

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

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

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

☒ Yes ☐ No

4. Consultation

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

If yes, which groups have you consulted with?

See appendix

Who else have you consulted with?

HNZPT, FENZ,

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

5. Applicant details

Name/s:

Luke Holmes

Email:

Phone number:**Postal address:**

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

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

If yes, please provide details.

6. Address for correspondence

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

Name/s:

Northland Planning & Development 2020 Ltd

Email:

Phone number:**Postal address:**

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

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

7. Details of property owner/s and occupier/s

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

Name/s:

Luke Kyle Holmes

Property address/
location:

Postcode

8. Application site details

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

Name/s:

Luke Holmes

Site address/
location:

6 Flagstaff Road,
Russell

Postcode

Legal description:

Part Block 1 OLC 288A

Val Number:

Certificate of title:

NA512/218

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.

Site is vacant.

9. Description of the proposal

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

Proposal to construct a dwelling on the site which is within the Russell Township zone and Russell Township Basin & Gateway Area - HP4 within the ODP as a Discretionary Activity. Site is zoned Kororareka Russell Township and within Kororareka Russell Heritage Area Overlay Part D and Coastal Environment under PDP and consent sought as RDA.

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

10. Would you like to request public notification?

☐ Yes ☒ No

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

(more than one circle can be ticked):

☒ Building Consent

☐ Regional Council Consent (ref # if known)

☐ National Environmental Standard Consent

☐ Other (please specify)

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

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

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

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

☐ Subdividing land

☐ Disturbing, removing or sampling soil

☒ Changing the use of a piece of land

☐ Removing or replacing a fuel storage system

13. Assessment of environmental effects:

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

Your AEE is attached to this application ☒ Yes

14. Draft conditions:

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

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

15. Billing Details:

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

Name/s: (please write in full)

Luke Holmes

Email:

Phone number:

Postal address:

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

Fees Information

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

15. Billing details continued...

Declaration concerning Payment of Fees

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

Name: (please write in full)

LUKE KYLE HOLMES

Signature:

(signature of bill payer)

Date 4-5-2026

MANDATORY

16. 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.

17. Declaration

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

Name (please write in full)

LUKE KYLE HOLMES

Signature

Date 4-5-2026

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

See overleaf for a checklist of your information...

Checklist

Please tick if information is provided

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

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

Land Use Resource Consent

Luke Holmes

6 Flagstaff Road, Russell

16 July 2026

Attention: Liz Searle and Jo Graham – Team Leader(s) Resource Consents

The applicant is seeking a land use consent to construct a new dwelling labelled as ‘Proposed New Apartment Boat Shed’ at 6 Flagstaff Road, Russell. The site is currently vacant, and the proposal will result in the first dwelling on the site. The site is zoned within The Russell Township Basin & Gateway Area – HP4 and Russell Township Zone within the Operative District Plan (ODP). The proposed activity requires a resource consent under the ODP for building height, stormwater management, earthworks and fire risk to residential units. The proposal is assessed as a **‘Discretionary Activity’** overall under the ODP.

Under the Proposed District Plan – Decisions Version (PDP-DV), the site is zoned as Kororāreka Russell Township and is within the Kororāreka Russell Heritage Overlay Area Part D as well as the Coastal Environment Overlay. The site is within 20 metres of a Scheduled Heritage Item noted as ‘House (including picket fence)’ reference 32, which is within the adjoining site to the south of the subject site. Within the Kororāreka Russell Township zone, the proposal results in infringements relating to impermeable surfaces and height. Within the Kororāreka Russell Heritage Overlay Part D the proposal requires consent as the building will be within 20m of a scheduled heritage resource as well as exterior colours being outside of the BS5252 colour range. As earthworks will be within 20m of the scheduled heritage resource on the adjoining site, consent is also sought under HA-R5 Earthworks. Within the Coastal Environment, consent is sought for a height infringement as well as for earthworks exceeding 100m² and 1m cut height. Consent is also sought under the Earthworks Chapter for volume and setback of earthworks from boundary. The proposal is a **‘Restricted Discretionary Activity’** under the PDP-DV.

An Archaeological Assessment has been prepared by Geometria as well as a Stormwater Mitigation Report prepared by Wilton Joubert in support of the proposal. These reports are attached within **Appendices 4 and 5**. Consultation has been had with Heritage New Zealand Pouhere Taonga (HNZPT) as well as Fire & Emergency NZ (FENZ). This correspondence is attached within **Appendices 6 and 7**.

Some pre-consultation has been undertaken on this application with **Aroha Chase, Intermediate Resource Planner – Resource Consents** regarding the interpretation of the sunlight rule under the PDP-DV. Given her prior involvement in this application we request that this consent be allocated to her for processing.

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

Regards,

■

—

Alex Billot
Resource Planner

Rochelle Jacobs
Director/Senior Planner

NORTHLAND PLANNING & DEVELOPMENT 2020 LIMITED

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Appendices

- 1. Far North District Council Application Form**
- 2. Record of Title – LINZ**
- 3. Site and Building Plans – *Absolute Build***
- 4. Stormwater Mitigation Report – *Wilton Joubert***
- 5. Archaeological Assessment - *Geometria***
- 6. Correspondence – *HNZPT***
- 7. Correspondence – *FENZ***
- 8. Correspondence – *Iwi***
- 9. Correspondence – *FNDC PDP Team***
- 10. ODP and PDP Relevant Assessment Criteria – *NPD Ltd***
- 11. ODP and PDP Objectives and Policies – *NPD Ltd***

Assessment of Environment Effects Report

1. Description of the Proposed Activity

- 1.1. The Applicant is seeking consent to construct a new dwelling on the site described as 'New Apartment Boat Shed Building'. The design of the building has a garage on the lower floor, which will be used to store a boat and vehicle, with an adjoining open plan living/kitchen/dining area and attached laundry and toilet area. The upper floor will contain three bedrooms, one with ensuite and an additional separate bathroom. The site is accessed via an existing metalled drive from the north-eastern corner of the site, where the site adjoins Flagstaff Road. This metalled drive will be extended and widened to enable access and manoeuvring within the site. There will be a landscaped area within the first 6 metres of the site, which adjoins Flagstaff Road. Two buried water tanks will be located within the southwestern portion of the site, with a retaining wall proposed along the existing bank within the northwestern portion of the site.

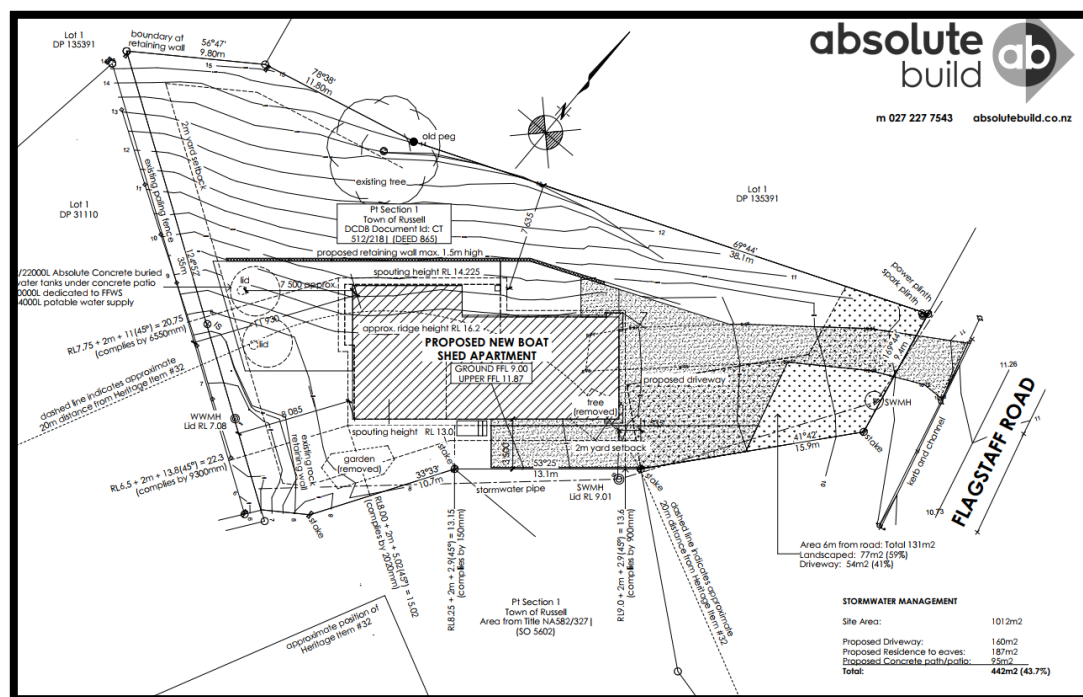


Figure 1: Absolute Build Site Plan.

- 1.2. Under the ODP, the site is zoned Russell Township Zone (RTZ) and is mapped within the Russell Township Basin & Gateway Area – HP4. Under the Proposed District Plan (PDP), the site is zoned as Kororāreka Russell Township (KRTZ) and is mapped within the Kororāreka Russell Heritage Overlay Area Part D as well as the Coastal Environment Overlay. The site is within 20

metres of a Scheduled Heritage Item noted as 'House (including picket fence)' reference 32, which is within the adjoining site to the south of the subject site.

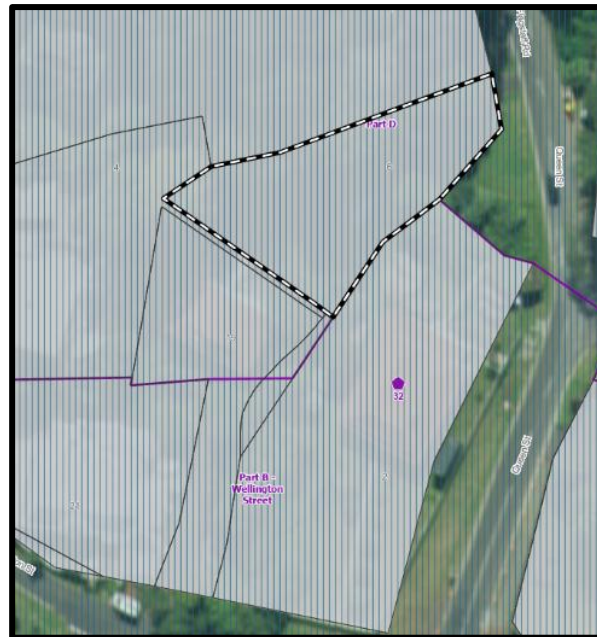


Figure 2: PDP zoning maps showing location of Heritage Item 32 and border of Part B and Part D Heritage Overlay Areas.

- 1.3. The proposed building height slightly exceeds the permitted height of 7.2 metres, which is the permitted height under both the ODP and PDP zones. The permitted height within the PDP Coastal Environment Overlay is 5.5 metres which also triggers consent.



Figure 3: Elevation plan showing slight infringement of permitted building height.

- 1.4. The proposed impermeable surface coverage within the site will amount to 442m² or 43.7% of the site area, which infringes the permitted amount of 35% of the total site area for both the ODP and PDP underlying zones. Wilton Joubert (WJL) have completed a Stormwater Mitigation Report (SMR) (**Appendix 4**) which has recommended that detention volume is to be provided within the 2x 25,000L water tanks provided on the site. Discharge from the tanks will be

transported via sealed pipes to the available stormwater connection within the site. Runoff from hardstand areas is to be directed to the available stormwater connection. This stormwater line intersects the southern portion of the site as shown within the Plan Set in **Appendix 3** and the SMR within **Appendix 4**. WJL have recommended that this line and existing connection be located prior to works commencing.

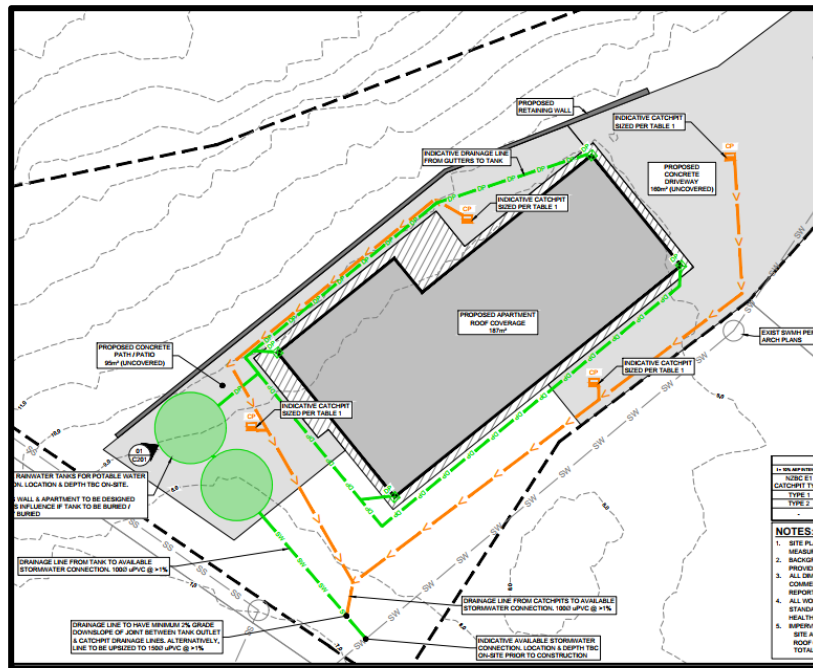


Figure 4: Snip of WJL site plan showing location of existing SW line and proposed works.

- 1.5. Within the Kororāreka Russell Heritage Overlay Area Part D, consent is required as the proposed building and associated earthworks will be within 20 metres of the scheduled heritage resource number 32. The exterior of the dwelling will not be finished in one of the stated BS5252 Resene colours in Appendix 7, however the proposed colour scheme is assessed as recessive and complimentary of the surrounding environment, as will be detailed further in this report. Given the above, consent is triggered.
- 1.6. The permitted volume of earthworks within the underlying zones of the ODP and PDP is 200m³ per calendar year. The proposal will result in a total earthworks volume of 242.5m³. Cut heights will most likely exceed 1 metre but not 1.5 metres, with some excavation works being within 3 metres of the boundary. Consent is sought under both the ODP and PDP for earthworks.
- 1.7. The proposed dwelling will also be within 20m of the existing bush to the north of the site. 10,000L fire fighting water supply (FFWS) will be held within the tanks onsite, for the specific purpose of FFWS. FENZ have been contacted as part of the proposal who provided approval.

See **Appendix 7**. Consent is sought under the ODP for fire risk to residential units. However, under the PDP, the proposal has been assessed as Permitted in terms of the relevant rule in relation to wildfire.

- 1.8. An Archaeological Assessment was requested within the initial correspondence with Heritage New Zealand Pouhere Taonga (HNZPT), which was subsequently completed by Geometria (**Appendix 5**) and provided to HNZPT. The Archaeological Assessment determined that there were no identified recorded or unrecorded archaeology present with the site and recommended the proposal proceed under the guidance of an ADP. HNZPT agreed and confirmed there were no objections to the proposed design in relation to the effects on scheduled heritage resource #32 (see **Appendix 6**).
- 1.9. The proposal has also been circulated to the relevant Iwi/Hapu (see **Appendix 8**), with no response received at time of lodgement.
- 1.10. The proposal has been assessed as a **Discretionary Activity** under the Operative District Plan (ODP) within the RTZ. The proposal has been assessed as a **Restricted Discretionary Activity** under the PDP-DV.

2. Description of the Site and Surrounding Environment

- 2.1. The application site is located at 6 Flagstaff Road, Russell. The site is legally described as Part Block I Old Land Claim No 288A. A copy of the record of title is attached in **Appendix 2**.
- 2.2. The site is irregular in shape, with the northern half of the site steeply sloping towards the southern portion, which flattens out. There is an existing stormwater pipe which intersects the southern and eastern boundaries, as detailed earlier. The site is accessed directly from Flagstaff Road which runs along the northeastern boundary. The surrounding environment has been heavily developed with residential buildings.
- 2.3. To the north of the site is a privately owned allotment which is uphill of the subject site and contains dense bush and a dwelling to the western portion of the site. An internal access to this dwelling separates the subject site from the bush areas, as can be seen in *Figure 6* below.



Figure 5: Site and surrounding environment.



Figure 6: Image of the site taken from Flagstaff Road. Boats are located within the site boundaries.



Figure 7: Image of the site taken from the highest elevation within the northern portion. Boat locations are where dwelling is to be constructed.

- 2.4. To the west of the site are two established residential sites each containing existing dwellings (Lot 1 DP 31110 and Lot 2 DP 135391). The proposed dwelling will be set back in excess of 8 metres from these sites and has not been assessed as creating any sunlight infringements along the western boundary. To the south is a privately owned allotment which contains scheduled heritage resource 32. As mentioned, works will be located within 20 metres of this building,

however will at least 3 metres separation distance from the dividing boundary. HNZPT have expressed no concerns in relation to the proposal being within proximity to this scheduled heritage resource given that the development site is located upslope and behind the scheduled heritage resource and given the diverse range of housing designs in the immediate area.



Figure 8: Image taken from the northwestern portion of the site, looking towards the scheduled heritage resource.

- 2.5. The site and surrounding environment are within an area noted as being an area where kiwi are present in high densities. The RPS Maps indicate that the site and surrounding environment are within the Coastal Environment. The site is not shown to be within an outstanding natural landscape or area of high natural feature. There are no known natural hazards which affect the site.

Title

- 2.6. The site is contained within Record of Title NA512/218 which is dated 8th October 1928. The land is legally described as Part Block I Old Land Claim No 288A, with an area of 1012m². There are no registered interests on the title.

3. Reasons for Consent

Operative District Plan (ODP)

3.1. Under the ODP, the site is zoned Russell Township Zone (RTZ) and is located within the Russell Township Basin & Gateway Area – HP4.

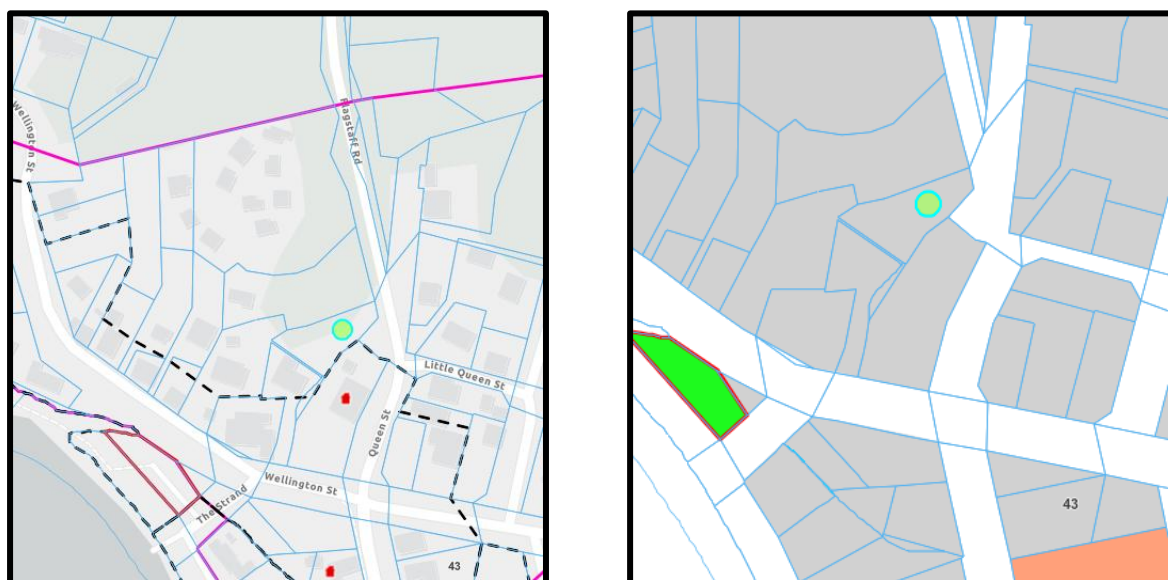


Figure 9: ODP zoning - Russell Township Basin & Gateway Area (left) and Russell Township zone (right).

3.2. The proposed activity is assessed against the following RTZ rules set out in [Table 1](#) below and the District-wide rules in [Table 2](#).

Table 1 - Assessment of the Permitted Section 10.9 Russell Township zone		
Plan Reference	Rule	Performance of Proposal
10.9.5.1.1	Relocated Buildings	Not applicable. The proposal does not involve relocatable buildings.
10.9.5.1.2	Residential Intensity	Permitted. The proposal will result in one dwelling on the site.
10.9.5.1.3	Scale of Activities	Not applicable.

10.9.5.1.4	Building Height	Restricted Discretionary. The proposed building height infringes the permitted height of 7.2 metres. The proposal can comply with the RDA requirement of 9m.
10.9.5.1.5	Building Scale	Permitted. This rule refers to the 'net ground floor area' of all buildings on site not exceeding 20% of the 'net site area' where the site is located within the Russell Township Basin and Gateway Area. The definition of 'net ground floor area' under the ODP refers to the sum of all ground floor areas of any building, which excludes some areas identified within the definition. The total net ground floor area of the proposal is calculated as 156m ² as shown on the site plan which is within the permitted threshold.
10.9.5.1.6	Sunlight	Permitted As shown within the Plan Set provided by Absolute Build, the proposal complies with the permitted sunlight angles.
10.9.5.1.7	Stormwater Management	Discretionary Activity The total impermeable surface coverage within the site amounts to 442m ² or 43.7% of the total site area. This exceeds the permitted allowance of 35% of the total site area and RDA allowance of 40%.
10.9.5.1.8	Setback from Boundaries	Permitted. (a) The minimum setback from road boundaries shall be 3 metres – Complies.

		(b) The minimum setback from any boundary other than a road boundary shall be 1.2m – Complies. (c) Not less than 50% of that part of the site between the road boundary and a parallel line 6m therefrom shall be landscaped – Complies – 59% or 77m² will be landscaped. The other 41% (54m²) will be driveway as per the plan set.
10.9.5.1.9	Outdoor Activities	Not applicable. Only residential activities will be carried out on this site.
10.9.5.1.10	Transportation	Permitted. <u>Traffic</u> – the proposal will result in a residential dwelling which is exempt from this rule. <u>Parking</u> – parking will be provided for onsite as per the Plan Set. <u>Access</u> – access will be from Flagstaff Road.
10.9.5.1.11	Hours of Operation - Non-Residential Activities	Not applicable. Only residential activities will be carried out on this site.
10.9.5.1.12	Keeping of Animals	Not applicable. Only residential activities will be carried out on this site.
10.9.5.1.13	Noise	Permitted.
10.9.5.1.14	Helicopter Landing Area	Not applicable. No helicopter landing area is proposed.

Table 2 – Assessment of applicable ODP District Wide Rules		
Plan Reference	Rule	Performance of Proposal
12.1	Landscape and Natural Features	Not applicable
12.2	Indigenous Flora and Fauna	Not applicable.
12.3 Soils & Minerals		
12.3.6.1.3 (P) 12.3.6.2.2 (RDA)	EXCAVATION AND/OR FILLING, EXCLUDING MINING AND QUARRYING, IN THE RESIDENTIAL, INDUSTRIAL, HORTICULTURAL PROCESSING, COASTAL RESIDENTIAL AND RUSSELL TOWNSHIP ZONES	Restricted Discretionary Activity Excavations for the works are anticipated to create a total volume of 242.5m ³ . This exceeds the permitted threshold of 200m ³ in any 12-month period but can comply with the RDA provisions of less than 500m ³ in any 12-month period. There are no cut/fill faces expected to exceed 1.5m.
12.4	NATURAL HAZARDS	Discretionary Activity The site is not within a coastal hazard area. The proposed dwelling will be located within 20 metres of the bush to the north and as such, results in an infringement of Rule 12.4.6.1.2. FENZ have been contacted as part of this application process with their response included within Appendix 7 .
12.5	HERITAGE	Permitted. The Russell Township and Basin Gateway overlay is addressed within the Russell Township zone rules. The overlay is not a listed Heritage Area or heritage buffer within this chapter such that none of the rules are considered applicable.

12.6	AIR	Deleted Chapter.
12.7	LAKES, RIVERS, WETLANDS AND THE COASTAL MARINE AREA	Permitted. The site does not contain nor immediately adjoin any waterbodies.
12.8	HAZARDOUS SUBSTANCES	Complies Not applicable
12.9	RENEWABLE ENERGY AND EFFICIENCY	Complies Not applicable

Operative District Plan Activity Status

- 3.3. Given the proposal cannot meet the Permitted or Restricted Discretionary criteria within the RTZ, it is assessed as a **Discretionary Activity** under the ODP. This relates to the combined building height, stormwater management, earthworks and fire risk to residential units aspects of the proposal.

Proposed District Plan (PDP)

- 3.4. Council have released their decision to adopt the majority of the Hearing Panel's recommendations, including those which relate to this application. Under Section 86B(1) all PDP-DV rules now have legal effect. After notification of decisions, there is a 30-working day period for submitters to appeal.
- 3.5. An assessment of the relevant rules and standards which have current legal effect has been undertaken below. Given that the PDP-DV now has legal effect, more weighting is applied to the standards, objectives and policies of the PDP-DV.
- 3.6. Within the PDP-DV the site is located within the Kororāreka Russell Township zone (KRTZ). It is subject to overlays for Coastal Environment and is within Kororāreka Russell Heritage Overlay Area Part D.

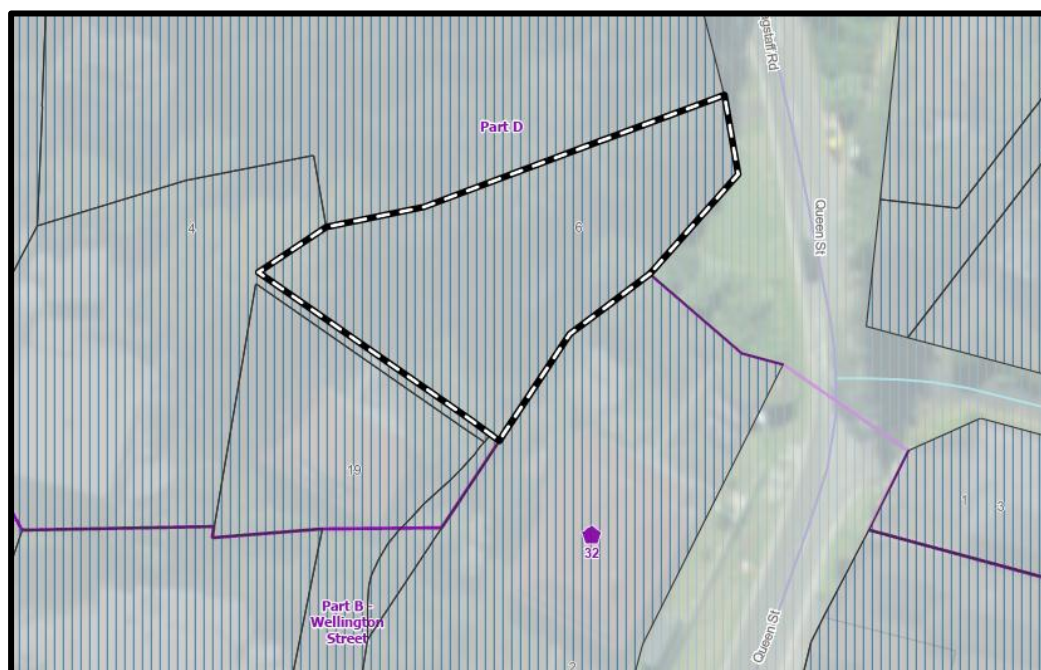


Figure 10: PDP-DV Zoning

3.7. An assessment against PDP-DV rules is set out in **Table 3** below.

TABLE 3 - ASSESSMENT AGAINST THE PDP RULES THAT HAVE IMMEDIATE LEGAL EFFECT		
Plan Reference	Rule	Performance of Proposal
Area Specific Matters Special Purpose Zone - Kororāreka Russell Township Zone		
KRT-R1	New buildings or structures and relocated buildings or extensions or alterations to existing buildings or structures.	Restricted Discretionary PER-1 The new building or structure and relocated buildings or extension or alteration to an existing building or structure, will accommodate a permitted, controlled or restricted discretionary activity.

		<i>Comment – Complies. The new building will be utilised as a residential unit.</i> PER-2 For multi-unit development, the building complies with standard KRT-S8 Multi-unit residential unit size. <i>Comment – Not applicable as the proposal does not include multi-unit development.</i> PER-3 The new building or structure and relocated buildings or extension or alteration to an existing building or structure complies with standards: KRT S1 Maximum height; <i>Maximum height permitted is 7.2m above ground level. The proposed dwelling will have a maximum height in excess of 7.2m above EGL.</i> Consent required. KRT S2 Height in relation to boundary; <i>The proposal easily complies along the northern, eastern and western boundaries. As the site is triangle in shape there does not appear to be a true southern boundary for this site. The initial assessment of this is that the 2m + 35° would therefore not be applicable. However, if a sector approach was instead adopted, the ‘southern’ sector of the site would see the very rear of the building being within this space where the site kinks out to the East providing a larger setback. Given this is the case, where the 2m +35° recession plane would be applicable means that</i>
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		<i>the development would again be compliant. If needed a visual representation of this can be provided to Council by the designer. Complies.</i> <u>KRT S3 Setback (excluding from MHWS or wetland, lake and river margins);</u> <i>The permitted setback from boundaries is 3m from road boundaries and 2m from any other site boundaries, with an exception for 10m along any one such boundary. The proposal complies with the permitted setback requirements.</i> <u>KRT S4 Building or structure coverage;</u> <i>The permitted building structure coverage within the Kororāreka Russell Heritage Area overlay is based on the maximum combined net floor area of all buildings on the site not exceeding 20% of the net site area. This amounts to 202.4m². The net floor area of the dwelling has been calculated to be 156m², which complies with the permitted threshold.</i> <u>KRT S5 Outdoor living space;</u> <i>Each residential unit must have an exclusive outdoor living space of at least 50m² at ground level with a minimum dimension of 5m and must be directly accessed from a habitable room, free from any buildings structures, parking or manoeuvring areas and be orientated to the north, east or west side. The proposal complies with this rule, with a concrete patio being accessed from the dining/living area to the west of the dwelling.</i>
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		KRT S6 Fences or boundary walls; and <i>Fencing and boundary walls must not exceed a maximum height of 1.2m. Any fencing will comply.</i> KRT S7 Outdoor Storage. <i>Outdoor storage must be screened from view.</i> <i>The proposal will comply.</i> <i>The proposal requires consent under PER-3 given non-compliance with KRT-S1 as maximum height exceeds 7.2m above EGL.</i> <i>Proposal assessed as a Restricted Discretionary Activity.</i>
KRT-R2	Impermeable Surface Coverage Activity Status: Permitted Where PER-1 is met.	Restricted Discretionary PER-1 The impermeable surface coverage of any site is no more than 35%. <i>Comment – The proposed impermeable surface coverage is 43.7% of the total site area.</i> <i>Proposal does not comply and is assessed as a Restricted Discretionary Activity.</i>
KRT-R3	Residential Activity Activity Status: Permitted Where PER-1 and PER-2 are met.	Permitted. PER-1 The site area per standalone residential unit is at least 1,000m². <i>Comment – the site area is 1012m² and the proposal will result in one residential unit.</i> <i>Proposal complies.</i>

		PER-2 The activity is not a multi-unit development . <i>Comment – the proposal does not include multi-unit development. Not applicable.</i>
KRT-R4	Visitor Accommodation	Not Applicable.
KRT-R5	Home Business	Not Applicable.
KRT-R6	Educational Facility	Not Applicable.
KRT-R7	Supported Residential Care	Not Applicable.
KRT-R8	Minor Residential Unit	Not Applicable.
KRT-R9	Retirement Villages	Not Applicable.
KRT-R10	Community Facility	Not Applicable.
KRT-R11	Emergency Services Facility	Not Applicable.
KRT-R12	Place of Assembly	Not Applicable.
KRT-R13	Activities not otherwise listed in this chapter.	Not Applicable.
KRT-R14	Commercial activity not provided for as a permitted, restricted discretionary or discretionary activity	Not Applicable.
KRT-R15	Industrial Activity	Not Applicable.
KRT-R16	Primary Production Activity	Not Applicable.
KRT-R17	Rural Industry	Not Applicable.
KRT-R18	Hospital Activity	Not Applicable.
KRT-R19	Mineral Extraction Activity	Not Applicable.
KRT-R20	Offensive Trade	Not Applicable.
<u>District Wide Matters - Historical and Cultural Value Overlays</u> Kororāreka Russell Heritage Area Overlay - Part D		
HA-R1	Maintenance and repair of buildings or structures.	Not applicable.

HA-R2	Additions or alterations to existing buildings or structures.	Not applicable.
HA-R3	Strengthening or fire protection of scheduled Heritage Resource.	Not applicable.
HA-R4	New buildings or structures and relocated buildings. Activity status: Permitted Where PER-1 is met.	Restricted Discretionary Activity PER-1 The building or structure and relocated building complies with standards: HA-S1 Setback from a scheduled Heritage Resource. <i>A 20m setback distance is required from any scheduled Heritage Resource. The proposal cannot comply as it will be within 20m of a scheduled heritage resource to the south of the site. Consent required.</i> HA-S2: Heritage Colours <i>It is noted that within the Hearings Panel recommendations, this standard was proposed to read '<u>2. If the exterior surface is painted, finished with a colour scheme from either the heritage colour palette or the BS5252 standard colour palette as shown in Appendix 7 or equivalent.</u>'</i> <i>Under the PDP-DV this rule has not adopted 'or equivalent' and as such any painted surface is required to be within the heritage colour palette or the BS5252 standard. The referencing of the 'resene' colour scheme was widely discussed at length throughout the s42a reports, with the requirement removed from the Coastal</i>

		<i>Environment Overlay. It is considered that the wording 'or equivalent' has been removed in error and this standard should allow recessive colours outside of the 'resene' colour palette. Given the above, consent is sought under this standard based on a technicality given it is anticipated the wording will be changed via the appeals process. Consent required.</i> <i>Proposal is assessed as a Restricted Discretionary Activity under HA-R4.</i>
HA-R5	Earthworks. Activity status: Permitted Where PER-1 is met.	Restricted Discretionary PER-1 The earthworks: 1. are setback a minimum of 20m from a scheduled Heritage Resource; 2. comply with standard HA-S3 Accidental Discovery Protocol. <i>Comment –</i> <i>The proposed works will be within 20m of the scheduled heritage resource and as such, the proposal cannot comply.</i> <i>The proposal will proceed under the guidance of an ADP.</i> <i>Proposal is assessed as a Restricted Discretionary Activity under HA-R5.</i>
HA-R6	Infrastructure not located within a site containing a scheduled Heritage Resource	Permitted.
HA-R7	Buildings or structures (including additions and	Not Applicable.

	alterations) located within the Alderton Park development	
HA-R8	Artificial crop protection structures and crop support structures	Not Applicable.
HA-R9	Infrastructure within a site containing a scheduled Heritage Resource	Not Applicable.
HA-R10	Relocation of a Scheduled Heritage Resource	Not Applicable.
HA-R11	Demolition of a scheduled Heritage Resource not otherwise listed in rule HA-R12	Not Applicable.
HA-R12	Demolition or relocation of a scheduled Heritage Resource	Not Applicable.
HA-S3	Accidental discovery protocol	Permitted.

District Wide Matters - Overlays

Coastal Environment

CE-R1	New buildings or structures and relocated buildings and extensions or alterations to existing buildings or structures Activity Status: Permitted Where PER-1, PER-2, PER-3 and PER-4 are met	Restricted Discretionary PER-1 If a new building or structure and relocated building is located in the ..., Kororāreka Russell Township zone, it: 1. is no greater than 300m²; 2. is located outside high or outstanding natural character areas; and 3. complies with:
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		a. CE-S1 Maximum height; b. CE-S2 Colour and materials; and c. CE-S4 Setbacks from MHWS. <i>Comment –</i> <i>PER-1(1) – proposal complies as the building is no greater than 300m².</i> <i>PER-1(2) – the site does not include any areas of high or outstanding natural character – proposal complies.</i> <i>PER-1(3) – The proposal does not comply with CE-S1 as the height exceeds 5.5m. Consent required.</i> <i>The proposal can comply with CE-S2 as the proposal will meet CE-S2(1) and (2) given the retaining wall will be constructed of natural materials (timber) and the dwelling will be finished to achieve a reflectance value no greater than 30%.</i> <i>The proposal can comply with CE-S4 as the building is in excess of 26m from MHWS.</i> PER-2 <i>Comment – Not applicable as PER-1 applies.</i> PER-3 <i>Comment – Not Applicable.</i> PER-4 <i>Comment – Not Applicable.</i> The proposal is unable to comply with CON-1 & CON-2 as there is no approved building platform
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		and the site is not within the Māori Purpose Zone. RDIS-1 therefore applies and the proposal is assessed as meeting this standard as it is outside ONLs and HNC areas. The proposal is a Restricted Discretionary Activity under this rule.
CE-R2	Earthworks or indigenous vegetation clearance. Activity Status: Permitted Where PER-1 and PER-2 are met.	Restricted Discretionary PER-1 Not applicable. PER-2 The earthworks or indigenous vegetation clearance is not provided for within CE-R2 PER-1 but it complies with standard CE-S3 Earthworks or indigenous vegetation clearance. <i>Comment – the proposal complies with CE-S3(1) as there are no works within outstanding natural character areas.</i> <i>The proposal cannot comply with CE-S3(2) as the works will exceed 100m². Consent required.</i> <i>The proposal cannot comply with CE-S3(3) as cut height will exceed 1m. Consent required.</i> <i>The proposal will comply with CE-S3(4)</i> <i>No indigenous vegetation clearance is proposed.</i> <i>The proposal is assessed as a Restricted Discretionary Activity.</i>
CE-R3	Farming	Not Applicable.
CE-R4	Afforestation for commercial forestry	Not Applicable.
CE-R5	Extension to existing mineral extraction activity	Not Applicable.

CE-R6	New mineral extraction activity	Not Applicable.
CE-R7	Land fill, managed fill, clean fill.	Not Applicable.

District Wide Matters General - Earthworks		
EW-R1	Earthworks Activity Status: Permitted Where PER-1 is met.	Restricted Discretionary. PER-1 The earthworks complies with standards: EW-S1 Maximum earthworks thresholds; <i>The maximum threshold for the underlying zone is 200m³ over an area of 2500m². The earthworks volumes are anticipated as 242.5m³ and therefore exceed this. Consent required.</i> EW-S2 Maximum depth; <i>Maximum depth shall not exceed 1.5m or 3m if retained by an engineered wall. The proposal will comply with this.</i> EW-S3 Accidental discovery protocol; <i>Proposal complies.</i> EW-S4 Site reinstatement; <i>Proposal complies.</i> EW-S5 Erosion and sediment control; <i>Proposal complies.</i> EW-S6 Setbacks; <i>Setback requirements are 1.5m from boundary if supported by retaining walls or 3m if not supported by retaining walls. Earthworks will occur within 3m of the boundary and as such, consent is required.</i> EW-S7 Land stability;

		<i>Proposal complies.</i> EW-S8 Nature of filling material; and <i>Proposal complies.</i> EW-S9 Flood and coastal hazards <i>Proposal complies.</i> <i>Consent triggered under EW-S1 and EW-S6 as a Restricted Discretionary Activity.</i>
EW-R2	Earthworks within the National Grid Yard and within 10m of Top Energy Transmission Lines (110kV and 66kV)	Not Applicable.
EW-R3	Earthworks within 10m of Critical Electricity Lines (excluding Top Energy 110Kv and 66kV Transmission Lines)	Not Applicable.
EW-R4	Earthworks Affecting a mapped Land Drainage Area of Benefit	Not Applicable.
<u>District Wide Matters</u> Hazards & Risks - Natural Hazards		
NH-R1 – NH-R4	Not applicable as the site is not shown to be susceptible to river flood hazards	
NH-R5	Activity Status: Permitted Where PER-1 and PER-2 are met	Permitted. PER-1 Any building used for a vulnerable activity (excluding accessory buildings) either:

		1. is located on a site that has access to a fire hydrant where reticulated water supply is available; or 2. provides for water supply for firefighting purposes in accordance with the minimum water storage for non-reticulated water supply specified in Table 2 of SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice. <i>Comment – Firefighting water supply will be provided for onsite. Written approval from FENZ allows for a reduced volume which is considered to comply with the Firefighting Code of Practice.</i> PER-2 Any building used for a vulnerable activity (excluding accessory buildings) that is not located within an urban zone is set back at least 20m from the dripline of any contiguous scrub or shrubland, woodlot or forestry. <i>Comment – the underlying zone is a Special Purpose Zone and there is no definition of ‘Urban Zone’ within the PDP-DV. It is noted that in the PDP Hearing 13 the s42a report referred to a definition of ‘urban’ being included in the plan which included the Kororāreka Russell Township zone. As part of Hearing 17, the definition of ‘urban’ was deleted on the basis that there was no reference in the remainder of the plan to the term ‘urban’ which made the definition redundant. This removal of the definition is</i>
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		<i>considered an oversight. Given that the Kororāreka Russell Township Zone was previously defined as urban, and given that the township is urban in character it is considered that the subject site meets the exemption in this standard and therefore can comply with NH-R5.</i>
NH-R6 – NH-R11 and NH-S1	Not Applicable.	

Proposed District Plan – Decisions Version Activity Status

- 3.8. The proposal triggers consent under a variety of chapters within the PDP-DV, which are listed below:

Kororāreka Russell Township Zone

- KRT-R1(PER-3) – as proposal results in infringement of KRT-S1 Maximum height. **Restricted Discretionary Activity.**
- KRT-R1(PER-1) – impermeable surface coverage. **Restricted Discretionary Activity.**

Heritage Area Overlays – Kororāreka Russell Heritage Area Overlay - Part D

- HA-R4(PER-1) – as proposal infringes HA-S1 Setback from Scheduled Heritage Resource and HA-S2 – Heritage Colours. **Restricted Discretionary Activity.**
- HA-R5(PER-1) – Earthworks as works will be within 20m of scheduled heritage resource. **Restricted Discretionary Activity.**

Coastal Environment

- CE-R1(PER-1) – as proposal infringes CE-S1 Maximum height. **Restricted Discretionary.**
- CE-R2(PER-2) – Earthworks – as proposal infringes CE-S3(2b) and (3) as earthworks will exceed 100m² and have a cut height larger than 1m. **Restricted Discretionary Activity.**

Earthworks

- EW-R1 – as proposal infringes EW-S1 Maximum earthwork thresholds and EW-S6 setbacks. **Restricted Discretionary Activity.**

3.9. Overall, the proposal is assessed as a **Restricted Discretionary Activity** under the PDP-DV.

National Environmental Standards

National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NESCS)

3.10. The subject site is not known to have been or currently be utilised for activities listed on the HAIL. The proposal is considered to be Permitted in terms of the NESCS.

National Environmental Standards for Freshwater Management 2020

3.11. There are no freshwater wetlands or other stream bodies affected by the proposal.

4. Statutory Assessment

Section 104C of the Resource Management Act 1991 (RMA)

3.12. Section 104C governs the determination of applications for Restricted Discretionary Activities. A consent authority must consider only matters which a discretion is restricted in national environmental standards, or it has restricted the exercise of its discretion in its plan or proposed plan. This relates to consent under the PDP-DV. The consent authority may grant or refuse consent.

Section 104B of the Resource Management Act 1991 (RMA)

4.1. Section 104B governs the determination of applications for a Discretionary Activity. A consent authority may grant or refuse consent and impose conditions under section 108. This relates to the consent sought under the ODP.

RMA Section 104

4.2. The application proposal is subject to the matters set out in Section 104.

4.3. Section 104(1) of the RMA states that when considering an application for resource consent –

- “the consent authority must, subject to Part 2, and section 77M have regard to –*
- (a) any actual and potential effects on the environment of allowing the activity; and*
 - (ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment that will or may result from allowing the activity; and*
 - (b) any relevant provisions of –*
 - i. a national environmental standard:*
 - ii. other regulations:*
 - iii. a national policy statement:*
 - iv. a New Zealand Coastal Policy Statement:*
 - v. a regional policy statement or proposed regional policy statement:*
 - vi. a plan or proposed plan; and*
 - (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.”*

Assessment of Effects on the Environment

- 4.4. Actual and potential effects arising from a development as described in 104(1)(a) can be both positive and adverse (as described in section 3 of the RMA). Positive effects arising from this proposal include the establishment of building which will be utilised by the Applicant as a place of residence and to store his belongings.
- 4.5. Potential adverse effects on the environment that go beyond the threshold of effects permitted within the underlying zones and District Wide Matters identified earlier within this report under both the ODP and PDP-DV.
- 4.6. Consent is sought under the ODP as a Discretionary Activity and as a Restricted Discretionary Activity under the PDP-DV. An assessment which covers all topics under both plans has been provided below.

Building Height, Scale & Sunlight

- 4.7. The ODP Russell Township Zone enables residential development which maintains the historic and amenity values of Russell and minimises effects on the natural environment. Opportunities are to be provided for activities to establish which have effects which are consistent with the existing development in the area. The proposal is considered consistent with development within the surrounding environment, although slightly infringing the permitted building height enabled within the zone. The corresponding PDP rule has adopted the same building height standard as the ODP.



Figure 11: Snip showing subject site and adjoining allotments.

- 4.8. Infringements of building height under the ODP as a Discretionary Activity are subject to assessment criteria set out in Section 11.2. Infringements within the PDP of maximum height are subject to assessment criteria set out within KRT-S1 (Maximum Height). The relevant assessment criteria can be found within **Appendix 10**, with a summary of the findings detailed below.
- 4.9. The design of the dwelling has been suited to the lay of the land and the irregular lot shape. Given the purpose of the building is to provide storage for vehicles and boats within the lower storey and also a place to reside, a double storey design has been adopted to ensure the building can adequately fit within the lot shape whilst enabling ample area for access, manoeuvring and outdoor space. Given the steep slope along the northern portion of the site,

which then increases further upslope into the adjoining lot, it is considered that the dwelling will be somewhat absorbed into the hillside. The dwelling is not anticipated to be viewed from the CMA or area known as 'The Strand' given the existing residential development between the site and these areas as well as existing vegetation and the separation distance being over 100 metres. *Figure 12* below depicts a small glimpse of the CMA obtained from the high point within the northern portion of the site. The dwelling will be built on the lower ground below this and will be obscured by the existing development on the adjoining lots shown in *Figures 12 & 13* below. The proposed design is not considered objectionable or out of character within the surrounding environment.



Figure 12: Image taken from high point within the site, with dwelling being located where boat can be seen. Existing dwelling in image is on the adjoining lot to the southwest



Figure 13: Image showing proposed location of dwelling which will sit within existing built development and vegetation.

- 4.10. HNZPT have been contacted as part of the pre-application process and had no concerns regarding the height of the building, given the subject site was located upslope of the scheduled heritage resource and consistent with development in the surrounding environment.
- 4.11. In terms of visual domination and overshadowing on other allotments, this is not anticipated given that most dwellings in the area are double storey, including that of the allotment to the west, Lot 1 DP 31110 and the south, Pt Section 1 Town of Russell. The dwellings within these allotments are also orientated southwest, away from the subject site, with the area near to the subject site being utilised as a backyard area. Furthermore, there is a dog leg of Lot 2 DP 135391, which separates the subject site and Lot 1 DP 31110 (see *Figure 11*). This provides a separation distance of approximately 2.6 metres between the site and Lot 1 DP 31110, creating

a larger separation distance between the proposed dwelling and this allotment. Given the proposed design will have the living area located on the ground floor, it is not considered that loss of privacy for adjacent properties will occur.

- 4.12. The dwellings within Lot 2 DP 135391 and Lot 1 DP135391 are located over 20 metres from the subject site boundaries and are therefore not considered to be impacted by the proposal, especially given the steep slope which separates the site from these lots. Overall, effects from visual domination, overshadowing, and loss of privacy for adjacent sites are considered to be less than minor.



Figure 14: Concept design showing outdoor living area and design for western end of the dwelling.

- 4.13. Given the proposed design complies with the permitted setback and sunlight distances, it is considered that the proposal does not require increased separation distances given the design already provides adequate separation and has been designed to suit the lay of the land. Additional landscaping or screening is not proposed.
- 4.14. The proposed design is considered compatible with other buildings in the area. The building scale is within the permitted thresholds for the zone and is therefore considered anticipated by the Plan. The proposal is considered to be compatible with both the built and natural environments. The likely generated effects are therefore considered to be consistent with that of a single residential dwelling which is anticipated for the site and consistent with the surrounding environment. The site is not shown to be susceptible to natural hazards, and the dwelling will not be located on a ridgeline, headland or peninsula.

Summary

4.15. The proposed design is considered suitable for the site and surrounding environment. Given the extensive development in the area, the proposal is considered to be consistent with built development within the surrounding environment. The permitted setback and sunlight provisions for the zones under both the ODP and PDP-DV have been complied with, enabling ample separation distance from adjoining sites. The 2.6m dog leg to the west of the site also provides further separation distance. The building height only slightly infringes the permitted height and has done so given the purpose of the building being for storage of a boat as well as a place of residence. Effects on adjoining allotments are considered to be less than minor and as such, no written approvals have been obtained apart from HNZPT to address the scheduled heritage resource. The physical constraints of the site have limited the building potential and the design provided is considered to be the best outcome for the site. Effects from the slightly higher building height which exceeds the permitted threshold, are considered to be less than minor.

Stormwater Management Effects

4.16. As detailed earlier in this report, the total impermeable surface coverage within the site will amount to 442m² or 43.7% of the site area, as stated within the Site Plan included within **Appendix 3** and the Stormwater Mitigation Report (SMR) within **Appendix 4**. This results in a breach of the permitted rules within both the ODP and PDP-DV in relation to impermeable surfaces. WJ have recommended that flow attenuation and flood control attenuation are provided for the proposed impermeable surfaces in excess of the permitted activity threshold. Below is a summary of the findings within the WJ report.

4.17. It is noted that WJ have completed an assessment of Section 11.3 of the ODP. We accept and adopt this assessment and to avoid repetition, please refer to the assessment within the WJ report. The matters which discretion is restricted over within the PDP-DV are also widely covered with the SMR and to avoid repetition the reader is directed to the above and the SMR, where effects have been determined to be less than minor. The matters of discretion within KRT-R2 are detailed within **Appendix 10**.

4.18. Two 22,000 litre water tanks are proposed on the site, which will be utilised for potable water supply, stormwater attenuation and FFWS. These water tanks will be fully buried and located under the concrete patio. A guttering system will collect roof runoff from the proposed roof

[illegible]

Figure 15: WJ Site Plan.

- 4.19. Hardstand areas will be shaped to be directed to runoff catchpits which will discharge to the available stormwater connection via sealed pipes, as per the recommendations within the SMR. Runoff from retaining walls shall also be directed to the stormwater connection within the existing stormwater network. WJ have recommended that the existing stormwater connection/line be located, surveyed and confirmed prior to construction. If connection is not available, has insufficient depth or is not suitable, WJ must be contacted to review the discharge arrangement.
- 4.20. It is considered that provided the recommendations within the SMR are adhered to, the effects of stormwater runoff will have a less than minor effect on the receiving environment, equivalent to if the proposal complied with the Permitted Activity thresholds.

Earthworks

- 4.21. The permitted threshold for excavations within the ODP and PDP-DV for the underlying zone is 200m³ in any 12 month period. The proposal is anticipated to result in 242.5m³, as per the Earthworks Plan within the Plan Set. Cut/fill heights are not anticipated to exceed 1.5m. Within the PDP-DV, earthworks within 3m of a boundary which are not retained by a properly engineered wall, require resource consent under EW-S6. It is anticipated that there will be some earthworks which will not be retained, within 3 metres of the boundary and hence consent is triggered under the PDP-DV. Sediment control is shown on the Earthworks Plan within the plan set, which will be in accordance with GD05.

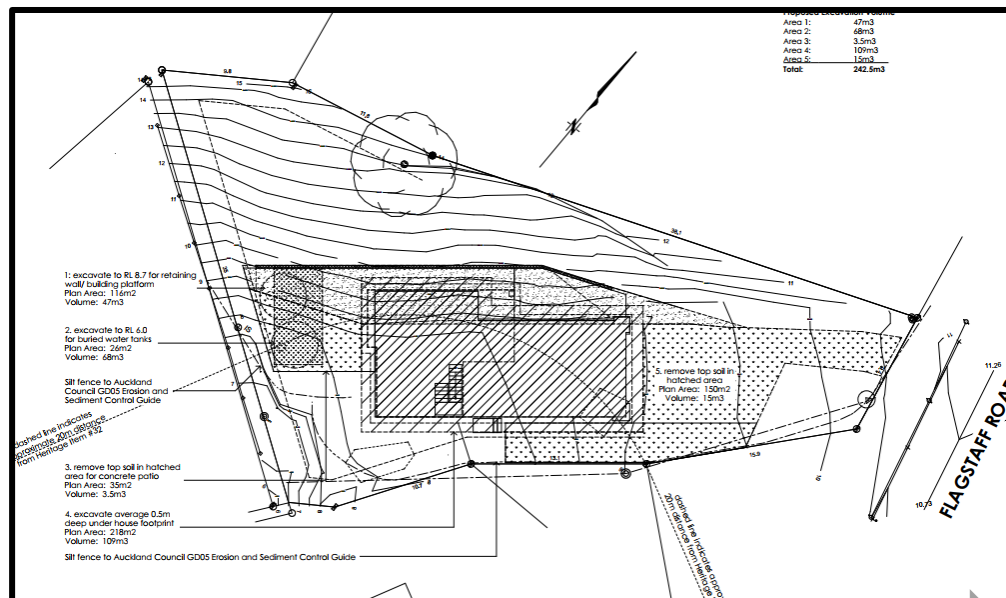


Figure 16: Earthworks Plan.

- 4.22. Infringements of earthworks under the ODP as a Discretionary Activity are subject to assessment criteria set out in Section 12.3.7. Infringements of earthworks within the PDP-DV are subject to assessment criteria set out within EW-R1. The relevant assessment criteria under both plans is listed within **Appendix 10**, with a summary of the findings detailed below.
- 4.23. The site is not shown to be susceptible to natural hazards nor within close proximity to lakes, rivers, wetlands or the coastline. Sediment and erosion control will be utilised in accordance with GD05 as required by the PDP-DV. The activity is not anticipated to exacerbate erosion or other natural hazards given effects will be contained within the site boundaries. Runoff will be contained onsite, mitigating the potential for contamination of surrounding soils and harm to

the life supporting capacity of soils. Existing infrastructure will be located on site prior to earthworks to ensure no disturbance to existing lines.

- 4.24. No loss of visual amenity or loss of natural character of the coastal environment are anticipated given the earthworks will be temporary in order to enable the construction of the dwelling. Excavated areas will be covered by buildings or impermeable surfaces with any other areas being re-grassed. The site does not contain any OLF or ONF nor any areas of significant indigenous vegetation or fauna.
- 4.25. An Archaeological assessment has been completed for the site, with an ADP approach recommended which has been accepted by HNZPT. The site is not known to have any cultural or spiritual association for Māori.
- 4.26. No cumulative adverse effects are anticipated given the earthworks will be temporary and are no considered to be excessive or objectionable for the construction of a dwelling. All effects will be managed within the site boundaries. The activity can easily be monitored given the urban location. Remedial action can easily be undertaken within the site boundaries.

Fire Risk from Residential Units

- 4.27. The proposed design will be within 20 metres of the bush area to the north, which infringes the permitted setback under Rule 12.4.6.1.2 under the ODP. FENZ have been contacted as part of the pre-application process, with their approval attached within **Appendix 7**. 10,000L of FFWS has been offered to be contained within the water tanks on the site.



Figure 17: Aerial image of the site and vegetation to the north.

4.28. An assessment of ODP Section 12.4.7(j) has been undertaken below.

(j) in respect of fire risk to residential units:

- (i) the degree of fire risk to dwellings arising from the proximity of the woodlot or forest and vice versa; and*
- (ii) any mitigation measures proposed to reduce the fire risk; and*
- (iii) the adequacy of the water supply; and*
- (iv) the accessibility of the water supply to fire service vehicles.*

4.28.1. The proposed dwelling will be located in similar proximity to the existing bush as many other dwellings in the surrounding environment. The subject site is separated from the bush by an internal accessway within the adjoining site to the north, as can be seen within *Figure 17* above. Given this, it is considered that the degree of fire risk is not unusual nor considered unreasonable in this environment. Mitigation measures include building the dwelling within the southern portion of the site, furthest from the bush area and having 10,000L of FFWS available within the water tanks on the site. FENZ have approved the FFWS volume. The tanks will be readily available to fire service vehicles.

- 4.28.2. Given written approval has been received from FENZ and given the dwelling is located as far as it can be from the bush, the proposal is not considered to exacerbate or create adverse effects in terms of fire risk.

Historic Heritage Effects

- 4.29. The site is not subject to a Heritage Overlay within the ODP, however under the PDP, the site is noted to be within the Kororāreka Russell Heritage Overlay Area – Part D, which is noted as the ‘remainder of the overlay’ surrounding other parts of the Kororāreka Russell Heritage Area. This overlay includes archaeological sites that indicate a relatively high sensitivity and risk of archaeological deposits.
- 4.30. An Archaeological Assessment has been completed by Geometria (**Appendix 5**) which determined there were no recorded or unrecorded sites within the site. The proposal was recommended to proceed under the guidance of an ADP. The Archaeological Assessment was sent to HNZPT along with the proposed design of the dwelling and proximity of the proposed dwelling to the Scheduled Heritage Resource #32 within the adjoining site. No concerns were raised by HNZPT, with their approval provided within **Appendix 6**.
- 4.31. The proposal will not see works within the adjoining site containing the scheduled heritage resource and is considered to have less than minor effects given the already modified environment and the fact the subject site is located to the rear and slightly upslope of the scheduled heritage resource.

HA-R4 New Buildings or Structures and relocated buildings

- 4.32. The proposal results in infringements within the Heritage Overlay chapter given the proposed building will be within 20 metres of the scheduled heritage resource 32 (HA-S1) and will not be finished in ‘resene’ colours (HA-S2). As detailed earlier in this report, it is considered that the proposal infringes HA-S2 based on a technicality given the wording of the standard has altered slightly from the Hearing Panel’s recommendations. The proposed colour scheme of the dwelling will be of natural recessive colours, suitable within the surrounding environment.
- 4.33. The matters of discretion for an infringement of this HA-R4 is as follows:
- a. whether the proposed building or structure will adversely affect the heritage values of the Heritage Area Overlay;*

4.33.1. The Heritage Area Overlay is described as Kororāreka Russell – Part D. HA-P6 describes the values of the Kororāreka Russell Heritage Overlay, with (e), (g), (h) and (i) being applicable to the subject site. (e) proposes to limit the scale and form of development in Part D in order to provide a backdrop to the village setting and support surrounding heritage values. The proposal is considered to be of a consistent scale and form to other development in the area, given that the site is surrounded by double storey buildings, which encompass a larger building scale than what is proposed. The proposal will result in a vacant site being developed with a dwelling, which is consistent with other allotments in the area. The subject site is the only vacant allotment, with all other adjoining sites being developed. Given it is set within existing residential development, the proposal is considered to be appropriate within the setting. (g) describes protecting archaeological sites from damage and retrieving information on unscheduled site if discovered. As detailed, an Archaeological Assessment was completed for the site which determined that there were no sites found and the proposal is to proceed under the guidance of an ADP. As such, the proposal is considered to be consistent with (g). (h) relates to protecting landforms and setting of Kororāreka Russell which have important relationship values of the area. The subject site is not known to contain any such landforms given it is a residential site within a residential area. The design of the dwelling has been designed to suit the lay of the land and will be constructed on the lower portion of the site, decreasing visual effects. In terms of (i), this relates to protecting boundary treatments and landscape areas associated with scheduled Heritage Resources. The proposal is considered to protect these areas associated with scheduled Heritage Resource 32, given the setback provisions are met and the proposal will not be intrusive on scheduled Heritage Resource 32. Overall, the proposal is considered to be consistent with the heritage values of the Kororāreka Russell Part D Overlay.

b. whether there is a practicable reason why the [building](#) or [structure](#) needs to be located within the [Heritage Area](#) Overlay;

4.33.2. The proposed dwelling is to be located on a vacant site which is owned by the Applicant.

c. the colour of all exterior surfaces and their appropriateness within the [Heritage Area](#) Overlay;

4.33.3. In terms of the proposed colours of the building, these are as per the Plan Set, are stated as:

- Roof – Coloursteel Slate LRV 9% (or similar approved)
- Aluminium joinery – Dulux Duralloy Slate (or similar approved)
- Upper storey – Cedar Bevelback Weatherboards – Colour – Wood-X Flint (or similar approved)
- Lower storey – Brick Veneer – Colour – San Selmo Aged Red (or similar approved)

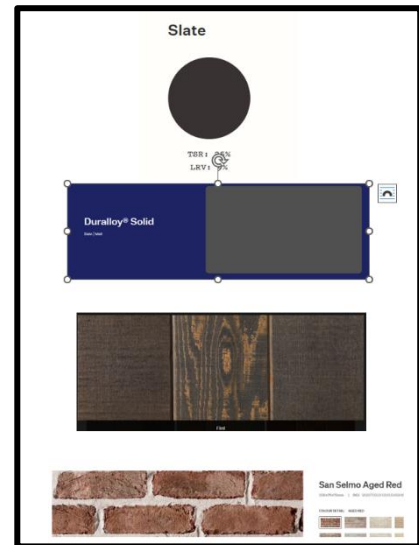


Figure 18: Examples of proposed colours.

- 4.33.4. As these proposed colours and/or materials are not 'resene' products in accordance with HA-S2 Standard of the PDP, the proposal results in a technical breach of this standard and therefore a breach of Rule HA-R4. As part of the Hearings process of the PDP, this particular matter of finishings sitting outside of the 'Resene' products was discussed at length. As a result, changes were made to the Coastal Environment rules to remove the requirement for strict compliance with Resene colours to allow other brands of paint to be used. This change however has not been reflected within the HA Chapter for unknown reasons.
- 4.33.5. The proposed colour scheme is considered a natural recessive colour scheme and of low reflectivity. The materials and colours provided will be coherent with other built development in the area and the use of the aged red brick will tie in with the heritage colours in the area.



Figure 19: Snip of plan set showing proposed colours/materials.

d. any [landscaping](#) or fencing to maintain heritage [boundary](#) treatments and curtilage;

4.33.6. Landscaping is proposed along the road frontage however, there is no specific landscaping or fencing proposed along other boundaries nor are any considered required, given the proposal is not considered to create adverse effects.

e. the location and relationship of the [building](#) or [structure](#) in relation to adjoining [sites](#) and the [road](#);

4.33.7. The proposed dwelling complies with setback from boundary provisions and is not considered to intrude on adjoining sites or the road, as detailed throughout this application.

f. any assessments or advice from a suitably qualified and experienced heritage or cultural expert (where provided); and

4.33.8. An Archaeological Assessment has been completed for the site which determined there were no recorded or unrecorded sites within the site. The proposal is to proceed under the guidance of an ADP.

g. any consultation with Heritage New Zealand Pouhere Taonga, Department of Conservation and [tangata whenua](#) (where provided); and

4.33.9. HNZPT have been contacted as part of the pre-application process with no concerns raised. Given the range of housing designs in the area and existing development, no concerns were

raised in regards to the design and height of the building. An ADP has been recommended in accordance with the Archaeological Assessment.

h. in the Kororāreka Russell [Heritage Area](#) Overlay, the matters listed in Policy [KRT-P6](#).

4.33.10. Assessment of the relevant policies within KRT-P6 was undertaken within (a) above where the proposal was concluded to be consistent with KRT-P6.

HA-R5 Earthworks

4.34. The proposal also results in an infringement of HA-R5 Earthworks given the proposed works will be within 20m of a scheduled heritage resource. It is considered the assessment criteria has been covered within the assessment above. Given earthworks will be temporary and contained within the site boundaries, no adverse effects are anticipated. The proposal will proceed under the guidance of an ADP. The matters of discretion within HA-R5 are listed below but have been covered within the assessment of HA-R4 as well as the earthworks assessment under the ODP. To avoid repetition, please refer to these sections.

- a. whether the proposed [earthworks](#) will adversely affect the heritage values of the [Heritage Area](#) Overlay;*
- b. whether the proposed [earthworks](#) will adversely affect the heritage values of any adjacent [scheduled Heritage Resource](#);*
- c. any adverse [effects](#) on any archaeological [site](#);*
- d. any methods of [site](#) rehabilitation;*
- e. any assessments or advice from a suitably qualified and experienced heritage or cultural expert (where provided); and*
- f. any consultation with Heritage New Zealand Pouhere Taonga, Department of Conservation and [tangata whenua](#) (where provided).*

Summary

4.35. The proposed activity will result in a new dwelling on a vacant site, which is surrounded by privately owned allotments containing residential dwellings, many being double storey. Although the proposed colour scheme does not meet the 'resene' colours stipulated, the proposed colour scheme is natural and recessive and compliments the surrounding character of the area. The proposed colour scheme is considered suitable for the site and will not create

any adverse visual effects. The subject site adjoins a scheduled Heritage Resource and as such, effects on this Heritage Resource have been assessed and determined to be less than minor, as is supported by HNZPT. Overall, the proposal is considered to be consistent with the Heritage Overlay values specific to the site and will not be objectionable within the surrounding environment. The proposal is considered to have less than minor effects

Coastal Environment

- 4.36. To manage resource management issues relating to the coastal environment, a mapped coastal overlay has been applied to District land within the PDP-DV to differentiate between land that is within, or outside of, the mapped coastal environment. To manage effects on the natural environment, the PDP has adopted environment overlays, including a high natural character overlay, which does not apply to the site.
- 4.37. Within the Coastal Environment (CE), the proposal requires consent under CE-R1(PER-1) as the proposed height exceeds 5.5m (CE-S1). Consent under CE-R2(PER-2) is also required given the proposal cannot comply with CE-S3 as earthworks will exceed 100m² and cut heights will exceed 1 metre. The matters of discretion for an infringement of these rules are the matters within CE-P9 and positive effects.
- 4.38. CE-P9 lists an array of considerations, some of which are relevant to the proposal. The proposal will result in a dwelling on a vacant site which is consistent with other development in the area (a). Temporary effects relate to earthworks effects with permanent effects relating to built development on a vacant site. The chosen natural recessive colour scheme and design of the building is considered to mitigate visual effects. Cumulative effects are not anticipated (b) and (d). The location, scale and design (c) is considered appropriate for the site and surrounding environment. Given the surrounding environment is already compromised with urban development, it is considered that the ability of the environment to absorb the change is high (e). The proposal will be infill development and will not be visually dominant in the landscape given the surrounding setting. The earthworks are required in order to establish the building platform, access and outdoor areas (f). No alternative locations have been provided given the constraints of the site and the fact no adverse effects are anticipated (h). The proposal has been circulated to the relevant Iwi with no response received (i). The site is not shown to be susceptible to natural hazards and with the recommendations of the accompanying reports adhered to, natural hazards are not considered to be exacerbated (j). Natural character is

considered to be maintained given the proposed development is consistent with the surrounding environment (n).

- 4.39. Positive effects relate to the site being developed with a dwelling, which is considered to be the intended purpose of the site. The dwelling has been designed to suit the lay of the land as well as blend into the existing environment via the use of natural and recessive colours. The proposal will support the use of the land by the Applicant.
- 4.40. Overall, the proposal is considered to be consistent with the intention of the Coastal Environment overlay and will be integrated into the existing development in the surrounding environment. The use of the natural and recessive colour scheme will mitigate visual effects to a less than minor degree, with the design of the dwelling being set into the existing landform.

Relevant Statutory Provisions

- 4.41. Section 104(1)(b) requires the consideration of any relevant provisions found in national policy statements or standards, regional policy statements or plans and operative or proposed district plans. Relevant statutory documents include:
- New Zealand Coastal Policy Statement
 - Regional Policy Statement for Northland
 - Far North District Plan
 - Proposed Far North District Plan

New Zealand Coastal Policy Statement

- 4.42. The NZCPS provisions apply to this proposal but are generally given effect to within the context of the District Plan and the higher order RPSN. The NZCPS is concerned with sustainable management of the coastal environment including its ecological function, and the preservation of its natural character and landscape values. Effects on Te Tiriti values, public access to the coast, coastal hazards and the wellbeing of people are also relevant considerations.
- 4.43. The site is within the coastal environment as mapped by the Regional Policy Statement for Northland. The current District Plan site zone is RTZ, which is within the ODP coastal

environment. The PDP zoning is Kororāreka Russell Township as well as being within the Kororāreka Russell Heritage Area Overlay – Part D. Coastal values and features are to be managed via a coastal environment overlay. Matters relating to the preservation of natural character and associated landscape and ecological values subject to building (visual amenity) that are directly relevant to RMA s6(a) matters of national importance.

- 4.44. Given the size and setting of the site, it is considered it was created with the intention of being developed with a residential dwelling. Given the underlying zoning, built development is enabled subject to controls as detailed earlier in this assessment. The consolidation of development within existing coastal settlements is supported by the NZCPS (Policy 6). Natural character will be preserved and visual effects mitigated as concluded earlier within this assessment, given the design and siting of the dwelling as well as the use of a natural and recessive colour scheme (Objective 2 & Policy 6, 13 & 15). A small glimpse of the CMA is visible from the northern portion of the site which is of higher elevation than the proposed location of the dwelling, however it is considered that given the site being separated by the CMA by existing built development and vegetation, the dwelling will not be visible from the CMA nor will it be visually obtrusive in the surrounding environment. The site does not contain any areas of significant indigenous vegetation or areas of HNC, such that effects on these features will be less than minor.
- 4.45. Overall, it is considered that the proposal is consistent with the objectives and policies of the NZCPS and will not have adverse effects on the character of the site and surrounding environment.

Regional Policy Statement for Northland (2016 - updated 2018)

- 4.46. The purpose of the Regional Policy Statement for Northland (RPS) is to promote the sustainable management of Northland's natural and physical resources by providing an overview of the region's resource management issues.
- 4.47. The RPS sets out policies and methods to achieve integrated management of Northland's natural and physical resources. The subject site does not include any mapped areas of outstanding natural landscape or high natural features. The site also does not contain any areas of significant indigenous vegetation.

- 4.48. Objective 3.4 seeks to protect areas of significant indigenous vegetation and fauna habitats, maintain the extent of ecosystem diversity and habitat and where practicable, enhance these environments. All effects will be managed within the site boundaries such that these areas will not be adversely affected in the wider environment.
- 4.49. It is considered that in the context of the existing site zoning and low-density development, the proposed development will not be contrary to the objectives and policies of the RPSN.

Far North District Plan

- 4.50. The proposed activity has been assessed against the applicable objectives and policies of the ODP. A copy of these provisions is attached at **Appendix 11**.

Coastal Environment and Russell Township Zone

- 4.51. The application site is within the ODP Coastal Environment which comprises rural and coastal land along the District's coastline. The site location sits within the settlement of Russell, where there is more intensely developed residential development, significant bush areas, indigenous fauna habitat (particularly for kiwi). Within the Coastal Environment, it is expected that where natural character exists it will be preserved and that landscape and visual qualities will be protected from inappropriate development. Wherever possible, development is to be consolidated within existing settlements to provide medium and low-density settlements along the coastline.
- 4.52. Coastal Environment Objective 10.3.1 recognises the tension between managing avoiding the adverse effects of subdivision and development and the practicalities around providing for appropriate development. As per s6(a) of the RMA, the NZCPS and the RPSN, the preservation of the natural character of the coastline and the coastal environment and any other associated natural and landscape values is sought (Objective 10.3.2). The RTZ forms part of the coastal environment and is considered a unique place in New Zealand's past given the historic and cultural significance of the area. At present, it is a popular tourist town afforded of special significance where maintaining and enhancing the historic and amenity characteristics are key. Given the vulnerability of the natural environment, preserving and restoring the environment is a key objective.

- 4.53. As has been detailed within this assessment, the proposed activity is considered to complement the natural character of the surrounding environment by utilising a natural and recessive colour scheme as well as providing a dwelling which has been designed to suit the lay of the land. Heritage values have been a primary consideration of the proposal, with effects on these values assessed as less than minor (Policy 10.4.1). Consolidating development within built up areas is also a key policy (Policy 10.4.2). Given the proposal will result in a vacant allotment being developed which is surrounded by existing built development, it is considered that the proposal is consistent with this.
- 4.54. In terms of the RTZ, the objective of this zone (10.9.3.1) is *‘to achieve the continued growth and development of Russell in a way which maintains the special historic and amenity values and minimises adverse effects on the natural environment.’* The proposal has been assessed as achieving this as has been detailed throughout this assessment. The level of effects are considered consistent with existing development in the surrounding environment (Policy 10.9.4.1). There is ample area on site for outdoor space and onsite services (Policy 10.9.4.2). Although the proposal results in an impermeable surface breach, the coverage is considered consistent with that in the surrounding environment and with stormwater being managed onsite, effects in relation to hydrology, ecology and amenity are considered to be less than minor (Policy 10.9.4.3 & 10.9.4.5). The proposal does not result in infringements of the permitted sunlight rules with built development on adjoining sites being located a sufficient distance to enable adequate access to sunlight and daylight and privacy (Policy 10.9.4.4 & 10.9.4.6). The character of the surrounding environment and underlying heritage overlay are considered to be protected as determined throughout this application (Policy 10.9.4.7).
- 4.55. It is considered that the proposed dwelling would not be contrary to the coastal environment or the RTZ objectives and policies.

District Wide Provisions – Earthworks and Natural Hazards

- 4.56. Chapter 12 of the ODP contains objectives and policies that apply to activities across the District. Section 12.3 addresses matters related to ‘Soils and Minerals’, including excavations, with Section 12.4 addressing matters in relation to ‘Natural Hazards’, including fire risk to residential units. Objective 12.3.3.3 seeks to ‘avoid, remedy or mitigate adverse effects associated with soil excavation and filling.’ The proposal is considered to achieve this given silt control will be provided for onsite, ensuring effects are contained within the site boundaries

and reducing downstream effects. This will ultimately ensure adverse effects on people and the environment are mitigated, including those on adjoining properties (Policy 12.3.4.4). In terms of fire risk, objectives are to ensure that development does not induce or exacerbate the effects of natural hazards (Objective 12.4.3.2) and to avoid fire risk arising from the location of residential units (Objective 12.4.3.7). The proposal is considered to achieve the above objectives given FFWS will be provided on site as approved by FENZ. The dwelling is located as far as it practically can be from the bush to the north, mitigating effects by increased separation distances. The risk to adjoining vegetation and properties arising from fire (Policy 12.4.4.7) is avoided as no dense bush is proposed within the site and adequate FFWS has been provided for.

Proposed Far North District Plan

- 4.57. The proposed activity has been assessed against the applicable objectives and policies of the PDP-DV. A copy of these provisions is attached at **Appendix 11**.

Kororāreka Russell Township zone and Heritage Area Overlay

- 4.58. The subject site is proposed to be located within the Kororāreka Russell Township Zone (KRTZ) and within the Kororāreka Russell Part D Heritage Overlay and Coastal Environment Overlay.
- 4.59. The KRTZ is identified as being a zone occupying a unique place in New Zealand's past, being historically significant. The zone seeks to *'maintain and enhance the characteristics and natural features of Kororāreka Russell which contribute to its unique built character, historic heritage, cultural and amenity values.'* The Kororāreka Russell Township is noted as being within the coastal environment and is a prominent coastal settlement within the East Coast and forms a continued pattern of settlement along the coastline.
- 4.60. The proposed activity has been assessed as being compatible with the heritage values of the zone, as was detailed within the AEE of this report, as well as protecting the natural character and amenity of the zone (KRT-O1 & KRT-O2). Infrastructure will be provided for onsite, with connection to the reticulated wastewater system being provided for (KRT-O3). Landscaping will be provided along the road boundary. The proposed activity is considered to be consistent with the existing development in the area and will protect the heritage resources in the area (KRT-P1). The zone encourages housing where it is appropriately serviced by infrastructure and does not compromise historic heritage and amenity values (KRT-P3), which the proposal achieves. The proposal is also considered consistent with KRT-P6.

- 4.61. The Heritage Area Overlay is described as Kororāreka Russell – Part D. HA-P6 describes the values of the Kororāreka Russell Heritage Overlay, as was detailed in depth earlier in this report. The proposal was found to be consistent with the relevant matters under HA-P6. Overall, the proposal is considered to be consistent with the heritage values of the Kororāreka Russell Part D Overlay.
- 4.62. HA-O1 and HA-P1 are relevant to all heritage area overlays which require that heritage values of the heritage area overlays are identified and protected. As detailed above, the proposal has taken these values into consideration and is considered to be consistent with the specific values of the relevant overlay.

District Wide – coastal environment and earthworks

- 4.63. The proposed activities are within the Coastal Environment Overlay. Objectives of the Coastal Environment overlay relate to preserving and protecting the natural character (CE-O1) as well as ensuring that land use activities are compatible with the surrounding land use (CE-O2). The proposed dwelling is a double storey design, similar to many dwellings in the surrounding environment including those on adjoining sites. A natural recessive colour scheme will be utilised in order to preserve the natural character of the surrounding environment. Landscaping along the road boundary will also be provided in accordance with the Plan Set. The proposal results in consolidated development (CE-O2, CE-O3 and CE-P4) as the development is located within a vacant site, which is surrounded by existing built development.
- 4.64. The site is not located within an ONC, ONL or ONF nor does it adjoin such sites. The proposed change in use of the site is considered acceptable given the development is consistent with the surrounding land use activities (CE-P5). The proposal has been previously assessed within this application as being consistent with CE-P9.
- 4.65. In terms of the earthworks chapter, earthworks are enabled under EW-O1 and EW-P1 where they facilitate the efficient use and development of land while managing adverse effects on amenity, public safety, surrounding land and infrastructure. The proposal is considered to achieve this given the measures proposed. Historical and cultural values will be protected, with an ADP approach proposed (EW-O2) and earthworks are not anticipated to compromise the

stability of land, infrastructure or public safety (EW-O3). The stormwater line within the site will be accurately located prior to works to ensure there is no disruption to the line. Although the proposed works exceed the maximum threshold and setback provisions, it is considered that effects will be less than minor given all effects will be maintained within the site boundaries (EW-P3). The proposed earthworks are not considered excessive and have been determined necessary to facilitate the building process. Silt control has been provided for within the Plan Set. Works will be undertaken in a manner to ensure there are no adverse effects on the surrounding environment.

Summary

- 4.66. The above assessment indicates that the proposed activity will be consistent with the intent of the relevant PDP-DV objectives and policies.

Plan Weighting Summary

- 4.67. As required by Section 104(1)(b) of the RMA, a decision on this application must consider the extent to which a proposal is consistent with the relevant provisions of the ODP and the PDP.
- 4.68. As detailed earlier in this application, Council have now released their decision to adopt the majority of the Hearings Panel Recommendations, including those which relate to this application. Under section 86B(1) all PDP-DV rules now have legal effect. After the notification of decisions there is a 30-working day period for submitters to appeal.
- 4.69. Now that the PDP has advanced beyond a Council Decision, greater weighting is applied to the PDP-DV.
- 4.70. As assessed above, the proposal is considered to be consistent with both the ODP and PDP-DV objectives and policies which are relevant to the application.

5. Notification Assessment

- 5.1. Section 95A-95G sets out the public and limited notification criteria for resource consent applications.

Section 95A – Public Notification Assessment

- 5.2. Section 95A requires a council to follow specific steps when deciding whether to publicly notify an application for resource consent. These steps are set out and commented on as follows.

Step 1: Mandatory public notification in certain circumstances

S95A(3)(a)	The applicant requests public notification
S95A(3)(b)	Public notification is required under section 95C
S95A(3)(c)	The application is made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.

- 5.3. The Applicant has not requested public notification, nor is it required under section 95C. Section 95A(3)(c) is not applicable.

Step 2: If not required by step 1, public notification in certain circumstances

S95A(5)(a)	Is the application for a resource consent for one or more activities and each activity is subject to a rule or national environmental standard that precludes public notification.
S95A(5)(b)	Is the application for a resource consent for 1 or more of the following, but not other, activities; a controlled activity; a restricted discretionary, discretionary or non-complying activity, but only if the activity is a boundary activity.

- 5.4. The proposed activity applied for is not precluded from notification by a rule or a national environmental standard. The activity is not solely for a boundary activity.

Step 3: If not precluded by step 2, public notification required in certain circumstances

S95A(8)(a)	The application is for a resource consent for 1 or more activities, and any one of those activities is subject to a rule or national environmental standard that requires public notification.
S95(8)(b)	In accordance with section 95D, the activity has or is likely to have adverse effects on the environment that are more than minor.

- 5.5. The proposed activity applied for is not subject to a rule or national environmental standard that requires public notification.

- 5.6. Section 95D specifies the criteria by which a consent authority may decide whether an activity will have or is likely to have adverse effects on the environment that are more than minor. This includes what a council may or may not have regard to:

S95D(a)(i)-(ii)	A consent authority <u>must</u> disregard any effects on persons who own or occupy- (i) The land in, on, or over which the activity will occur, or (ii) Any land adjacent to that land
S95D(b)	A consent authority <u>may</u> disregard an adverse effect of the activity if a rule or national environmental standard permits an activity with that effect.
S95D(c)	A consent authority <u>must</u> , in the case of a restricted discretionary activity, disregard an adverse effect of the activity that does not relate to a matter for which a rule or national environmental standard restricts its discretion.
S95D(d)	A consent authority <u>must</u> disregard trade competition and the effects of trade competition.
S95D(e)	A consent authority <u>must</u> disregard any effect on a person who has given written approval to the relevant application

- 5.7. For the purposes of deciding public notification, any effects on persons who own or occupy the application site, or adjacent land may be disregarded. The proposal is not considered to create adverse effects as detailed within this application.

Step 4: Public notification in special circumstances

S95(9)	Do special circumstances exist in relation to the application that warrant the application being publicly notified?
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- 5.8. When considering public notification, current caselaw has defined ‘special circumstances’ as those outside the common run of things which are exceptional, abnormal or unusual, but they may be less than extraordinary or unique. The proposed activity is for a dwelling within an established coastal settlement that is anticipated by the District Plan. There are no extraordinary or unique circumstances.

- 5.9. Potential adverse effects beyond the immediate site boundary are less than minor. Public notification of the application is not deemed necessary, nor is it required.

Section 95B – Limited Notification Assessment

- 5.10. If an application is not publicly notified, a consent authority must follow the steps of section 95B to decide if limited notification is required. A Section 95B assessment requires a decision about whether there are any specified affected groups or affected persons (under section 95E).

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

S95B(2)(a)	Are there any affected protected customary rights groups
S95B(2)(b)	Are there any affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity)?
S95B(3)(a)	Is the proposed activity adjacent to, or may affect land that is the subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 11?
S95B(3)(b)	Is the person to whom the statutory acknowledgement is made is an affected person under section 95E?

- 5.11. The proposed activity would not affect any protected customary rights groups or marine title groups. The proposed activity is not adjacent to and would not affect land (or persons) that are the subject of a statutory acknowledgement.

Step 2: If not required by step 1, limited notification precluded in certain circumstances

S95B(6)(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.
S95B(6)(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).

- 5.12. The proposed activity is not subject to a rule or national environmental standard that precludes limited notification. The application activity status is not 'controlled'.

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

S95B(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.
S95B(8)	In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.

5.13. The proposed activity does not include a boundary activity.

5.14. Section 95E provides the basis on which a person is deemed to be affected by a proposed activity. Section 95E(1) a person is an affected person if the consent authority decides that the activity's adverse effects on the person are minor or more than minor (but not less than minor). Section 95E(2)(a)-(c) sets out the adverse effects a consent authority can disregard or matters it must have regard to when assessing adverse effects on a person:

Affected Persons

S95E(2)(a)	A consent authority <u>may</u> disregard adverse effect of an activity on the person if a rule or a national environmental standard permits an activity with that effect.
S95E(2)(b)	A consent authority <u>must</u> disregard an adverse effect arising from a a controlled activity or a restricted discretionary activity if the effect of the activity does not relate to a matter for which a rule or a national environmental standard reserves control or restricts discretion.
S95E(2)(c)	A consent authority <u>must</u> have regard to every relevant statutory acknowledgement made in accordance with an Act specified in Schedule 11.

5.15. The application proposal is a Discretionary Activity. It is not a Controlled Activity or a Restricted Discretionary Activity. An assessment of the proposal requires consideration of all potential effects on the environment. The Council may disregard the effects of an activity where they are permitted under a rule or a national environmental standard.

5.16. As detailed within this application, the proposed dwelling complies with the sunlight requirements under the ODP and PDP-DV. The proposed dwelling is not considered to be

objectionable with the surrounding environment and is consistent with existing dwellings in the area. Overall, written approval from the adjoining lot owners has not been obtained given the conclusion has been made that there are no adverse effects created.

- 5.17. There are no other persons on adjacent sites that would be adversely affected to a minor or more than minor extent. HNZPT have been consulted with as part of the pre-application process, with their support provided to the proposal. An ADP approach has been recommended. Iwi have also been contacted, with no response received. The proposed design complies with the permitted setback provisions, such that effects on adjoining allotments are considered to be less than minor. FENZ have been contacted in terms of the fire risk breach, with their approval also received. As such, effects on adjoining property owners are considered to be no more than minor. The Applicant requests that the application be processed on a non-notified basis.

6. Part 2 Assessment

- 6.1. The application must be considered in relation to the purpose and principles of the Resource Management Act 1991 which are contained in Section 5 to 8 of the Act inclusive.
- 6.2. The proposal will meet Section 5 of the RMA as the proposal will sustain the potential of natural and physical resources whilst meeting the foreseeable needs of future generations.
- 6.3. Section 6 of the Act sets contains the matters of national importance. These matters of national importance are considered relevant to this application. The proposal is located within the coastal environment and is considered to be consistent with development within the surrounding environment whilst ensuring effects on natural character are less than minor. The site is not known to contain any outstanding landscapes or high natural features. The site does not adjoin any lakes, rivers or the CMA. The proposal is not considered to exacerbate natural hazards and the recommendations within the supporting SMR will be adhered to, to ensure this.
- 6.4. Section 7 identifies a number of “other matters” to be given particular regard by a Council in the consideration of any assessment for resource consent, including the maintenance and enhancement of amenity values. The proposal maintains amenity values in the area.

- 6.5. Section 8 requires Council to take into account the principals of the Treaty of Waitangi. It is considered that the proposal raises no Treaty issues. Iwi have been contacted as part of the pre-application process with no response received. HNZPT have provided their approval, with the proposal to proceed under the guidance of an ADP. The proposal has considered the principals of the Treaty of Waitangi and would not be contrary to these principals.
- 6.6. Overall, the application is assessed to be consistent with the relevant provisions of Part 2 of the Act, as expressed through the objectives, policies and rules reviewed in earlier sections of this application. Given that consistency, we conclude that the proposal achieves the purposes of sustainable management set out by Sections 5-8 of the Act.

7. Conclusion

- 7.1. The Applicant is seeking a resource consent to construct a dwelling at his site at 6 Flagstaff Road, Russell. The site is currently vacant and is within an existing established coastal settlement.
- 7.2. The site is zoned within The Russell Township Basin & Gateway Area – HP4 and Russell Township Zone within the ODP and is within the Kororāreka Russell Township Zone and Kororāreka Russell Part D Heritage Overlay and Coastal Environment Overlay under the PDP.
- 7.3. The proposal requires Discretionary resource consent under the ODP and Restricted Discretionary resource consent under the PDP (Notified Decisions Version), for matters detailed within this application. Written approval from HNZPT and FENZ have been obtained and is attached to this application.
- 7.4. Potential adverse effects arising from the proposed activity are assessed to be less than minor. Positive effects will be significant for the Applicant. The proposed activity would not be contrary to any ODP or PDP objective or policy. The Applicant requests the application is processed on a non-notified basis.

8. Limitations

- 8.1. This report has been commissioned solely for the benefit of our client, in relation to the project as described above, and to the limits of our engagement, with the exception that the Far North

District Council or Northland Regional Council may rely on it to the extent of its appropriateness, conditions and limitations, when issuing their subject consent.

- 8.2. Copyright of Intellectual Property remains with Northland Planning and Development 2020 Limited, and this report may NOT be used by any other entity, or for any other proposals, without our written consent. Therefore, no liability is accepted by this firm or any of its directors, servants or agents, in respect of any information contained within this report.
- 8.3. Where other parties may wish to rely on it, whether for the same or different proposals, this permission may be extended, subject to our satisfactory review of their interpretation of the report.
- 8.4. Although this report may be submitted to a local authority in connection with an application for a consent, permission, approval, or pursuant to any other requirement of law, this disclaimer shall still apply and require all other parties to use due diligence where necessary.



RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Limited as to Parcels
Search Copy



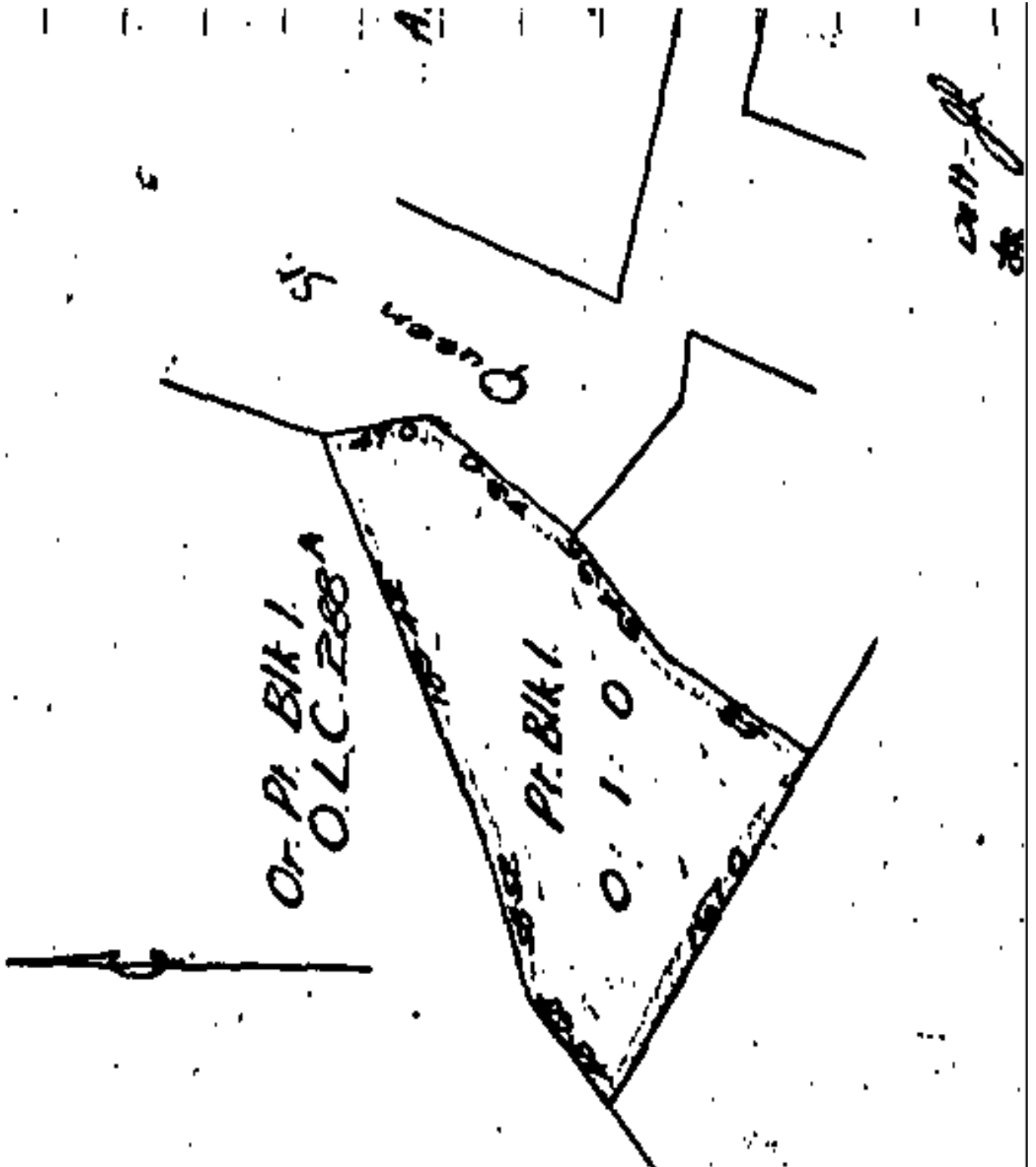

R.W. Muir
Registrar-General
of Land

Identifier **NA512/218**
Land Registration District **North Auckland**
Date Issued 08 October 1928

Prior References
DI 1E. 206

Estate Fee Simple
Area 1012 square metres more or less
Legal Description Part Block I Old Land Claim No 288A
Registered Owners
Luke Kyle Holmes

Interests

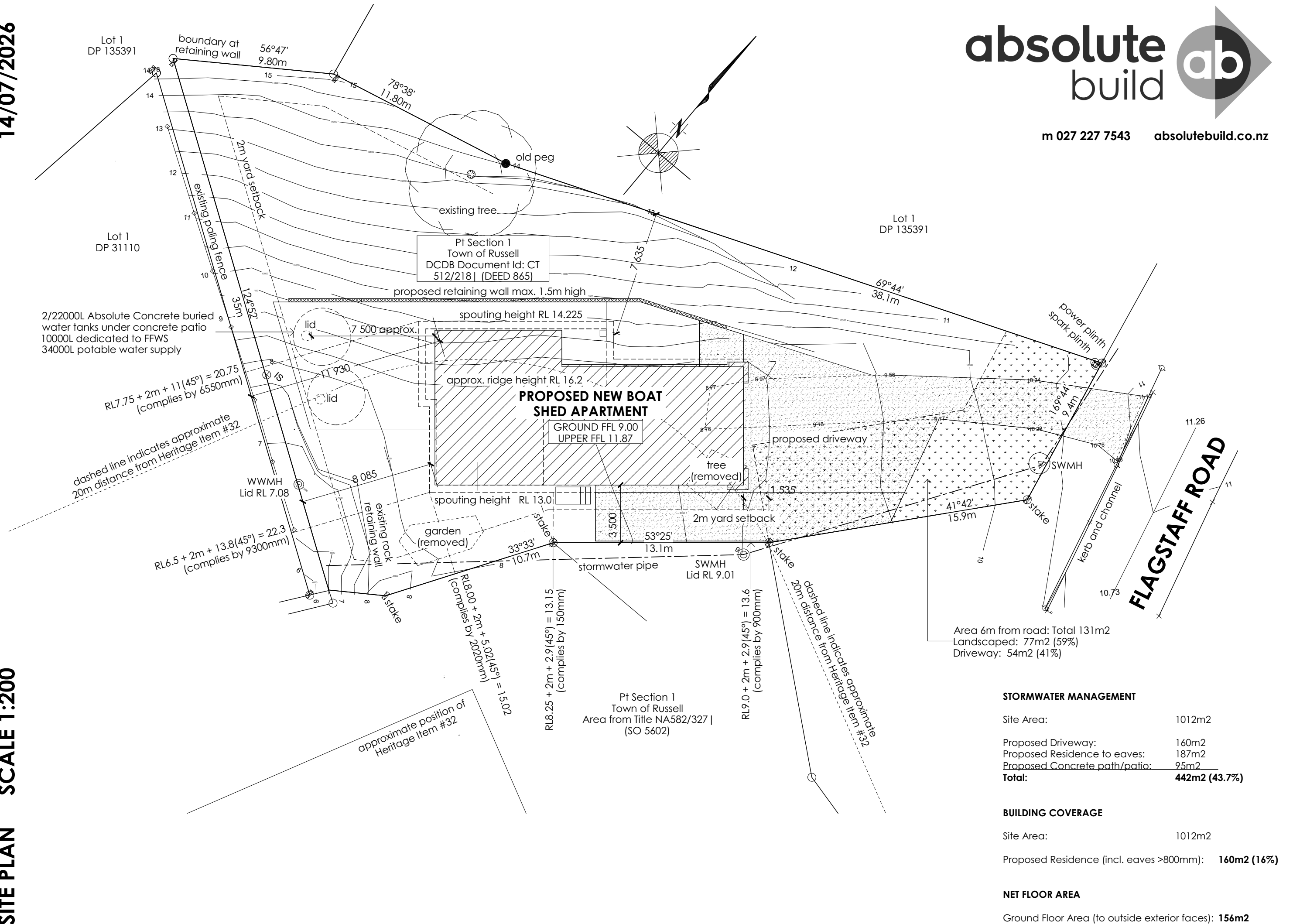


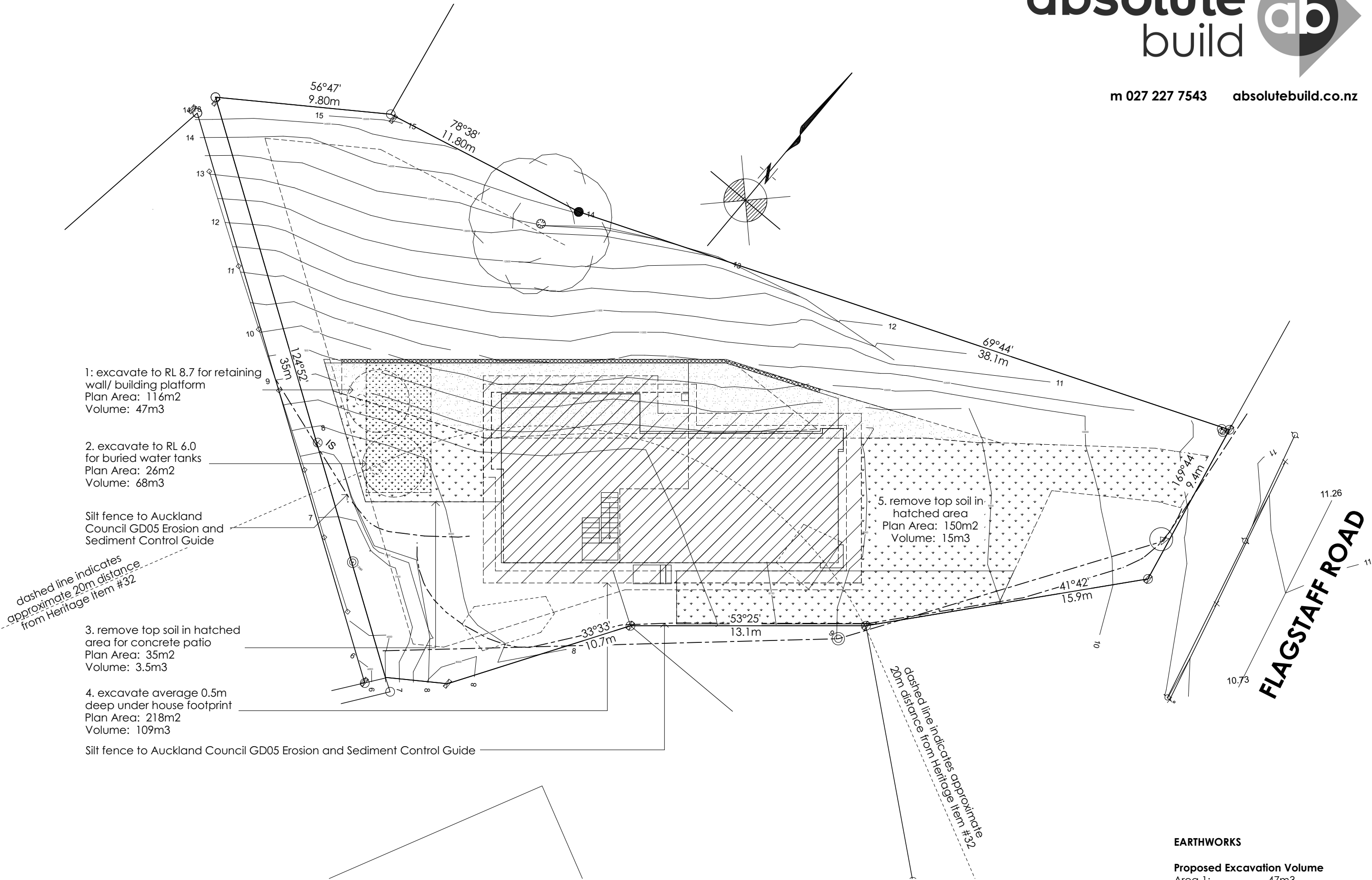
SITE PLAN

SCALE 1:200



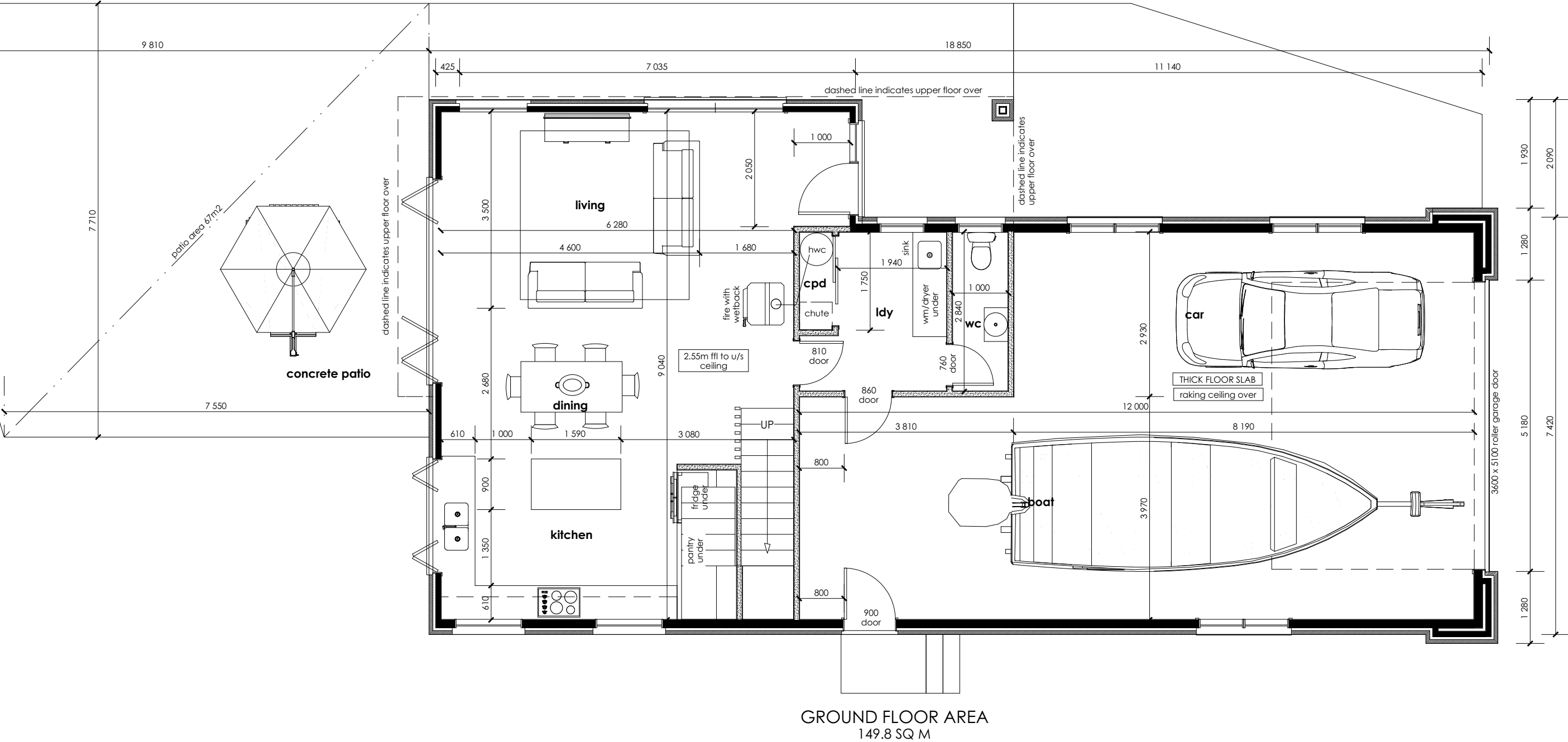
m 027 227 7543 absolutebuild.co.nz

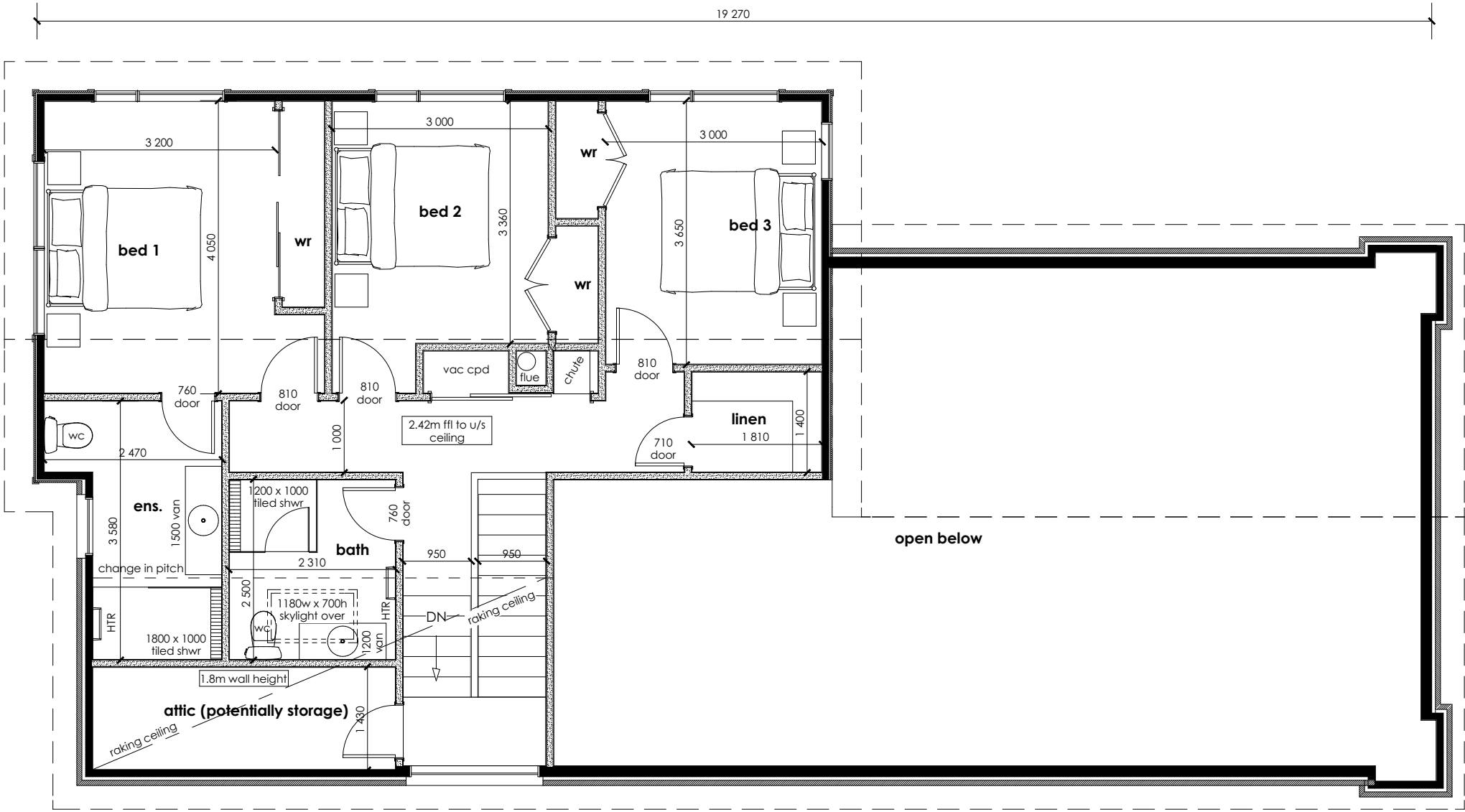




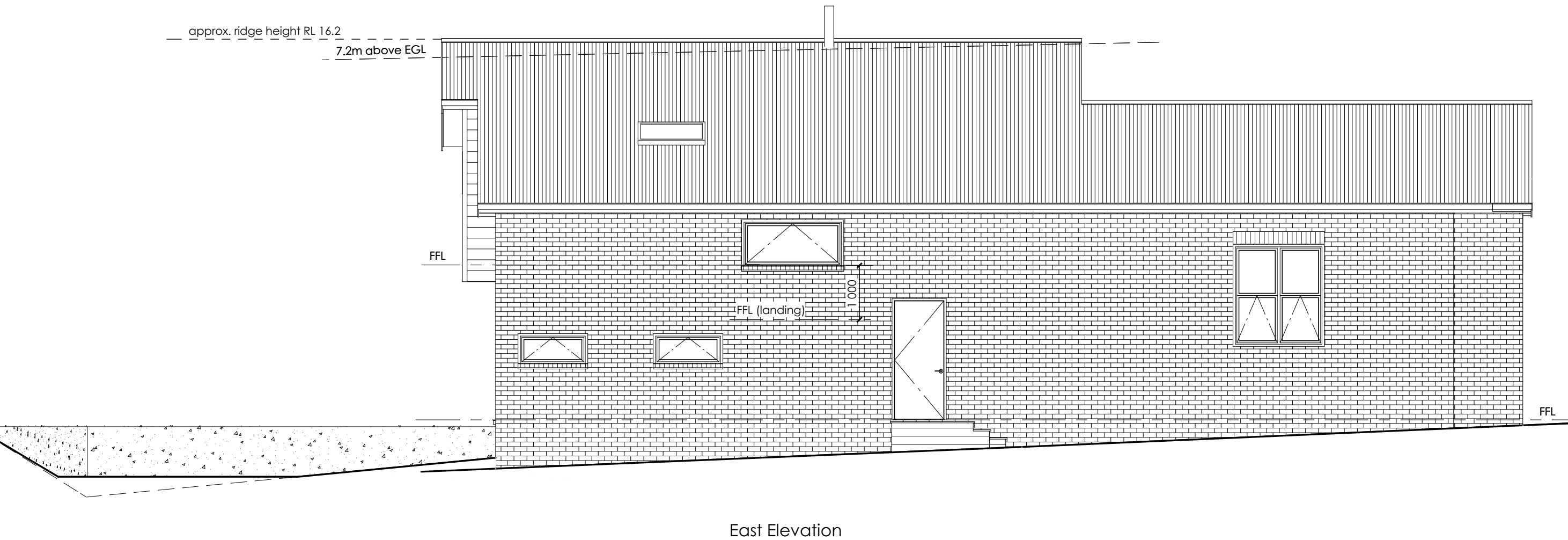
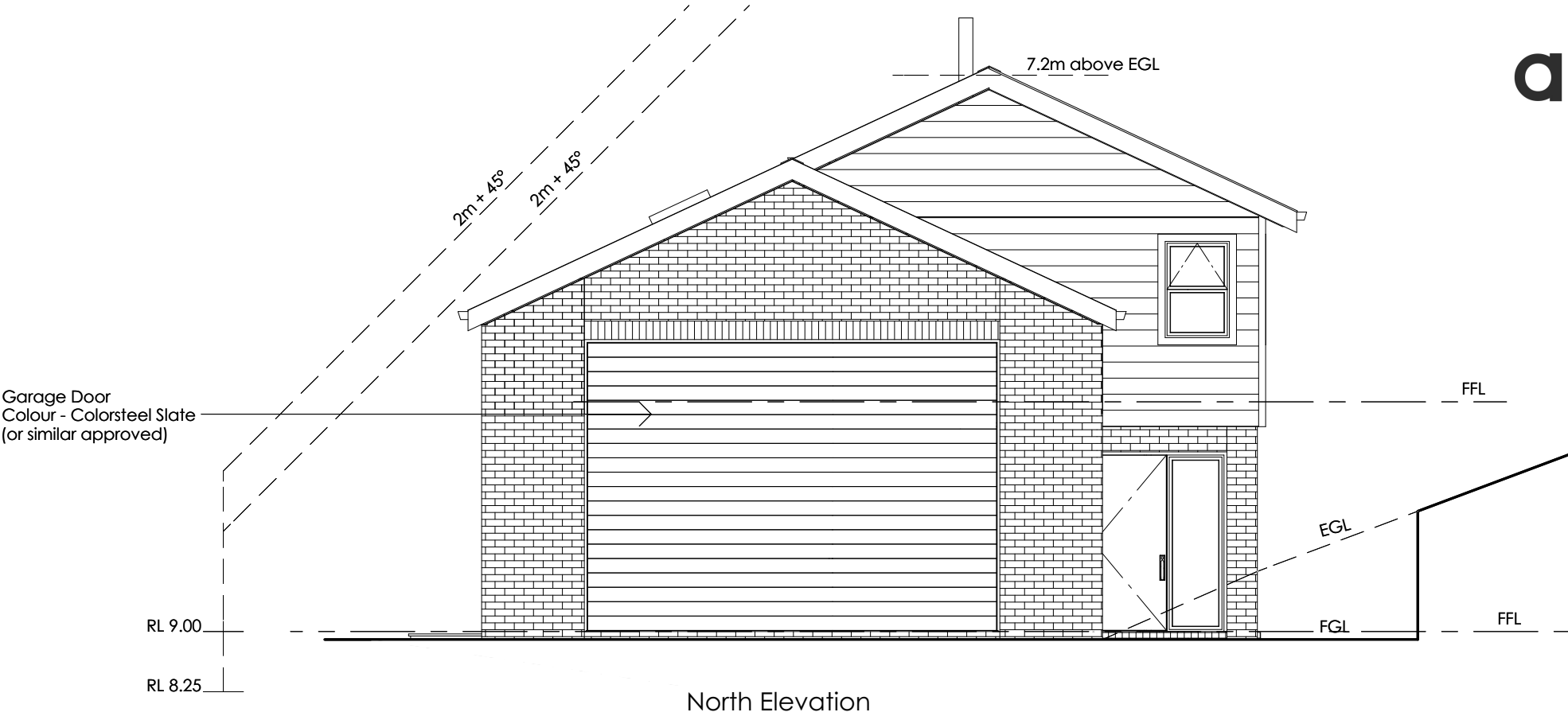
EARTHWORKS

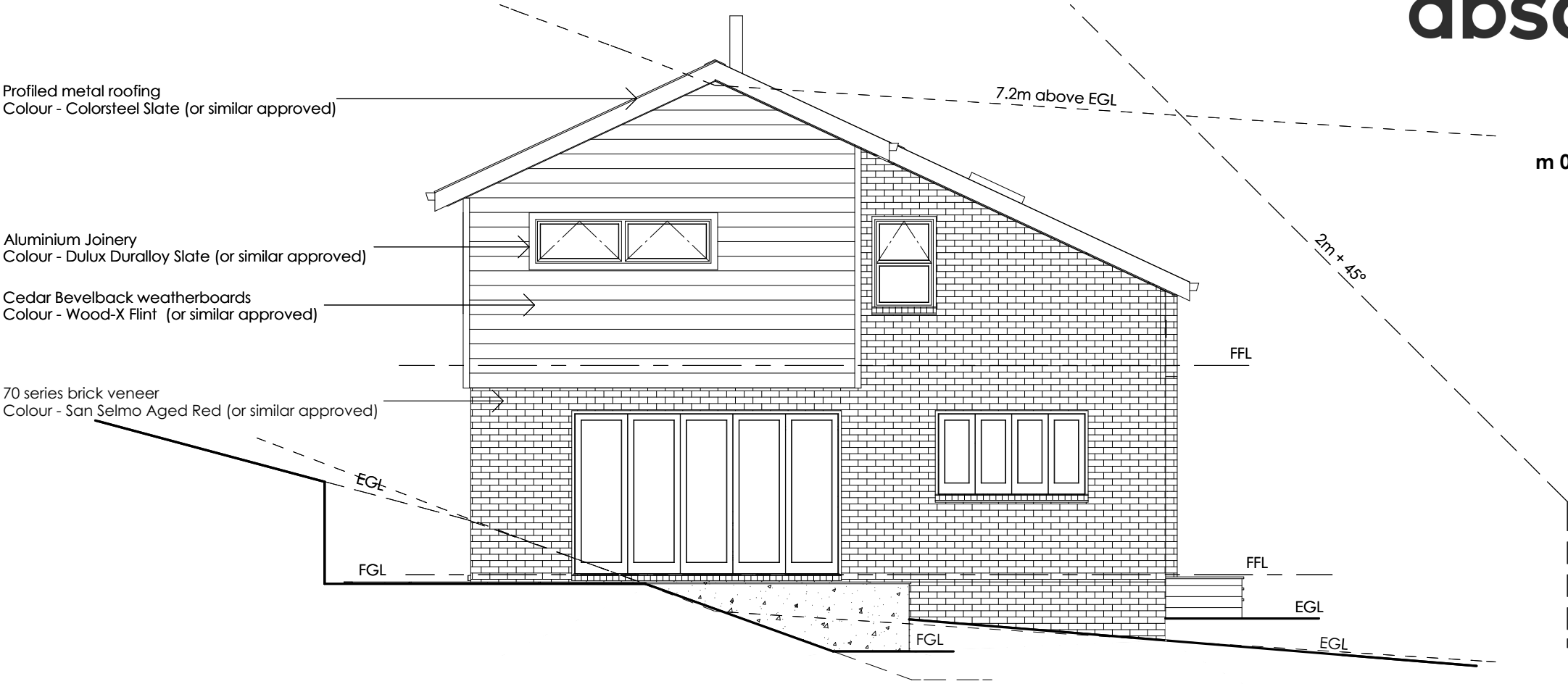
Proposed Excavation Volume	
Area 1:	47m3
Area 2:	68m3
Area 3:	3.5m3
Area 4:	109m3
Area 5:	15m3
Total:	242.5m3





UPPER FLOOR AREA
71.2 SQ M





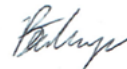
South West Elevation



West Elevation

SITE 6 Flagstaff Road, Russell
LEGAL DESCRIPTION Part Section 1 Town of Russell
PROJECT Proposed Boat Shed Apartment
CLIENT Luke Holmes
REFERENCE NO. 145884
DOCUMENT Stormwater Mitigation Report
STATUS/REVISION No. 01
DATE OF ISSUE 24th April 2026

Report Prepared For	Email
Luke Holmes	lukeholmes@msn.com

Authored by	G.Brant (BE(Hons) Civil)	Civil Engineer	Gustavo@wjl.co.nz	
Reviewed & Approved by	B. Steenkamp (CPEng, BEng Civil, CMEngNZ, BSc (Geology))	Senior Civil Engineer	BenS@wjl.co.nz	

1. EXECUTIVE SUMMARY

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

Legal Description:	Part Section 1 Town of Russell	
Site Area:	1,012m ²	
Development Type:	Proposed Boat Shed Apartment	
Development Proposals Supplied:	Plan Set by Absolute Build Ltd (Ref No: dated: 13.03.2026)	
Associated Documents:	Geotechnical Report WJL Ref. 145882	
District Plan Zone:	Russell Township Zone	
Permitted Activity Coverage:	<u>35%</u>	
Impermeable Coverage:	Post-Development Impermeable Areas	
	Total Roof Area	187m ²
	Total Hardstand	255m ²
	Total impermeable area = 442m ² or 43.7%	
Activity Status:	<u>Discretionary Activity</u>	
Roof Attenuation:	Attenuation is to be provided in accordance with the requirements outlined in Section 5 via the proposed dual-purpose rainwater tank.	
	Proposed Tank – 2 x 25,000 litre Rainwater Tanks (or approved equivalent)	
	Dimensions – 3600mmØ x 2600mm high (or greater)	
	50% AEP & 20% AEP & 1% AEP Control Orifice – 58mmØ orifice; located >180mm below the overflow outlet	
	Overflow – 100mmØ at the top of the tank	
Hardstand Mitigation:	It is recommended that the proposed concrete areas be shaped to direct runoff to catchpits, which shall discharge to the available stormwater connection via sealed pipes.	
Point of Discharge:	To existing stormwater connection if suitable. Alternatively, a new connection to the street catchpit is proposed.	

2. SCOPE OF WORK

Wilton Joubert Ltd. (WJL) was engaged by the client to produce an on-site stormwater mitigation assessment for the above site.

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

- Plan Set by Absolute Build Ltd (Ref No: dated: 13.03.2026)

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

3. SITE DESCRIPTION

The proposed development will be constructed within the following property, which is located off the western side of Flagstaff Road, towards the northern outskirts of the Russell Township:

- 6 Flagstaff Road, Russell, legally described as Pt Section 1 Town of Russell.



Figure 1: Aerial snip from FNDC Maps showing site boundaries (cyan) & public wastewater (red)

The surface area of the subject site is 1,012m² and is accessed at the eastern boundary via an aggregate driveway from Flagstaff Road. The site is vacant of structures and is largely covered in lawn, with bush present across the northern portion. A rock wall up to 1.0m in height is present along the southwestern boundary corner. A shared paved driveway also bounds the northern boundary.

Topographically speaking, the property is located at the toe of a long, very steep, bush covered side flank that descends from a spur crest some 60m upslope of the property to the northwest. The northern boundary is initially very steep, averaging 45°, before reducing to an average uniform moderate grade of 18° across the northwestern portion of the site. The southeastern portion is the toe of the common flank and is near level to gently sloping.

The Far North District Council (FNDC) on-line GIS Water Services Map indicates that a public underground wastewater line bounds the southwestern boundary. Additionally, the drawings supplied indicate that an underground stormwater line bounds the southeastern boundary and includes two manholes near the middle and eastern end of the subject boundary.

4. DEVELOPMENT PROPOSALS

The development proposal, obtained from the client, is to construct a boat shed apartment and associated concrete hardstand areas on-site as depicted in the plan set provided by Absolute Build Ltd (Ref No: dated: 13.03.2026).

The principal objective of this assessment is to provide an indicative stormwater disposal design which will manage runoff generated from the increased impermeable areas associated with the proposed development.

5. ASSESSMENT CRITERIA

Impermeable Areas

The calculations for the stormwater system for the development are based on a gross site area of 1,012m² and the below areas *extracted from the supplied plans*:

	Pre-Development	Post-Development	Total Change
Proposed Roof Area	0 m ²	187 m ²	187 m ²
Total Hardstand Area	0 m ²	255 m ²	255 m ²
Proposed Concrete Driveway	0 m ²	160 m ²	
Proposed Concrete Path / Patio	0 m ²	95 m ²	
Pervious	1,012 m ²	570 m ²	-442 m ²

The total amount of impermeable area on-site, post-development, equates to 442m² or 43.7% 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 Russell Township Zone. The following rules apply under the FNDC District Plan:

10.9.5.1.7 – **Permitted Activities – Stormwater Management** - The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 35%.

10.9.5.2.9 – **Restricted Discretionary Activities – Stormwater Management** - The maximum proportion site area covered by buildings and other impermeable surfaces shall be 40%.

The total proposed impermeable area exceeds 40% and does not comply with Permitted Activity Rule (10.9.5.1.7) nor Restricted Discretionary Activity (10.9.5.2.9). Therefore, the proposal is considered 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 (10.9.5.1.7) is 87.8m². In accordance with Table 4-1 of the Engineering Standards, Flow Attenuation and Flood Control attenuation will be provided for the proposed impermeable areas in excess of the permitted activity threshold.

Provided that the recommendations within this report are adhered to, the effects of stormwater runoff resulting from the unattenuated proposed impermeable areas 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.

The Type IA storm profile was utilised for Flow and Flood Control calculations in accordance with TR-55. HydroCAD® software has been utilised in design for a 50% AEP rainfall value of 127mm with a 24-hour duration, a 20% AEP rainfall value of 167mm with a 24-hour duration and a 1% AEP rainfall value of 298mm with a 24-hour duration utilised for calculations. Rainfall data was obtained from HIRDS and increased by 20% 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 rainwater tanks are utilised to provide the proposed apartment with a potable water supply. The tank type is at the discretion of the client. A proprietary guttering system is required to collect roof runoff from the proposed roof area. 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 proposed roof area. Provision should be made by the homeowner for top-up of the tanks via water tankers in periods of low rainfall.

All potable water tanks must be constructed level and fitted with balancing pipes at the top and 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 100mmØ 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:

Proposed Tank	2 x 25,000L litre Rainwater Tanks (or approved equivalent)
Tank dimensions	3600mmØ (or greater) x 2600mm high (or greater)
Outlet orifice (50% AEP, 20% AEP & 1% AEP Control)	58mm diameter orifice; located <u>>180mm below the overflow outlet</u> - 66mm water elevation (50% AEP) - 1.3m³ storage (50% AEP) - 87mm water elevation (20% AEP) - 1.8m³ storage (20% AEP) - 175mm water elevation (1% AEP) - 3.6m³ storage (1% AEP)
Overflow Outlet	100mm diameter; located at the top of the tank

Discharge from the potable water / detention tanks must be transported via sealed pipes to the available stormwater connection. Refer to the appended Site Plan (145884-C200), Tank Detail (145884-C201) and calculation set for clarification.

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

Stormwater Mitigation – Hardstand

It is recommended that the proposed concrete areas be shaped to direct runoff to catchpits, which shall discharge to the available stormwater connection via sealed pipes. Refer to the appended Site Plan (145884-C200) and calculation set for clarification.

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 public stormwater network.

The drainage line to the available stormwater connection must have a minimum grade of 2% downslope of the joint where any hardstand drainage lines join the tank outlet line. Alternatively, the line to the available stormwater connection is to be upsized to a 150mmØ line at a minimum 1% grade.

Stormwater Mitigation – Retaining Walls

Runoff from the drainage portion of the retaining walls should be directed via sealed pipes to the available stormwater connection.

Stormwater Mitigation - Discharge Point

All piped stormwater runoff must be directed to the existing stormwater network.

The existing stormwater connection / line shown on the supplied architectural plans must be located, surveyed and confirmed as suitable prior to construction. If the connection is not available, has insufficient depth, or is not suitable for connection, WJL must be contacted to review the discharge arrangement.

7. STORMWATER RUNOFF SUMMARY

Refer to the appended HydroCAD Calculation output.

Maximum Permitted Threshold Peak Flows – 50% AEP, 20% AEP & 1% AEP Storm Events + CCF

<i>Surface</i>	<i>Area</i>	<i>Runoff CN</i>	<i>50% AEP Peak Flow Rate</i>	<i>20% AEP Peak Flow Rate</i>	<i>1% AEP Peak Flow Rate</i>
Maximum Permitted Impermeable Area	354.2 m ²	98	3.37ℓ/s	4.58ℓ/s	8.50ℓ/s
Remaining Greenfields	87.8 m ²	74			

Post-Development Scenario – 50% AEP, 20% AEP & 1% AEP Storm Events + CCF

Surface	Area	Runoff CN	50% AEP Peak Flow Rate	20% AEP Peak Flow Rate	1% AEP Peak Flow Rate
Proposed roof area via potable water tank fitted with attenuation outlets	187 m ²	98	3.37ℓ/s	4.38ℓ/s	7.47ℓ/s
Proposed concrete areas to be 'over-mitigated'	255 m ²	98			

Given the design parameters, Flow Attenuation and Flood Control will be achieved for the proposed impermeable areas in excess of the permitted activity threshold.

8. DISTRICT PLAN ASSESSMENT

As the proposed development is not compliant with Permitted Activity Rule 10.9.5.1.7, nor Restricted Discretionary Activity Rule 10.9.5.2.9, 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 FNDCCP Section 11.3.

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

<i>(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;</i>	Impermeable surfaces resulting from the development increase site impermeability by 442m ² . Through tank attenuation runoff resulting from the proposed development is to be attenuated back to permitted flows for the 50%, 20% & 1% AEP storm events, adjusted for climate change.
<i>(b) the extent to which Low Impact Design principles have been used to reduce site impermeability;</i>	Low Impact Design principles have been incorporated through the reuse of roof runoff for potable water supply, attenuation within dual-purpose rainwater tanks, and retention of landscaped / pervious areas where practicable. The driveway and patio areas have been limited to those necessary for access and use of the proposed apartment.
<i>(c) any cumulative effects on total catchment impermeability;</i>	Impervious coverage will increase by 442m ² .
<i>(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;</i>	Runoff resulting from the proposed impermeable areas is to be collected and directed to stormwater management devices and then to the available stormwater connection via sealed pipes. This should not worsen the ability of natural ground to absorb water in normal conditions.
<i>(e) the physical qualities of the soil type;</i>	Clayey SILT soils – moderate drainage
<i>(f) any adverse effects on the life supporting capacity of soils;</i>	Runoff resulting from the proposed impermeable areas is to be collected and directed to stormwater management devices and then to the available stormwater connection via sealed pipes, mitigating the

	potential for contamination of surrounding soils and harm to the life supporting capacity of soils.
<i>(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;</i>	Runoff resulting from the proposed impermeable areas is to be collected and directed to stormwater management devices and then to the available stormwater connection via sealed pipes, mitigating the potential for contamination of surrounding soils and harm to the life supporting capacity of soils. Public wastewater connection is available to the site.
<i>(h) the extent to which paved, Impermeable Surfaces are necessary for the proposed activity;</i>	The proposed driveway is necessary to provide access to the proposed apartment and is not considered excessive.
<i>(i) the extent to which land scaping and vegetation may reduce adverse effects of run-off;</i>	Existing vegetation and any plantings introduced by the owner 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.
<i>(j) any recognised standards promulgated by industry groups;</i>	The stormwater design has been prepared with reference to the FNDC Engineering Standards, NZBC Clause E1 Surface Water, HIRDS rainfall data, and TR-55 / HydroCAD hydrological modelling methodology.
<i>k) the means and effectiveness of mitigating stormwater runoff to that expected by permitted activity threshold;</i>	Through tank attenuation runoff resulting from the proposed development is to be attenuated back to permitted flows for the 50%, 20% & 1% AEP storm events, adjusted for climate change.
<i>(l) the extent to which the proposal has considered and provided for climate change;</i>	Rainfall data was obtained from HIRDS and increased by 20% to account for climate change.
<i>(m) the extent to which stormwater detention ponds and other engineering solutions are used to mitigate any adverse effects.</i>	Through tank attenuation runoff resulting from the proposed development is to be attenuated back to permitted flows for the 50%, 20% & 1% AEP storm events, 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 (145884-C200 & 145884-C201).

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), geotechnical requirements, 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)

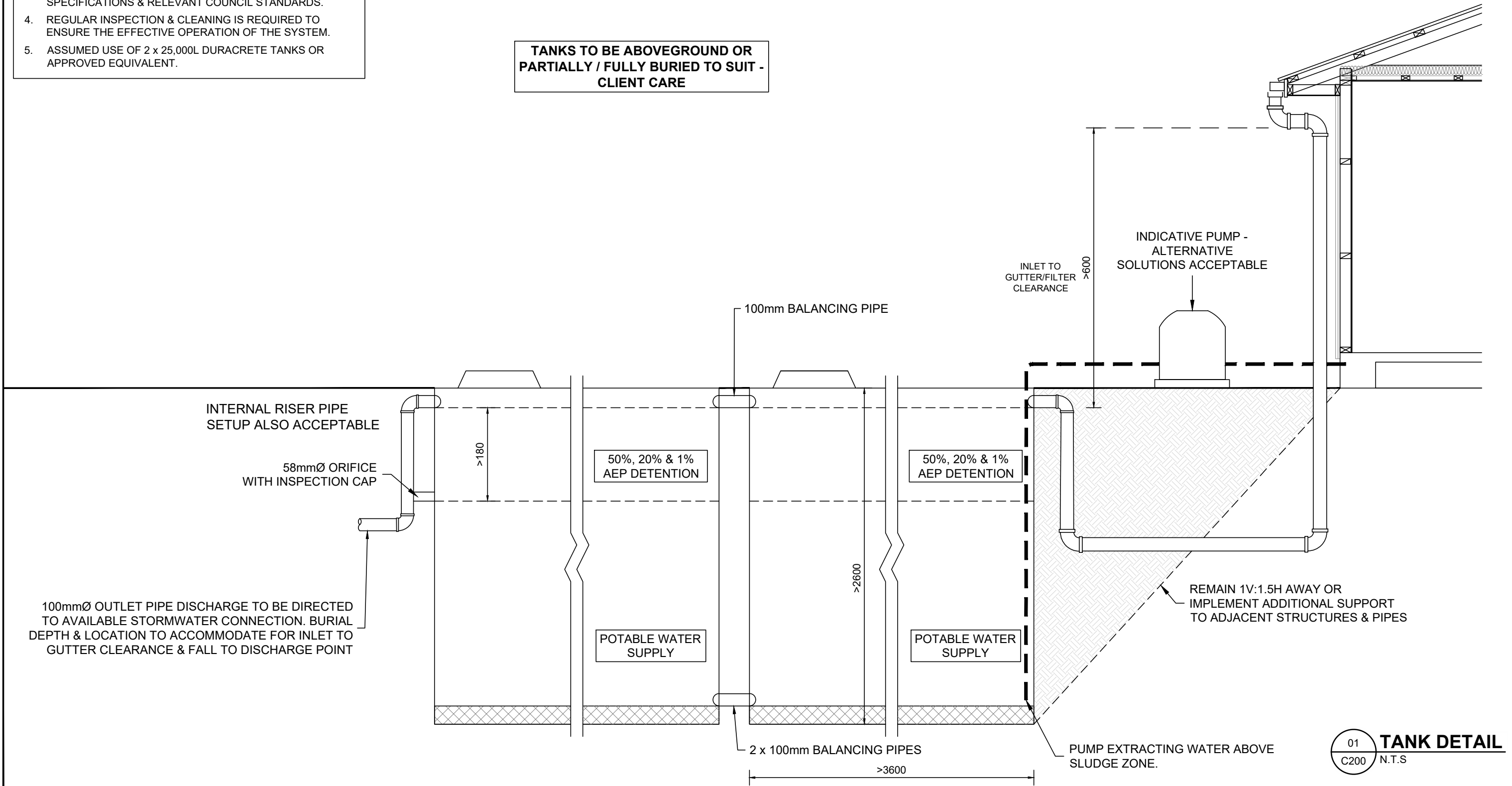
REPORT ATTACHMENTS

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

NOTES:

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

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



01 TANK DETAIL
C200 N.T.S



WILTON JOUBERT
Consulting Engineers
Northland: 09 945 4188 Auckland: 09 527 0196
Christchurch: 021 824 063 Wanaka: 03 443 6209
www.wiltonjoubert.co.nz

ISSUE / REVISION			
No.	DATE	BY	DESCRIPTION
01	APR '26	GMB	STORMWATER MITIGATION REPORT

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:

TANK DETAIL

PROJECT DESCRIPTION:

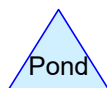
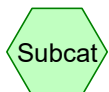
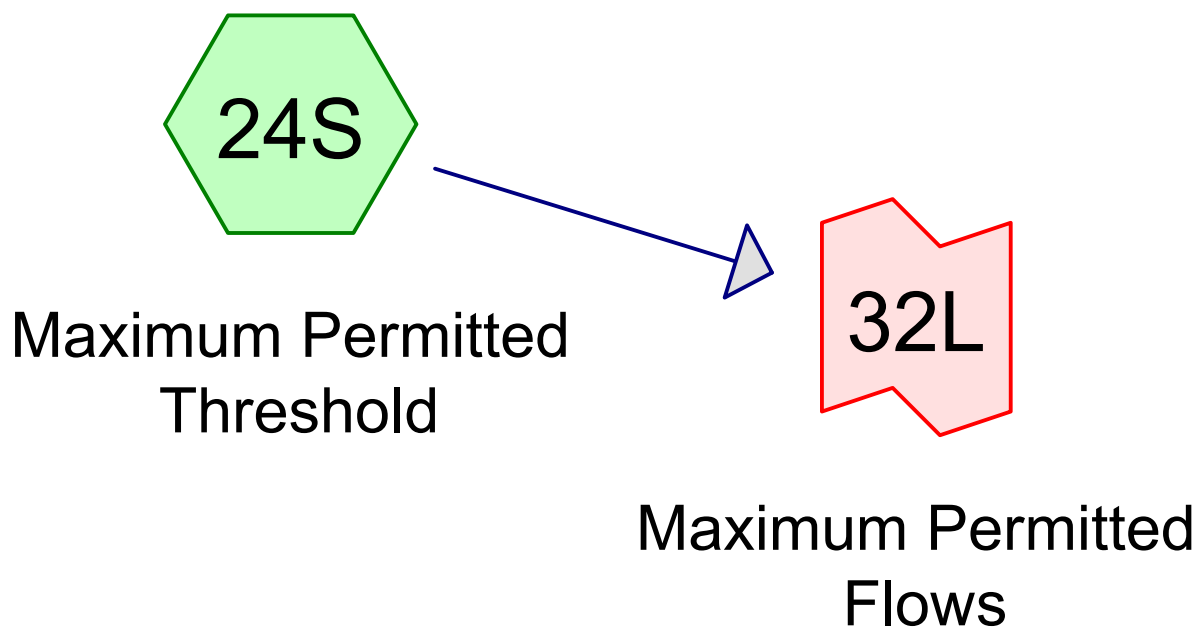
STORMWATER MITIGATION REPORT

PROJECT TITLE:

**PT SEC 1 TN OF RUSSELL
6 FLAGSTAFF ROAD
RUSSELL
NORTHLAND**

ORIGINAL DRAWING SIZE:	OFFICE:
A3	OREWA
DRAWING SCALE:	CO-ORDINATE SYSTEM:
N.T.S	NOT COORDINATED
DRAWING NUMBER:	ISSUE:
145884-C201	01
COPYRIGHT - WILTON JOUBERT LIMITED	

Permitted Activity Peak Flows



Routing Diagram for 145884

Prepared by Wilton Joubert Limited, Printed 9/04/2026
HydroCAD® 10.00-26 s/n 10413 © 2020 HydroCAD Software Solutions LLC

145884

Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

Prepared by Wilton Joubert Limited

Printed 9/04/2026

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Page 2

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 24S: Maximum Permitted Runoff Area=442.0 m² 80.14% Impervious Runoff Depth>275 mm
Tc=10.0 min CN=93 Runoff=8.50 L/s 121.8 m³

Link 32L: Maximum Permitted Flows

Inflow=8.50 L/s 121.8 m³
Primary=8.50 L/s 121.8 m³

145884

Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

Prepared by Wilton Joubert Limited

Printed 9/04/2026

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Page 3

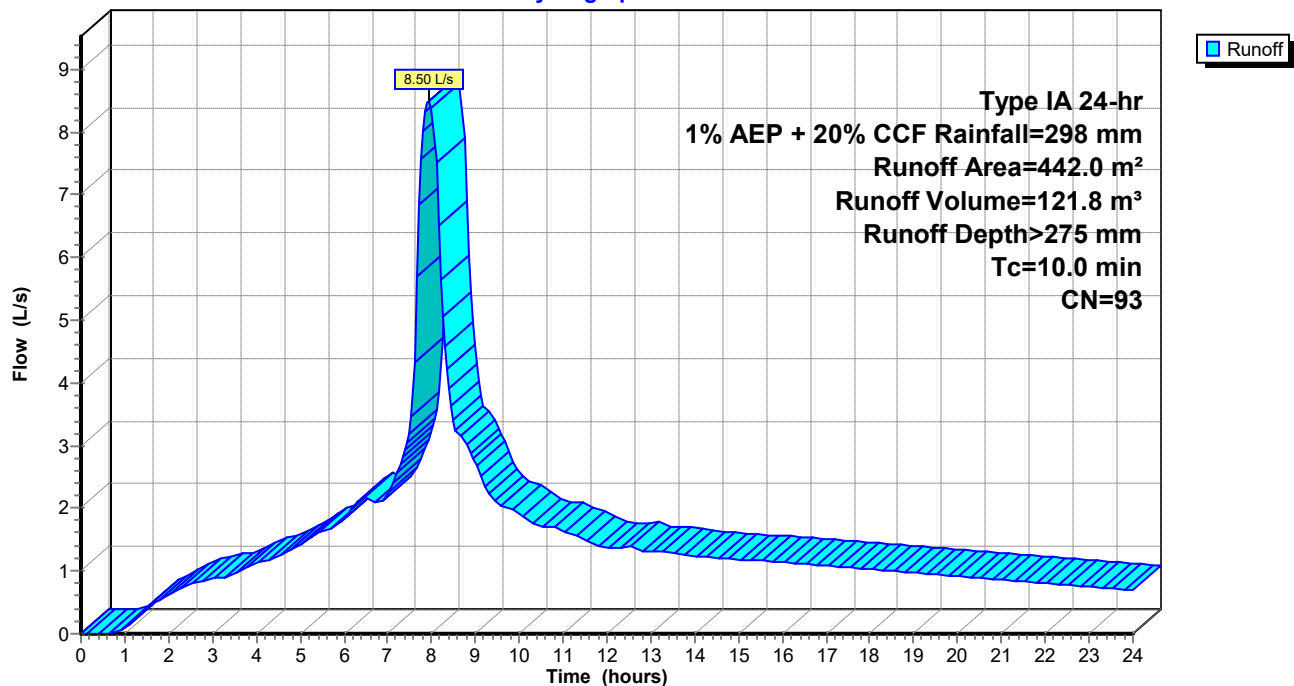
Summary for Subcatchment 24S: Maximum Permitted ThresholdRunoff = 8.50 L/s @ 7.94 hrs, Volume= 121.8 m³, Depth> 275 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

Area (m ²)	CN	Description
87.8	74	>75% Grass cover, Good, HSG C
354.2	98	Roofs, HSG C
442.0	93	Weighted Average
87.8		19.86% Pervious Area
354.2		80.14% Impervious Area

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

Subcatchment 24S: Maximum Permitted Threshold

Hydrograph



145884

Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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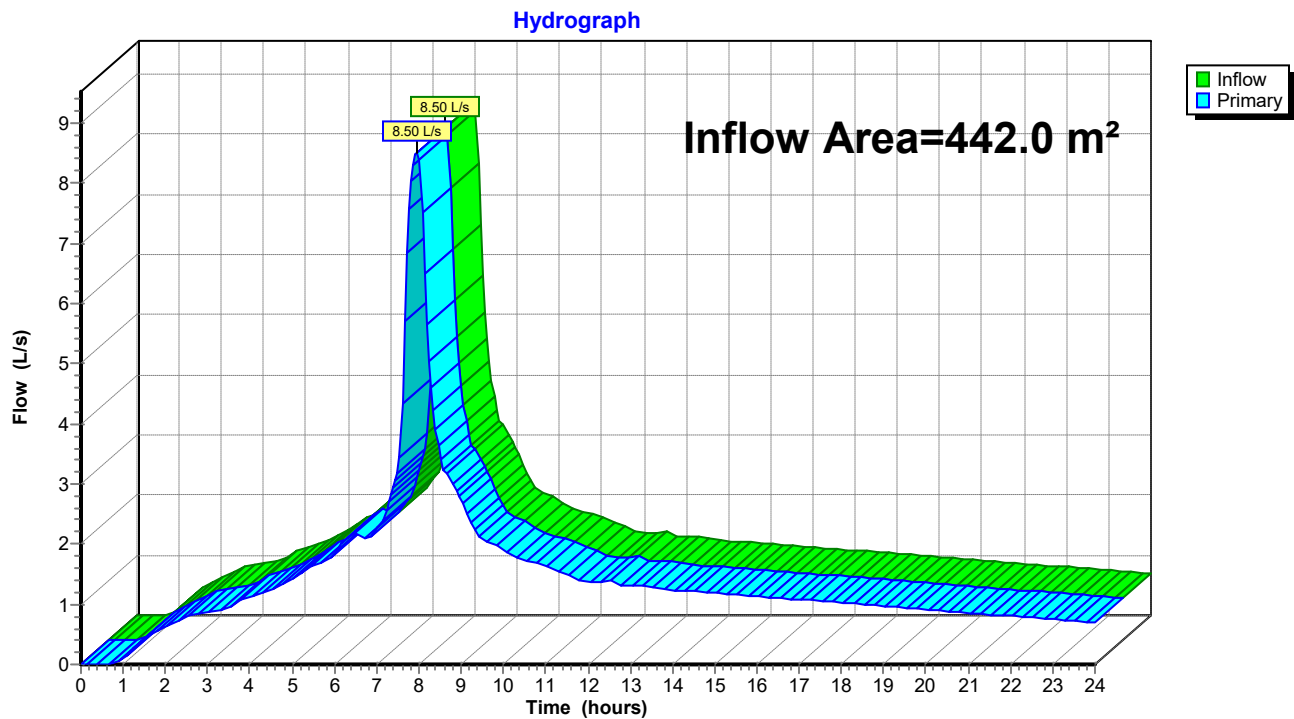
Page 4

Summary for Link 32L: Maximum Permitted Flows

Inflow Area = 442.0 m², 80.14% Impervious, Inflow Depth > 275 mm for 1% AEP + 20% CCF event
Inflow = 8.50 L/s @ 7.94 hrs, Volume= 121.8 m³
Primary = 8.50 L/s @ 7.94 hrs, Volume= 121.8 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 32L: Maximum Permitted Flows



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Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

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

Subcatchment 24S: Maximum Permitted Runoff Area=442.0 m² 80.14% Impervious Runoff Depth>146 mm
Tc=10.0 min CN=93 Runoff=4.58 L/s 64.4 m³

Link 32L: Maximum Permitted Flows

Inflow=4.58 L/s 64.4 m³
Primary=4.58 L/s 64.4 m³

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Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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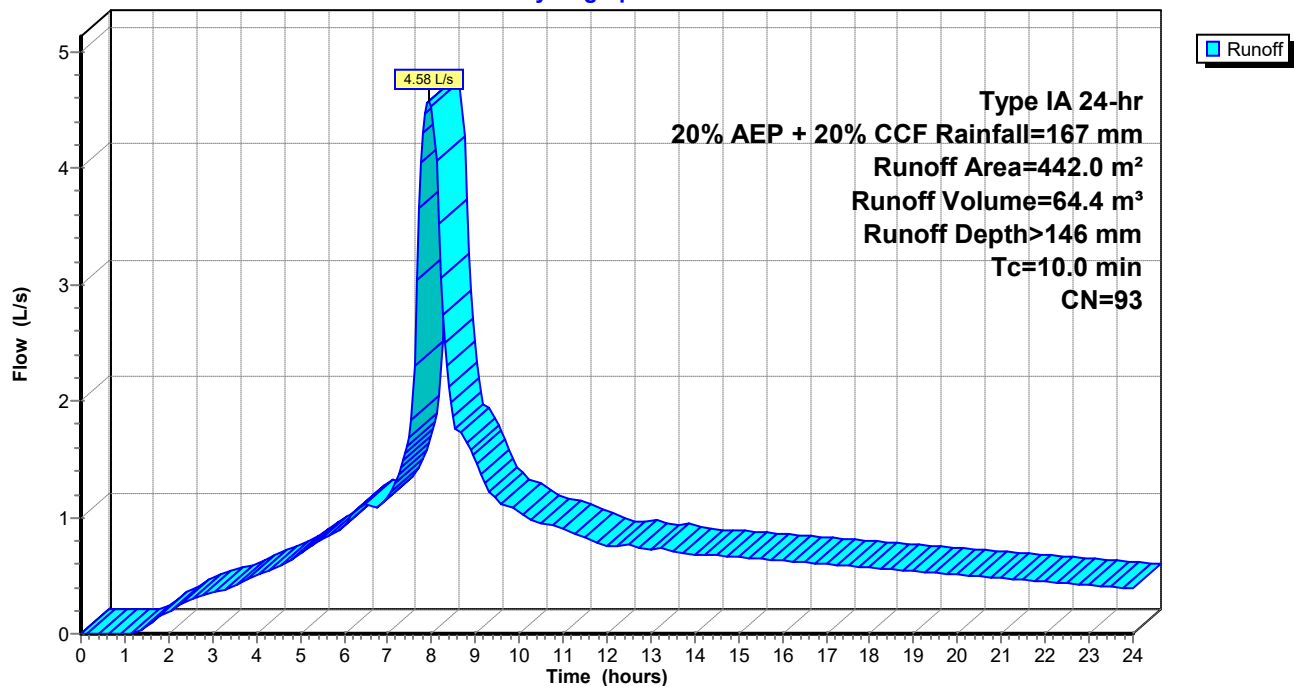
Summary for Subcatchment 24S: Maximum Permitted ThresholdRunoff = 4.58 L/s @ 7.95 hrs, Volume= 64.4 m³, Depth> 146 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

Area (m ²)	CN	Description
87.8	74	>75% Grass cover, Good, HSG C
354.2	98	Roofs, HSG C
442.0	93	Weighted Average
87.8		19.86% Pervious Area
354.2		80.14% Impervious Area

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

Subcatchment 24S: Maximum Permitted Threshold

Hydrograph



145884

Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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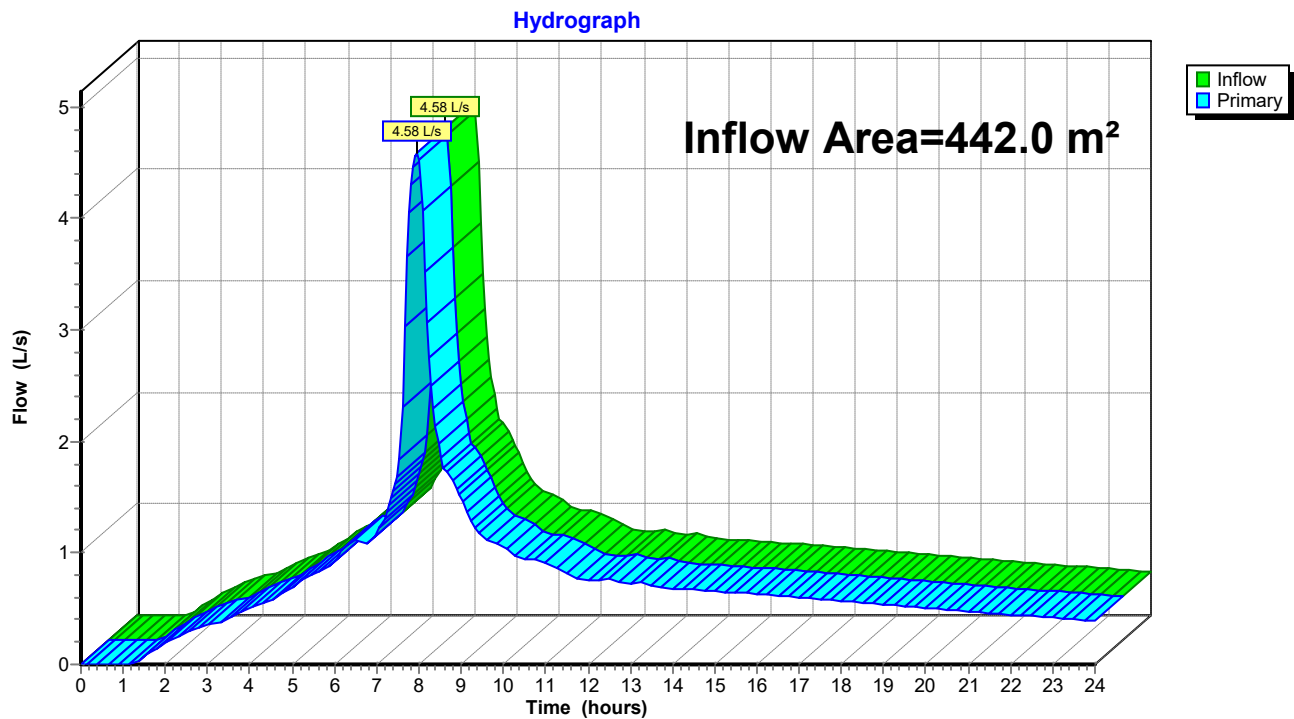
Page 7

Summary for Link 32L: Maximum Permitted Flows

Inflow Area = 442.0 m², 80.14% Impervious, Inflow Depth > 146 mm for 20% AEP + 20% CCF event
Inflow = 4.58 L/s @ 7.95 hrs, Volume= 64.4 m³
Primary = 4.58 L/s @ 7.95 hrs, Volume= 64.4 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 32L: Maximum Permitted Flows



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Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 24S: Maximum Permitted Runoff Area=442.0 m² 80.14% Impervious Runoff Depth>106 mm
Tc=10.0 min CN=93 Runoff=3.37 L/s 47.0 m³

Link 32L: Maximum Permitted Flows

Inflow=3.37 L/s 47.0 m³
Primary=3.37 L/s 47.0 m³

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Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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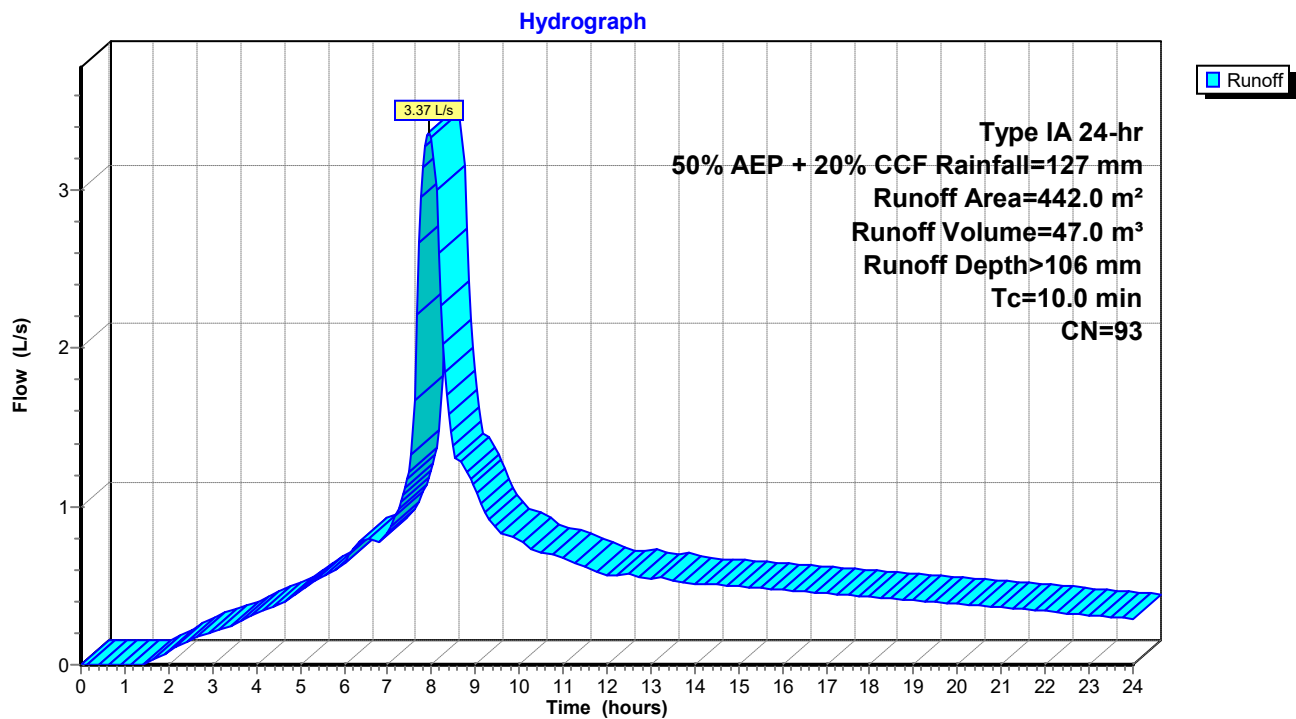
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Summary for Subcatchment 24S: Maximum Permitted ThresholdRunoff = 3.37 L/s @ 7.96 hrs, Volume= 47.0 m³, Depth> 106 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

Area (m ²)	CN	Description
87.8	74	>75% Grass cover, Good, HSG C
354.2	98	Roofs, HSG C
442.0	93	Weighted Average
87.8		19.86% Pervious Area
354.2		80.14% Impervious Area

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

Subcatchment 24S: Maximum Permitted Threshold

145884

Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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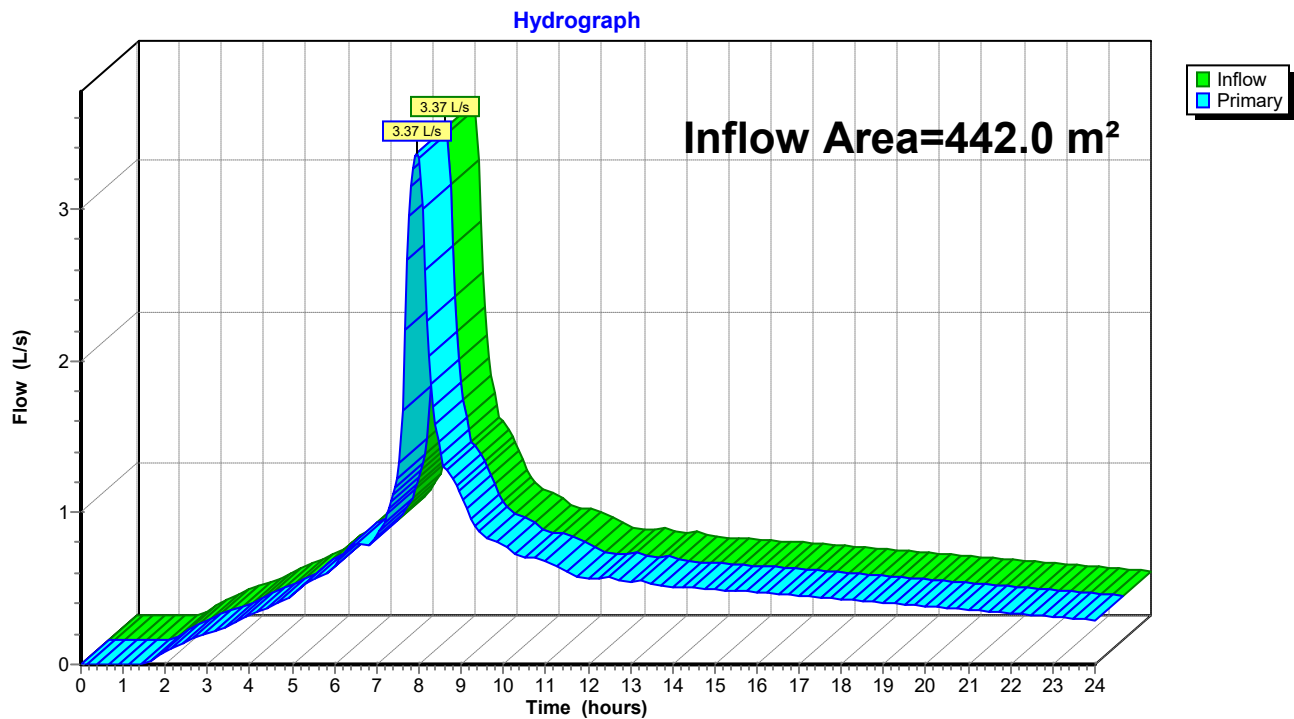
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Summary for Link 32L: Maximum Permitted Flows

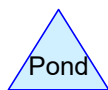
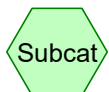
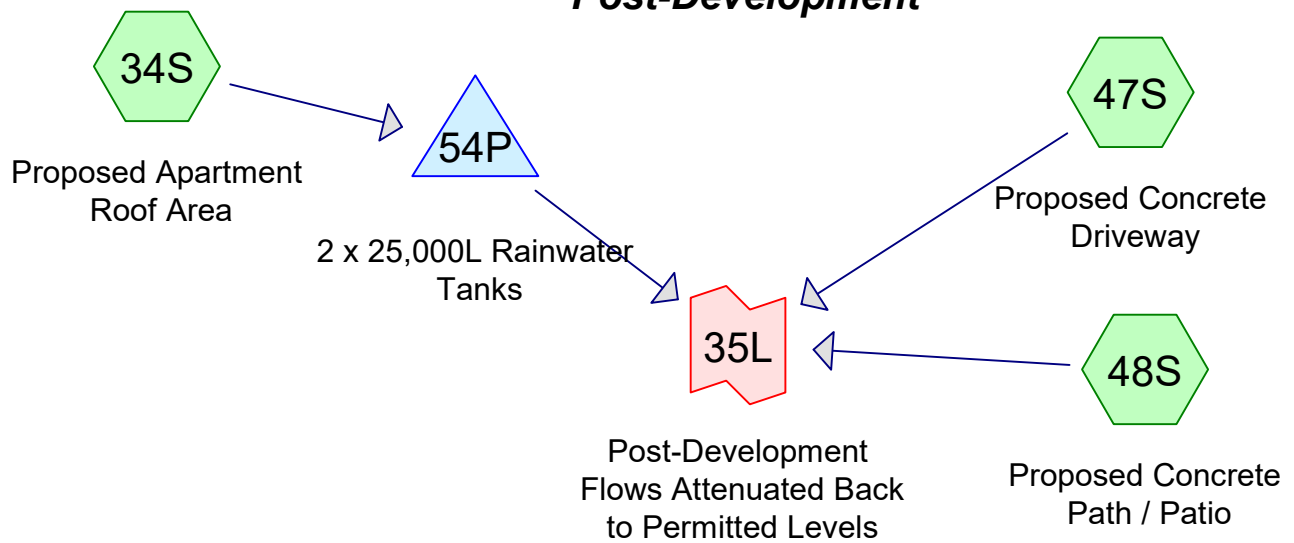
Inflow Area = 442.0 m², 80.14% Impervious, Inflow Depth > 106 mm for 50% AEP + 20% CCF event
Inflow = 3.37 L/s @ 7.96 hrs, Volume= 47.0 m³
Primary = 3.37 L/s @ 7.96 hrs, Volume= 47.0 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 32L: Maximum Permitted Flows



Post-Development



Routing Diagram for 145884

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Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 34S: Proposed

Runoff Area=187.0 m² 100.00% Impervious Runoff Depth>291 mm
Tc=10.0 min CN=98 Runoff=3.67 L/s 54.4 m³

Subcatchment 47S: Proposed

Runoff Area=160.0 m² 100.00% Impervious Runoff Depth>291 mm
Tc=10.0 min CN=98 Runoff=3.14 L/s 46.6 m³

Subcatchment 48S: Proposed Concrete

Runoff Area=95.0 m² 100.00% Impervious Runoff Depth>291 mm
Tc=10.0 min CN=98 Runoff=1.87 L/s 27.7 m³

Pond 54P: 2 x 25,000L Rainwater Tanks

Peak Elev=0.175 m Storage=3.6 m³ Inflow=3.67 L/s 54.4 m³
Outflow=2.68 L/s 54.0 m³

Link 35L: Post-Development Flows Attenuated Back to Permitted Levels

Inflow=7.47 L/s 128.2 m³
Primary=7.47 L/s 128.2 m³

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Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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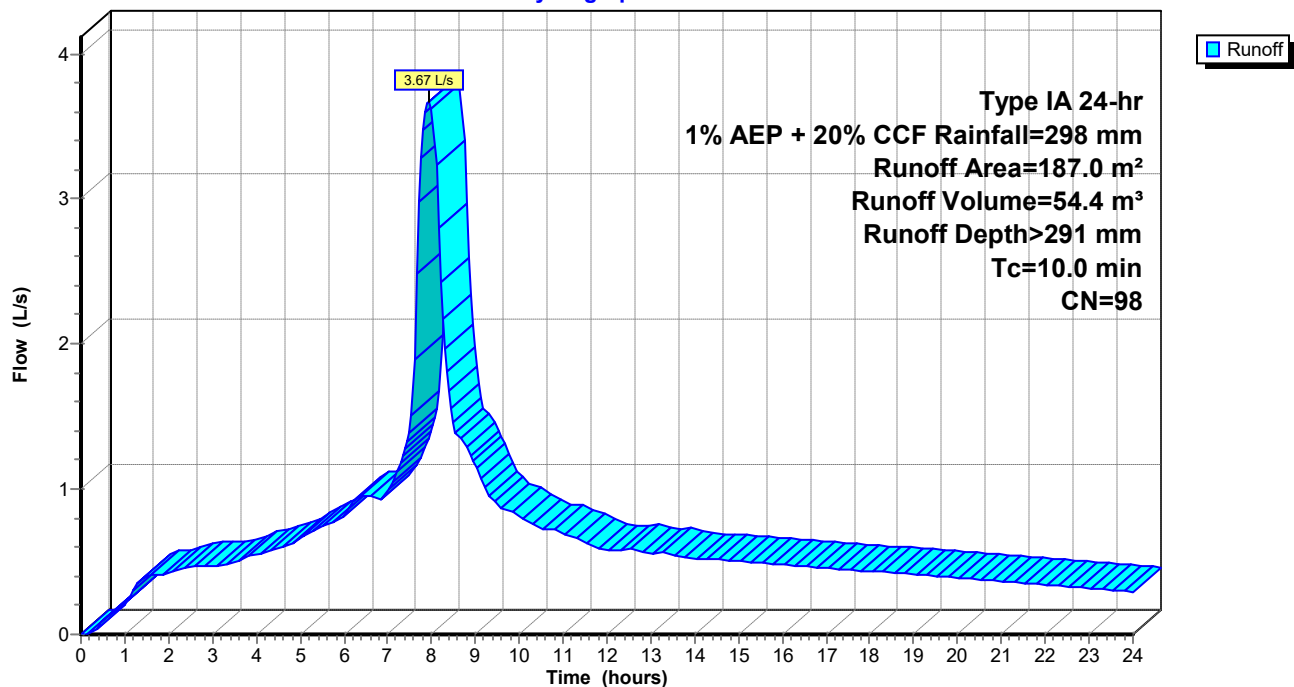
Summary for Subcatchment 34S: Proposed Apartment Roof AreaRunoff = 3.67 L/s @ 7.94 hrs, Volume= 54.4 m³, Depth> 291 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

Area (m ²)	CN	Description
187.0	98	Roofs, HSG C
187.0		100.00% Impervious Area

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

Subcatchment 34S: Proposed Apartment Roof Area

Hydrograph



145884

Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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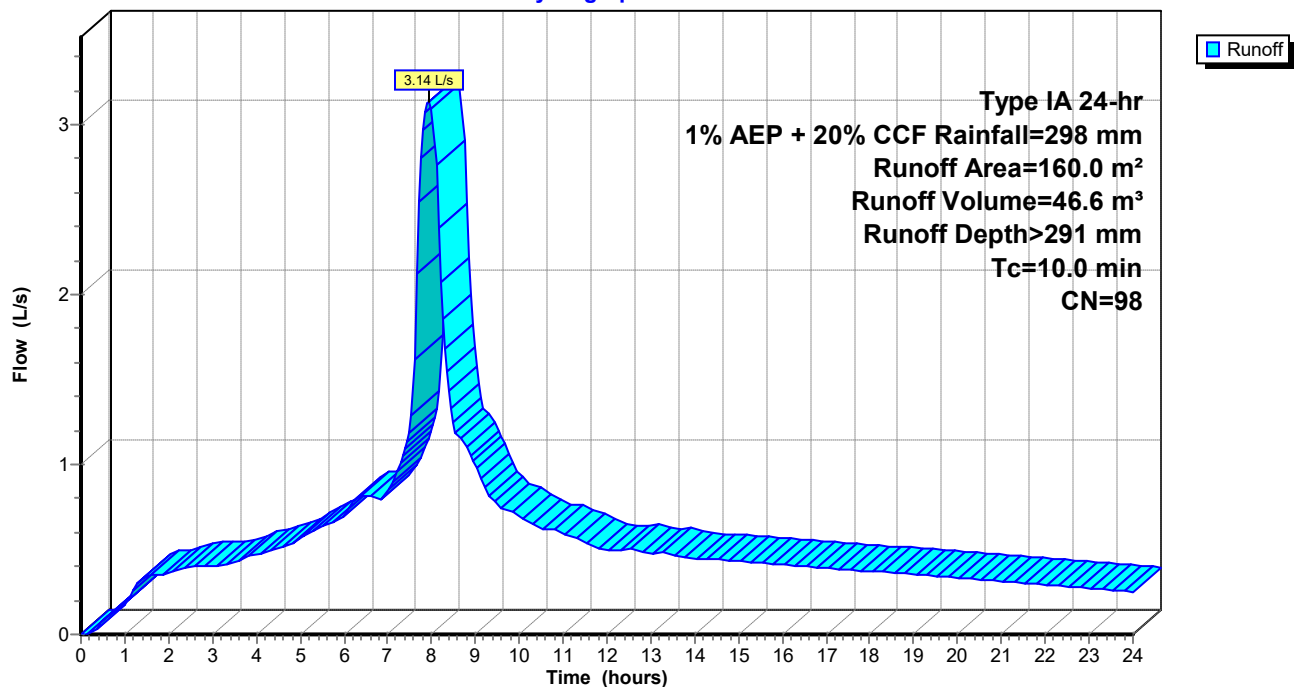
Summary for Subcatchment 47S: Proposed Concrete DrivewayRunoff = 3.14 L/s @ 7.94 hrs, Volume= 46.6 m³, Depth> 291 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

Area (m ²)	CN	Description
160.0	98	Roofs, HSG C
160.0		100.00% Impervious Area

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

Subcatchment 47S: Proposed Concrete Driveway

Hydrograph



145884

Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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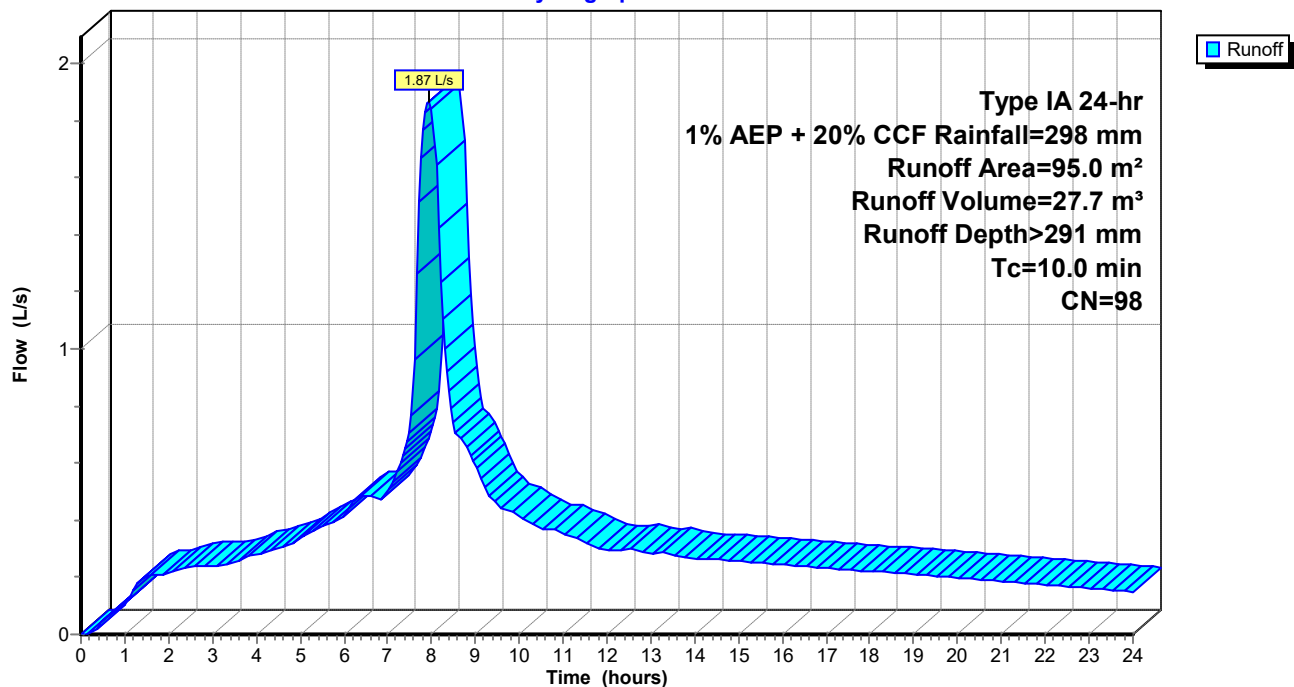
Summary for Subcatchment 48S: Proposed Concrete Path / PatioRunoff = 1.87 L/s @ 7.94 hrs, Volume= 27.7 m³, Depth> 291 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

Area (m ²)	CN	Description
95.0	98	Roofs, HSG C
95.0		100.00% Impervious Area

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

Subcatchment 48S: Proposed Concrete Path / Patio

Hydrograph



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Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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Summary for Pond 54P: 2 x 25,000L Rainwater Tanks

Inflow Area = 187.0 m², 100.00% Impervious, Inflow Depth > 291 mm for 1% AEP + 20% CCF event
 Inflow = 3.67 L/s @ 7.94 hrs, Volume= 54.4 m³
 Outflow = 2.68 L/s @ 8.17 hrs, Volume= 54.0 m³, Atten= 27%, Lag= 13.7 min
 Primary = 2.68 L/s @ 8.17 hrs, Volume= 54.0 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 0.175 m @ 8.17 hrs Surf.Area= 20.4 m² Storage= 3.6 m³Plug-Flow detention time= 20.2 min calculated for 54.0 m³ (99% of inflow)

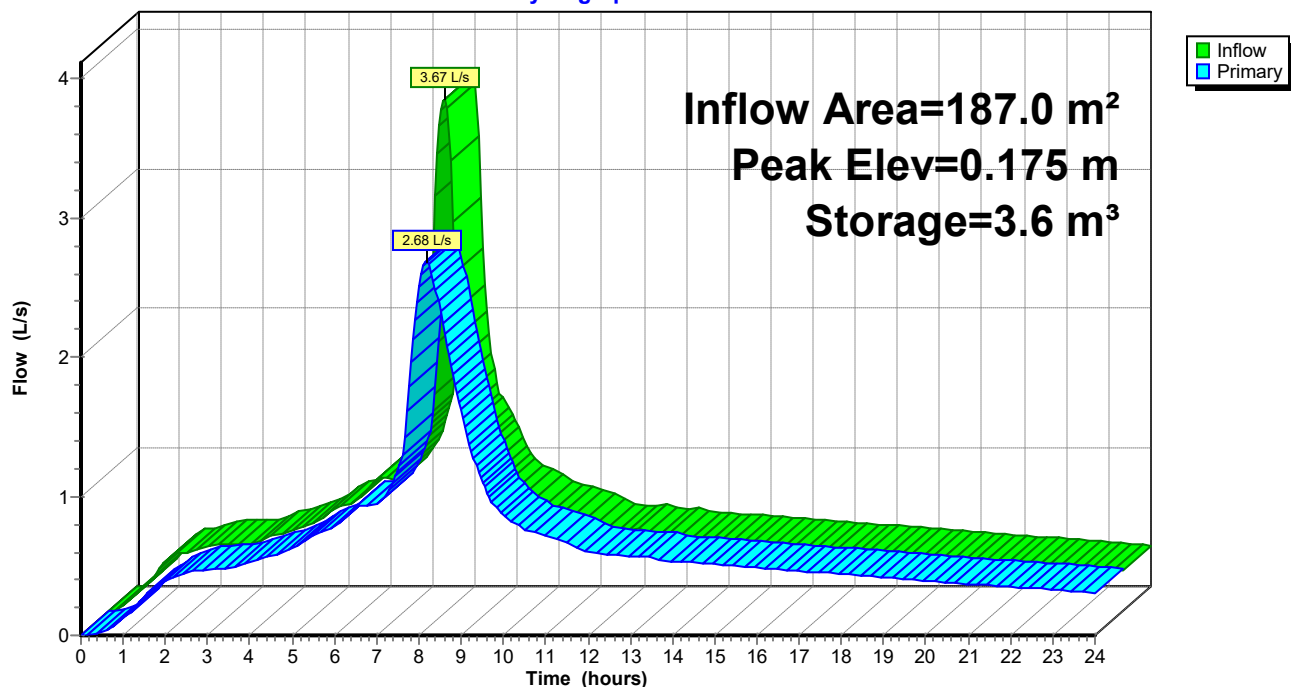
Center-of-Mass det. time= 13.5 min (657.8 - 644.3)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	52.9 m ³	3.60 mD x 2.60 mH Vertical Cone/Cylinder x 2

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	58 mm Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=2.68 L/s @ 8.17 hrs HW=0.175 m (Free Discharge)←**1=Orifice/Grate** (Orifice Controls 2.68 L/s @ 1.02 m/s)**Pond 54P: 2 x 25,000L Rainwater Tanks**

Hydrograph



145884

Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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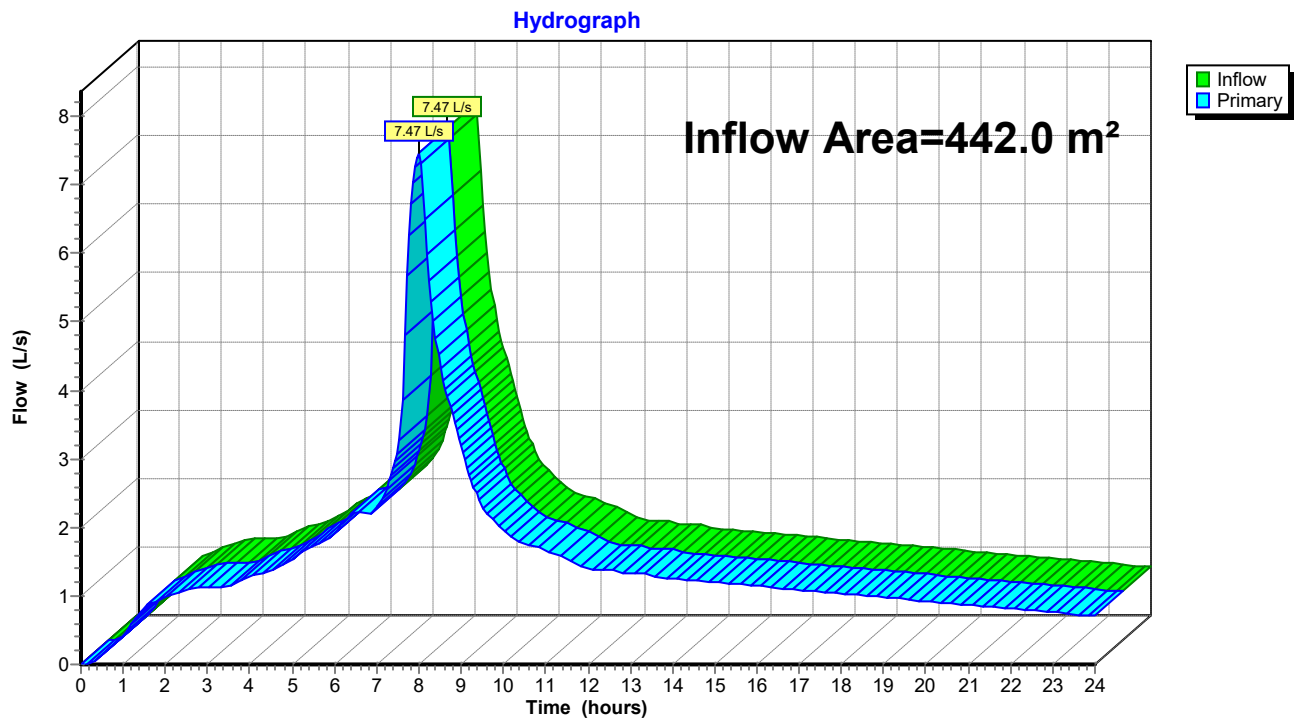
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Summary for Link 35L: Post-Development Flows Attenuated Back to Permitted Levels

Inflow Area = 442.0 m², 100.00% Impervious, Inflow Depth > 290 mm for 1% AEP + 20% CCF event
Inflow = 7.47 L/s @ 8.00 hrs, Volume= 128.2 m³
Primary = 7.47 L/s @ 8.00 hrs, Volume= 128.2 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 35L: Post-Development Flows Attenuated Back to Permitted Levels



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Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 34S: Proposed Runoff Area=187.0 m² 100.00% Impervious Runoff Depth>161 mm
Tc=10.0 min CN=98 Runoff=2.05 L/s 30.0 m³

Subcatchment 47S: Proposed Runoff Area=160.0 m² 100.00% Impervious Runoff Depth>161 mm
Tc=10.0 min CN=98 Runoff=1.75 L/s 25.7 m³

Subcatchment 48S: Proposed Concrete Runoff Area=95.0 m² 100.00% Impervious Runoff Depth>161 mm
Tc=10.0 min CN=98 Runoff=1.04 L/s 15.3 m³

Pond 54P: 2 x 25,000L Rainwater Tanks Peak Elev=0.087 m Storage=1.8 m³ Inflow=2.05 L/s 30.0 m³
Outflow=1.69 L/s 29.8 m³

Link 35L: Post-Development Flows Attenuated Back to Permitted Levels Inflow=4.38 L/s 70.7 m³
Primary=4.38 L/s 70.7 m³

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Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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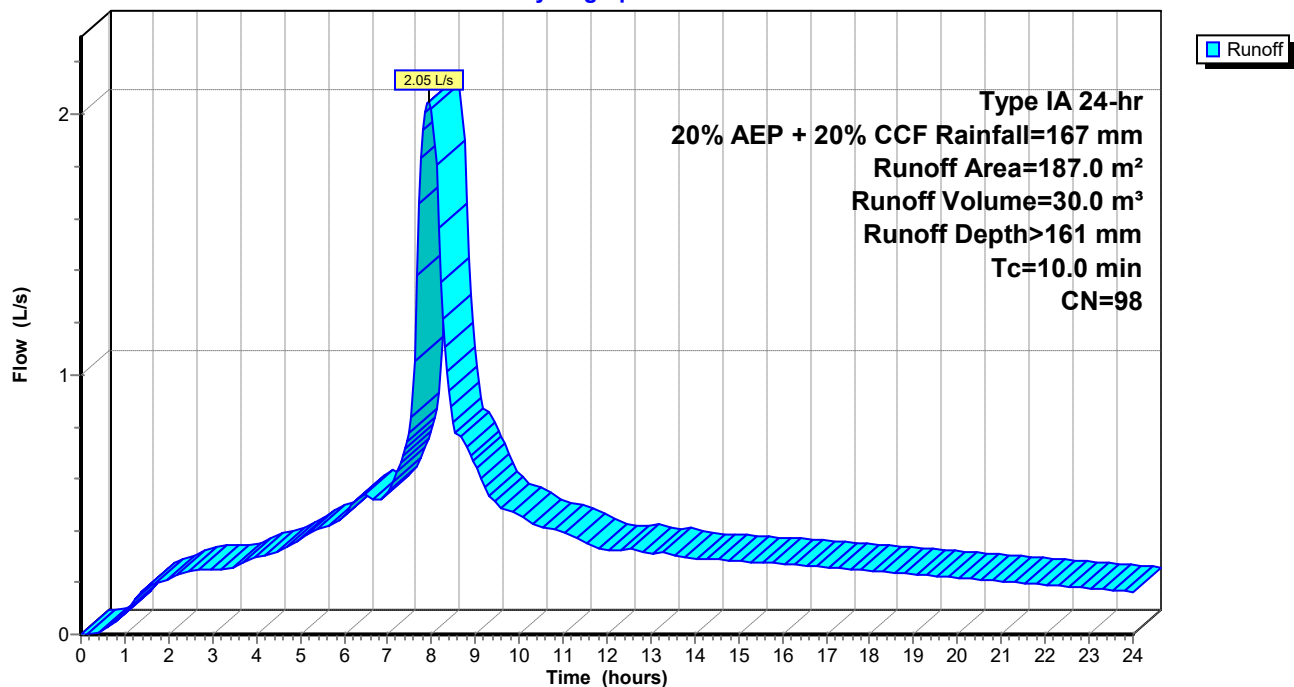
Summary for Subcatchment 34S: Proposed Apartment Roof AreaRunoff = 2.05 L/s @ 7.94 hrs, Volume= 30.0 m³, Depth> 161 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

Area (m ²)	CN	Description
187.0	98	Roofs, HSG C
187.0		100.00% Impervious Area

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

Subcatchment 34S: Proposed Apartment Roof Area

Hydrograph



145884

Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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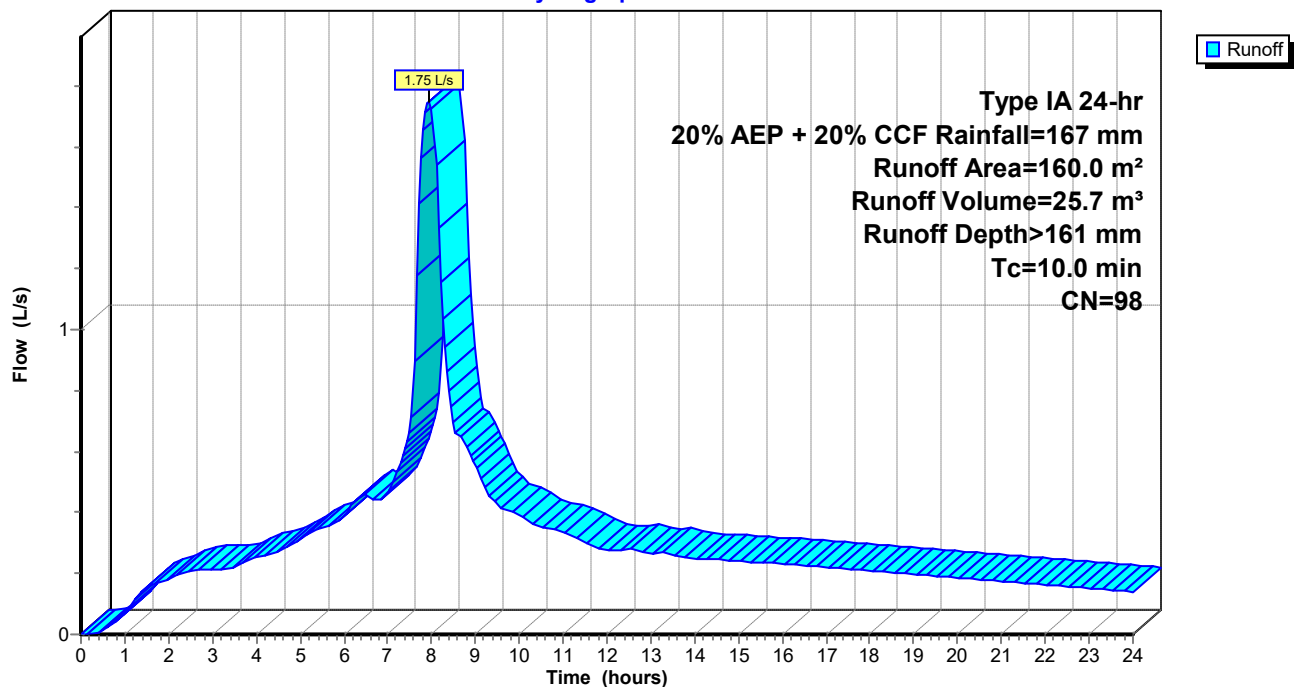
Summary for Subcatchment 47S: Proposed Concrete DrivewayRunoff = 1.75 L/s @ 7.94 hrs, Volume= 25.7 m³, Depth> 161 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

Area (m ²)	CN	Description
160.0	98	Roofs, HSG C
160.0		100.00% Impervious Area

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

Subcatchment 47S: Proposed Concrete Driveway

Hydrograph



145884

Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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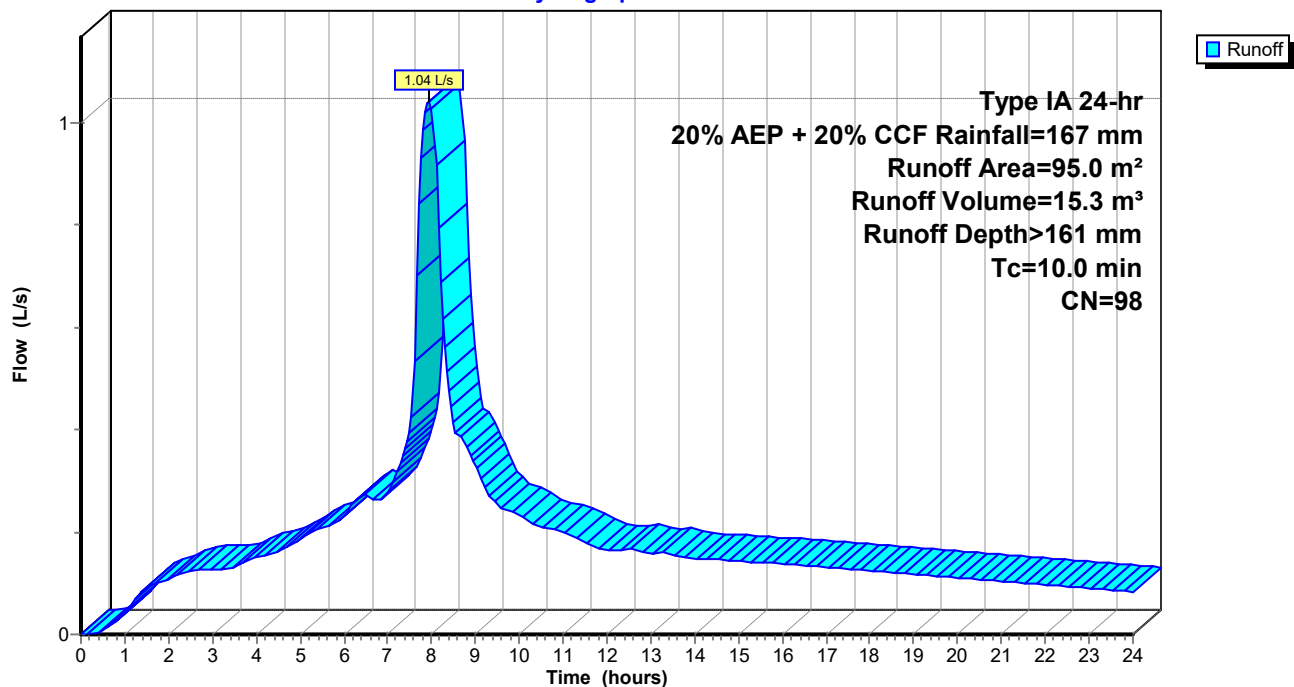
Summary for Subcatchment 48S: Proposed Concrete Path / PatioRunoff = 1.04 L/s @ 7.94 hrs, Volume= 15.3 m³, Depth> 161 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

Area (m ²)	CN	Description
95.0	98	Roofs, HSG C
95.0		100.00% Impervious Area

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

Subcatchment 48S: Proposed Concrete Path / Patio

Hydrograph



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Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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Summary for Pond 54P: 2 x 25,000L Rainwater Tanks

Inflow Area = 187.0 m², 100.00% Impervious, Inflow Depth > 161 mm for 20% AEP + 20% CCF event
 Inflow = 2.05 L/s @ 7.94 hrs, Volume= 30.0 m³
 Outflow = 1.69 L/s @ 8.13 hrs, Volume= 29.8 m³, Atten= 18%, Lag= 11.2 min
 Primary = 1.69 L/s @ 8.13 hrs, Volume= 29.8 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 0.087 m @ 8.13 hrs Surf.Area= 20.4 m² Storage= 1.8 m³Plug-Flow detention time= 22.4 min calculated for 29.7 m³ (99% of inflow)

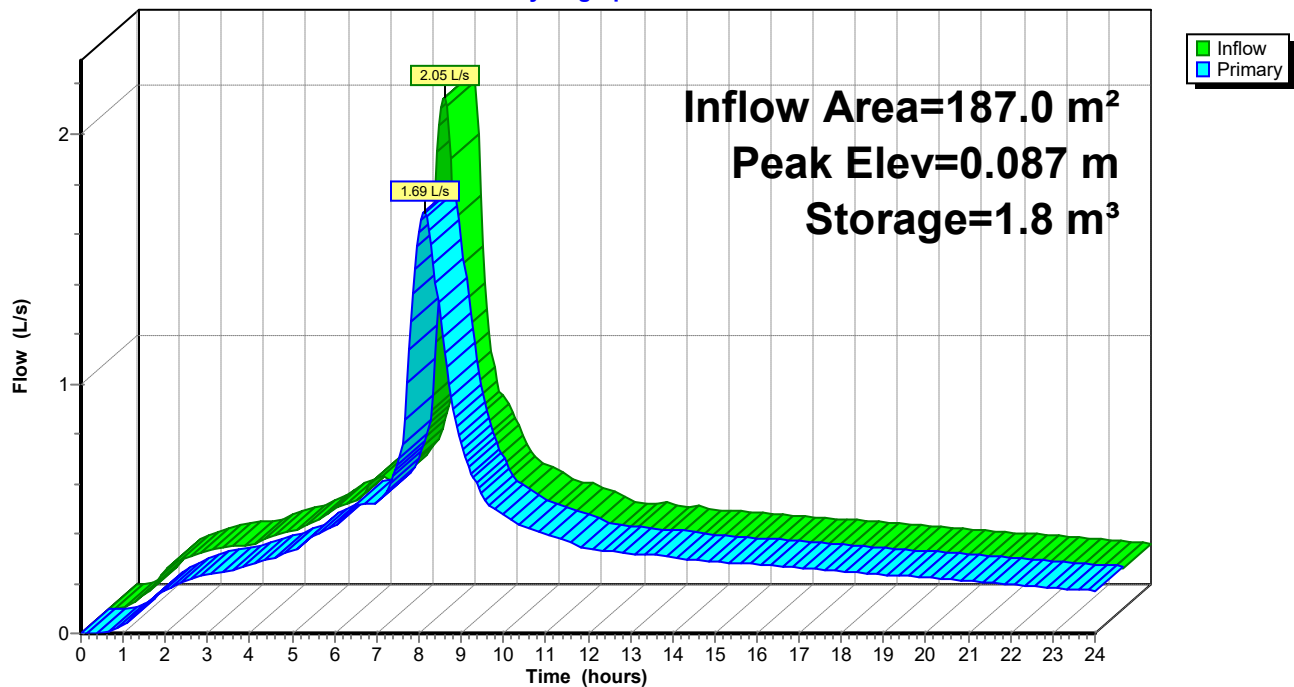
Center-of-Mass det. time= 15.7 min (667.4 - 651.7)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	52.9 m ³	3.60 mD x 2.60 mH Vertical Cone/Cylinder x 2

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	58 mm Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=1.69 L/s @ 8.13 hrs HW=0.087 m (Free Discharge)←**1=Orifice/Grate** (Orifice Controls 1.69 L/s @ 0.64 m/s)**Pond 54P: 2 x 25,000L Rainwater Tanks**

Hydrograph



145884

Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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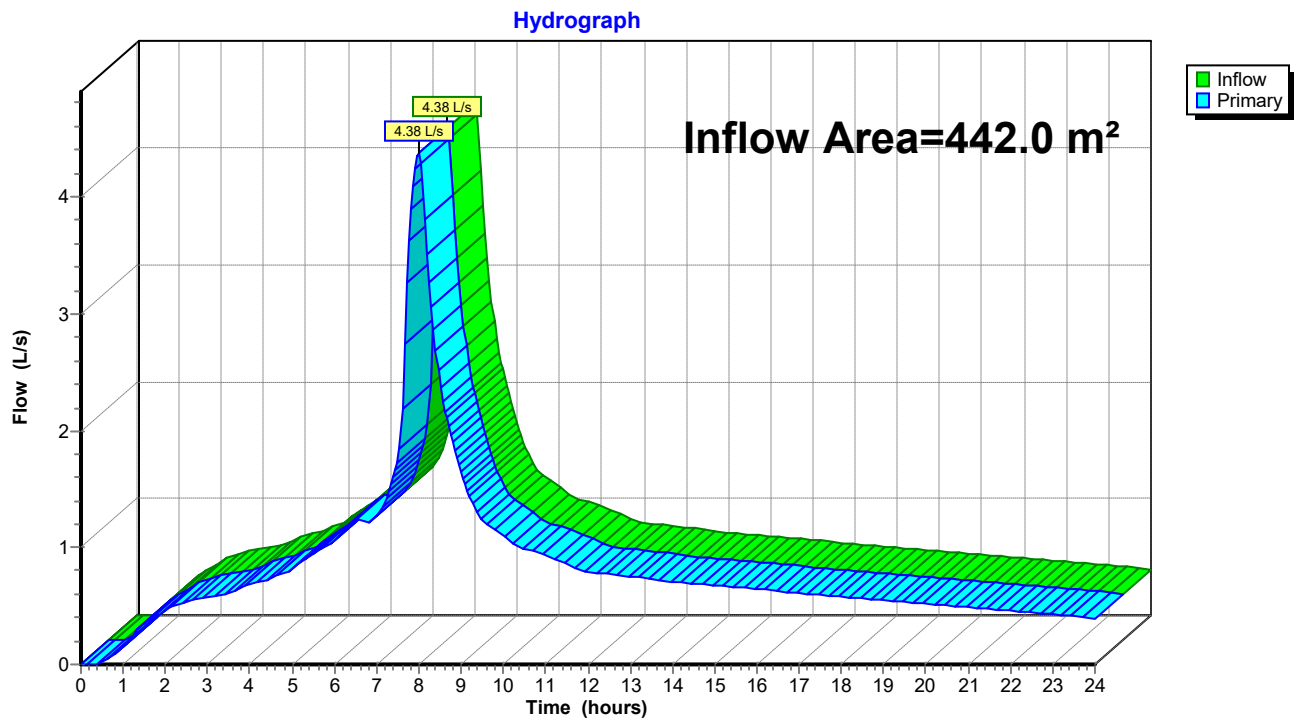
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Summary for Link 35L: Post-Development Flows Attenuated Back to Permitted Levels

Inflow Area = 442.0 m², 100.00% Impervious, Inflow Depth > 160 mm for 20% AEP + 20% CCF event
Inflow = 4.38 L/s @ 8.00 hrs, Volume= 70.7 m³
Primary = 4.38 L/s @ 8.00 hrs, Volume= 70.7 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 35L: Post-Development Flows Attenuated Back to Permitted Levels



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Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 34S: Proposed Runoff Area=187.0 m² 100.00% Impervious Runoff Depth>121 mm
Tc=10.0 min CN=98 Runoff=1.55 L/s 22.6 m³

Subcatchment 47S: Proposed Runoff Area=160.0 m² 100.00% Impervious Runoff Depth>121 mm
Tc=10.0 min CN=98 Runoff=1.33 L/s 19.3 m³

Subcatchment 48S: Proposed Concrete Runoff Area=95.0 m² 100.00% Impervious Runoff Depth>121 mm
Tc=10.0 min CN=98 Runoff=0.79 L/s 11.5 m³

Pond 54P: 2 x 25,000L Rainwater Tanks Peak Elev=0.066 m Storage=1.3 m³ Inflow=1.55 L/s 22.6 m³
Outflow=1.33 L/s 22.4 m³

Link 35L: Post-Development Flows Attenuated Back to Permitted Levels Inflow=3.37 L/s 53.1 m³
Primary=3.37 L/s 53.1 m³

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Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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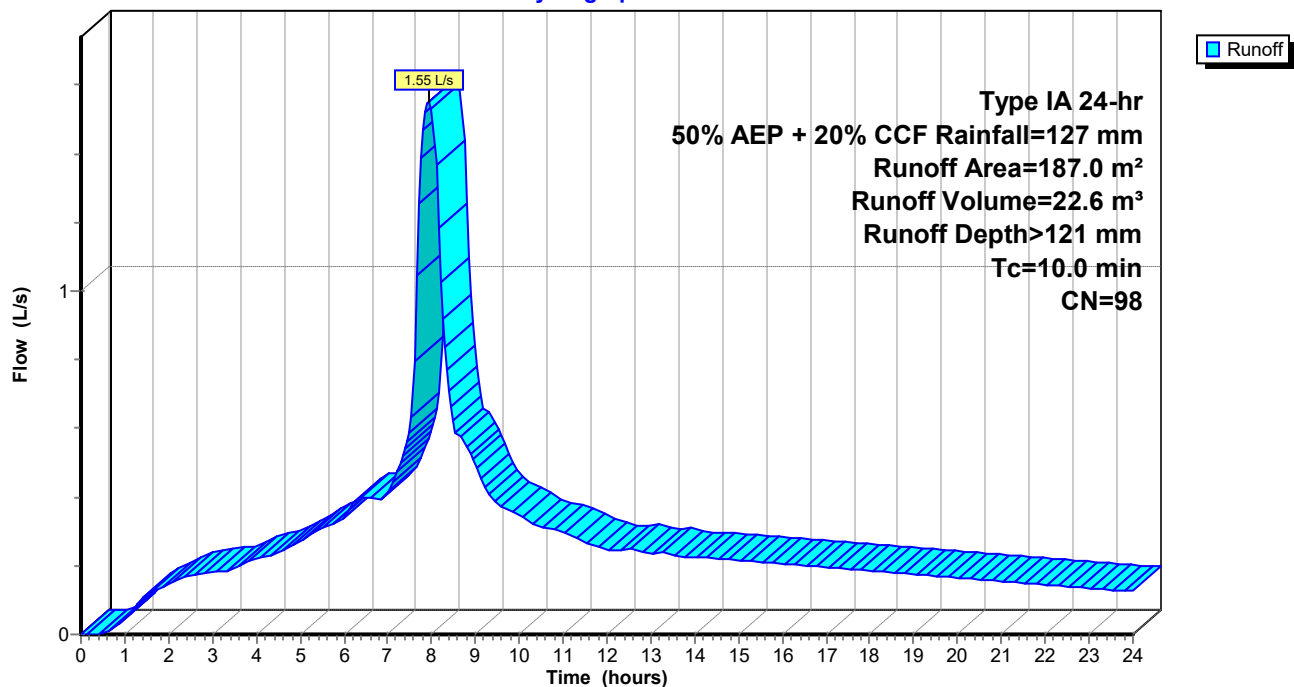
Summary for Subcatchment 34S: Proposed Apartment Roof AreaRunoff = 1.55 L/s @ 7.94 hrs, Volume= 22.6 m³, Depth> 121 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

Area (m ²)	CN	Description
187.0	98	Roofs, HSG C
187.0		100.00% Impervious Area

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

Subcatchment 34S: Proposed Apartment Roof Area

Hydrograph



145884

Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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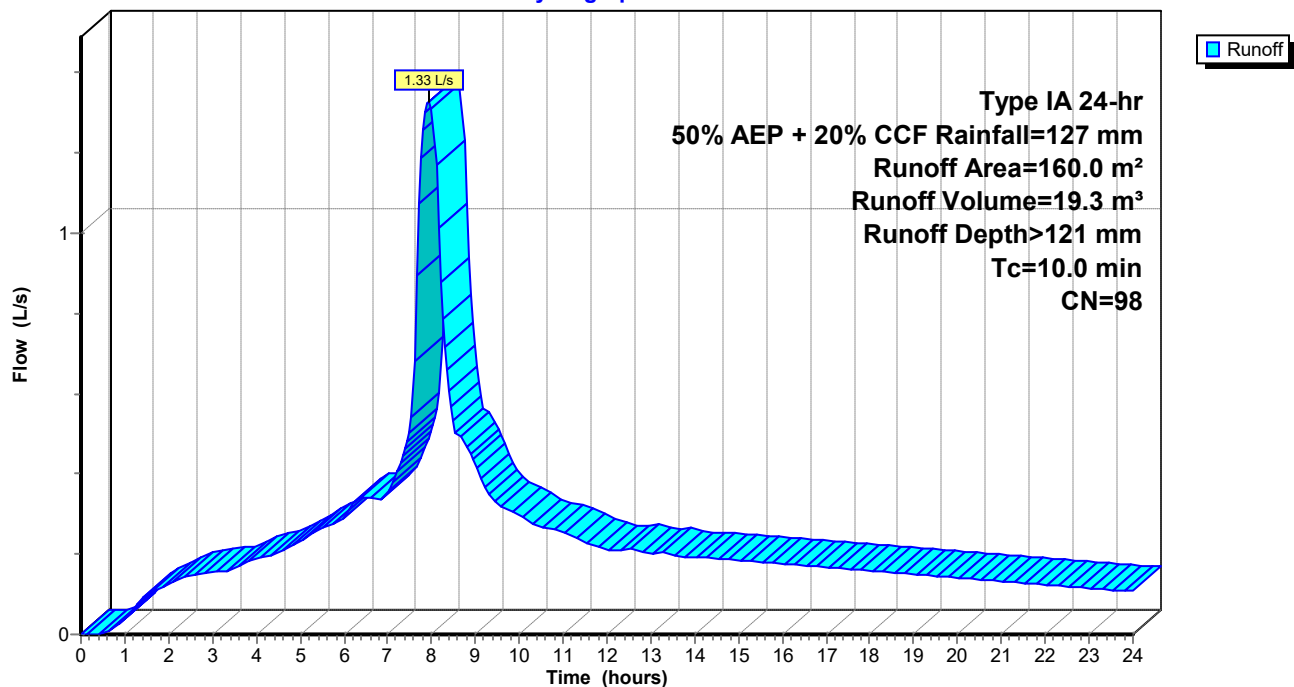
Summary for Subcatchment 47S: Proposed Concrete DrivewayRunoff = 1.33 L/s @ 7.94 hrs, Volume= 19.3 m³, Depth> 121 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

Area (m ²)	CN	Description
160.0	98	Roofs, HSG C
160.0		100.00% Impervious Area

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

Subcatchment 47S: Proposed Concrete Driveway

Hydrograph



145884

Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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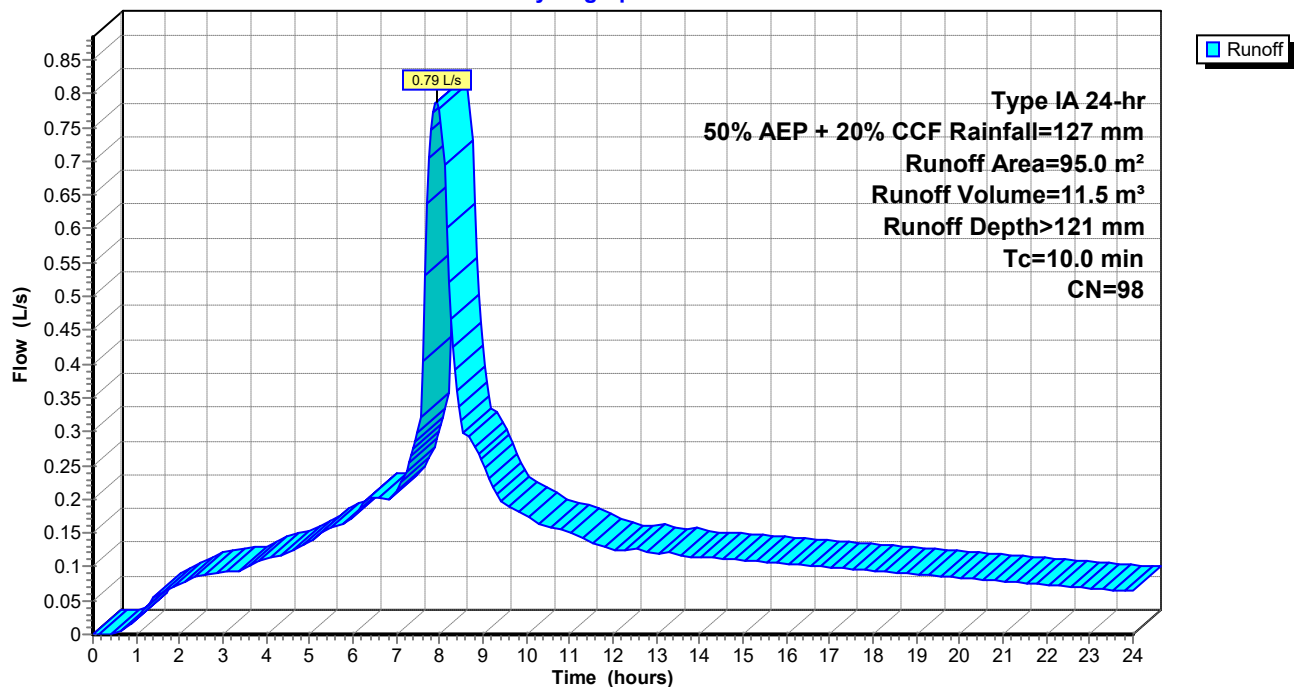
Summary for Subcatchment 48S: Proposed Concrete Path / PatioRunoff = 0.79 L/s @ 7.94 hrs, Volume= 11.5 m³, Depth> 121 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

Area (m ²)	CN	Description
95.0	98	Roofs, HSG C
95.0		100.00% Impervious Area

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

Subcatchment 48S: Proposed Concrete Path / Patio

Hydrograph



145884

Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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Summary for Pond 54P: 2 x 25,000L Rainwater Tanks

Inflow Area = 187.0 m², 100.00% Impervious, Inflow Depth > 121 mm for 50% AEP + 20% CCF event
 Inflow = 1.55 L/s @ 7.94 hrs, Volume= 22.6 m³
 Outflow = 1.33 L/s @ 8.11 hrs, Volume= 22.4 m³, Atten= 14%, Lag= 10.2 min
 Primary = 1.33 L/s @ 8.11 hrs, Volume= 22.4 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 0.066 m @ 8.11 hrs Surf.Area= 20.4 m² Storage= 1.3 m³Plug-Flow detention time= 23.2 min calculated for 22.4 m³ (99% of inflow)

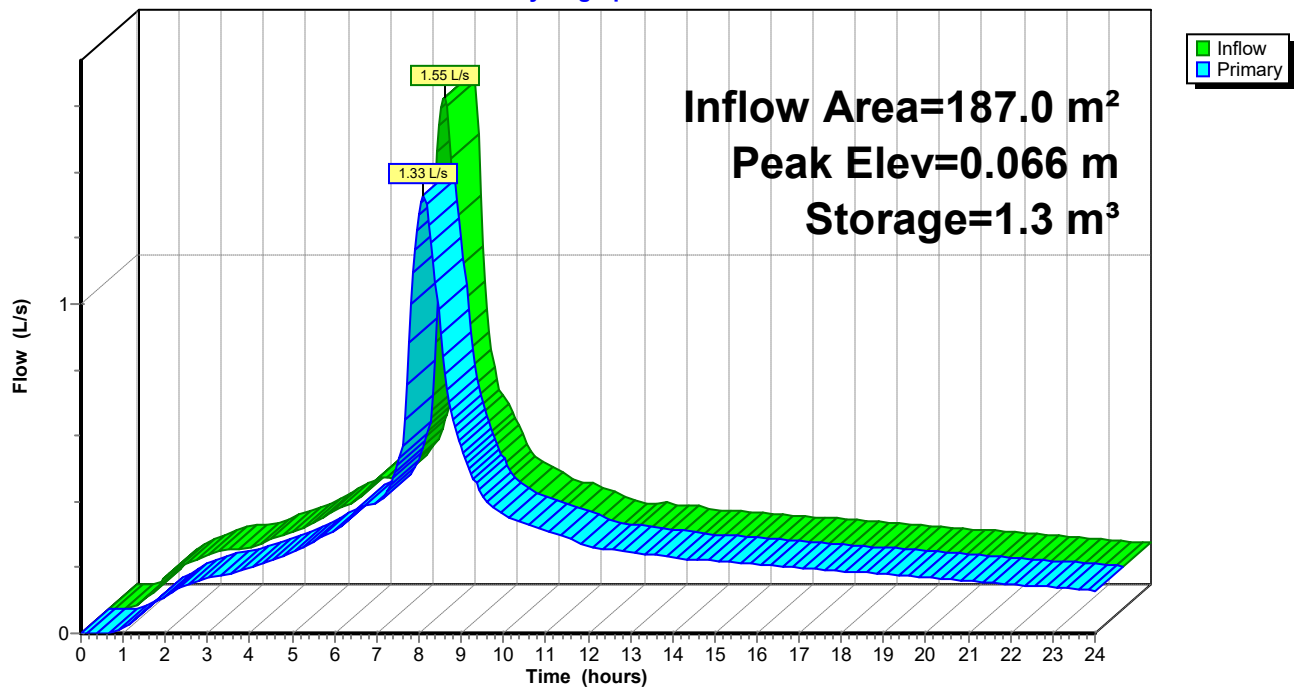
Center-of-Mass det. time= 16.4 min (673.0 - 656.7)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	52.9 m ³	3.60 mD x 2.60 mH Vertical Cone/Cylinder x 2

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	58 mm Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=1.35 L/s @ 8.11 hrs HW=0.066 m (Free Discharge)←**1=Orifice/Grate** (Orifice Controls 1.35 L/s @ 0.51 m/s)**Pond 54P: 2 x 25,000L Rainwater Tanks**

Hydrograph



145884

Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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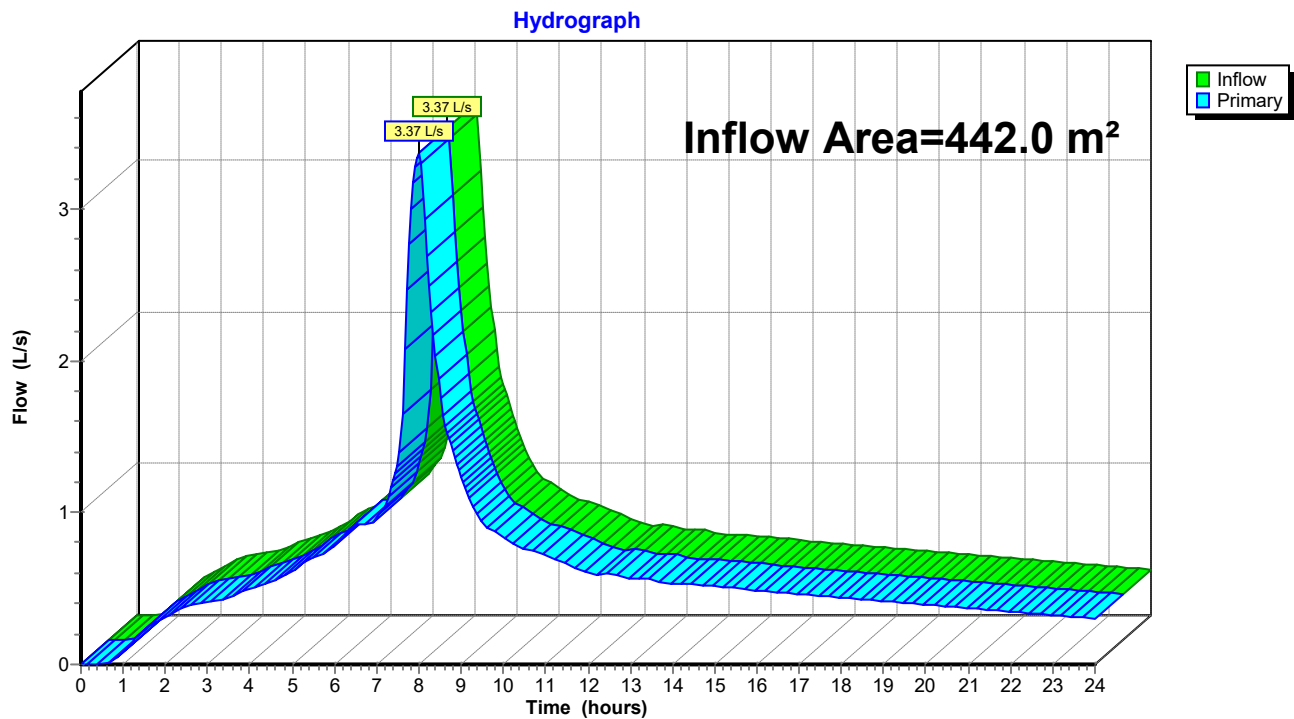
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Summary for Link 35L: Post-Development Flows Attenuated Back to Permitted Levels

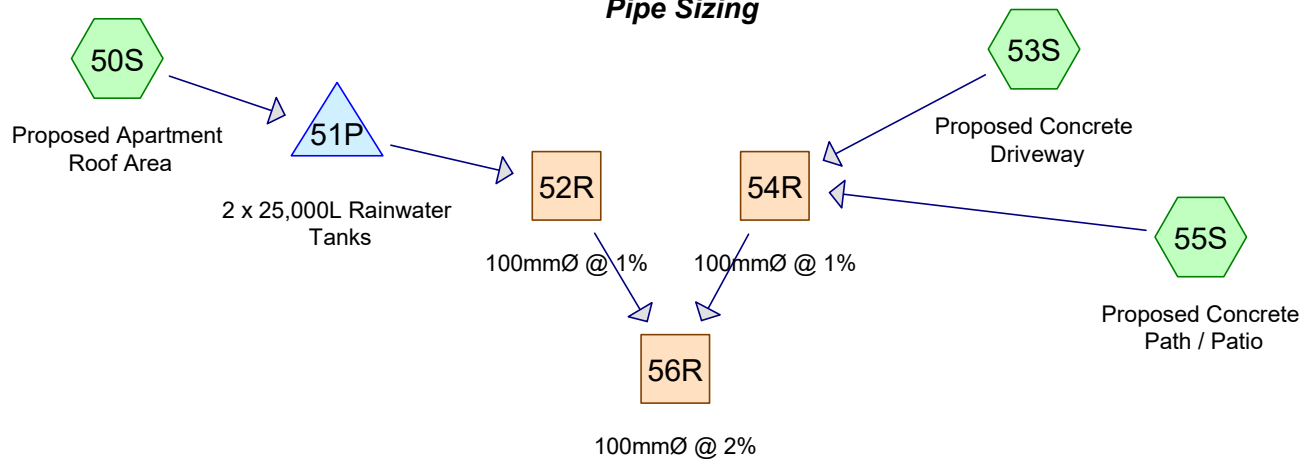
Inflow Area = 442.0 m², 100.00% Impervious, Inflow Depth > 120 mm for 50% AEP + 20% CCF event
Inflow = 3.37 L/s @ 8.00 hrs, Volume= 53.1 m³
Primary = 3.37 L/s @ 8.00 hrs, Volume= 53.1 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 35L: Post-Development Flows Attenuated Back to Permitted Levels



Pipe Sizing



Routing Diagram for 145884

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145884

Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 50S: Proposed Runoff Area=187.0 m² 100.00% Impervious Runoff Depth>291 mm
Tc=10.0 min CN=98 Runoff=3.67 L/s 54.4 m³

Subcatchment 53S: Proposed Runoff Area=160.0 m² 100.00% Impervious Runoff Depth>291 mm
Tc=10.0 min CN=98 Runoff=3.14 L/s 46.6 m³

Subcatchment 55S: Proposed Concrete Runoff Area=95.0 m² 100.00% Impervious Runoff Depth>291 mm
Tc=10.0 min CN=98 Runoff=1.87 L/s 27.7 m³

Reach 52R: 100mmØ @ 1% Avg. Flow Depth=0.05 m Max Vel=0.75 m/s Inflow=2.68 L/s 54.0 m³
100 mm Round Pipe n=0.011 L=10.00 m S=0.0100 m/m Capacity=6.10 L/s Outflow=2.69 L/s 54.0 m³

Reach 54R: 100mmØ @ 1% Avg. Flow Depth=0.07 m Max Vel=0.87 m/s Inflow=5.01 L/s 74.2 m³
100 mm Round Pipe n=0.011 L=10.00 m S=0.0100 m/m Capacity=6.10 L/s Outflow=5.01 L/s 74.2 m³

Reach 56R: 100mmØ @ 2% Avg. Flow Depth=0.07 m Max Vel=1.24 m/s Inflow=7.46 L/s 128.2 m³
100 mm Round Pipe n=0.011 L=10.00 m S=0.0200 m/m Capacity=8.63 L/s Outflow=7.46 L/s 128.2 m³

Pond 51P: 2 x 25,000L Rainwater Tanks Peak Elev=0.175 m Storage=3.6 m³ Inflow=3.67 L/s 54.4 m³
Outflow=2.68 L/s 54.0 m³

145884

Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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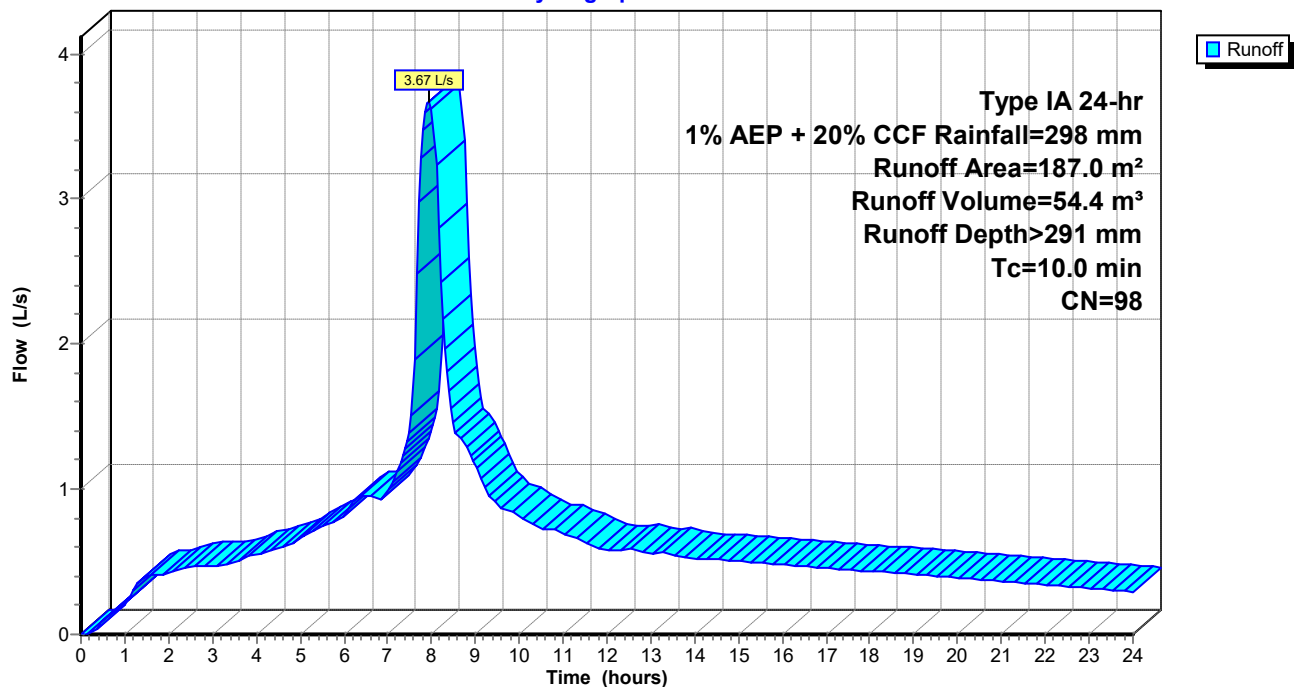
Summary for Subcatchment 50S: Proposed Apartment Roof AreaRunoff = 3.67 L/s @ 7.94 hrs, Volume= 54.4 m³, Depth> 291 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

Area (m ²)	CN	Description
187.0	98	Roofs, HSG C
187.0		100.00% Impervious Area

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

Subcatchment 50S: Proposed Apartment Roof Area

Hydrograph



145884

Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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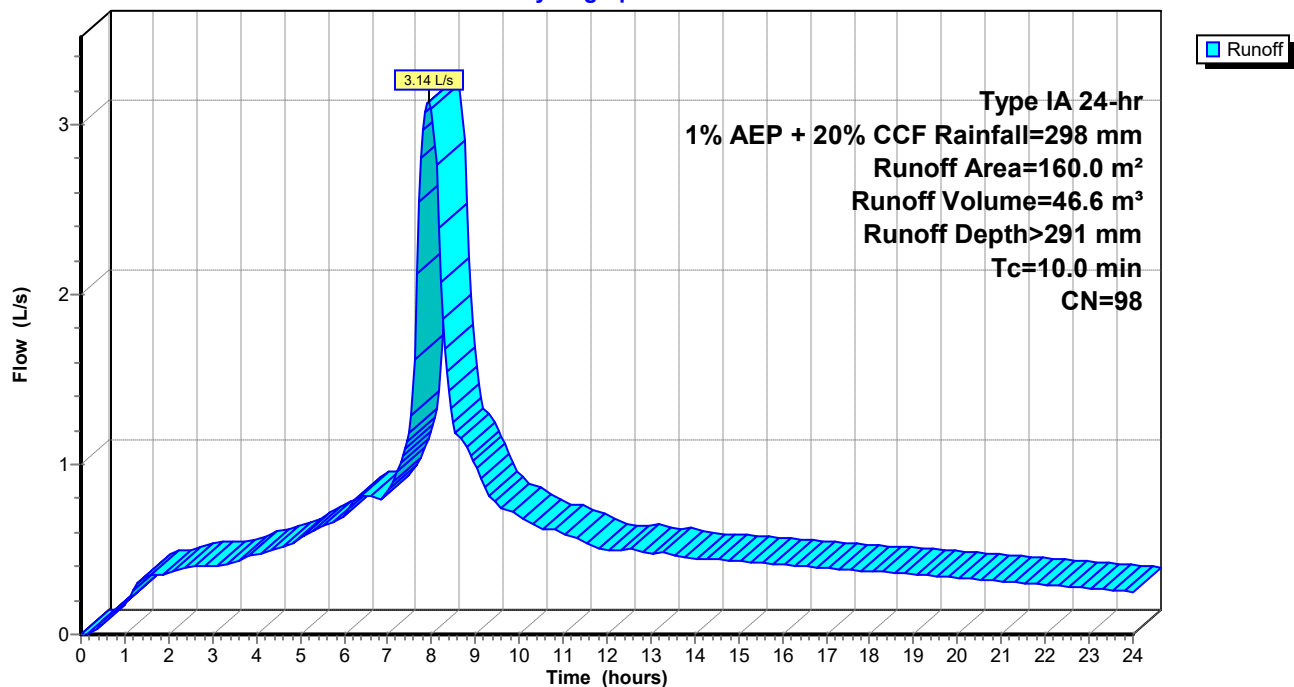
Summary for Subcatchment 53S: Proposed Concrete DrivewayRunoff = 3.14 L/s @ 7.94 hrs, Volume= 46.6 m³, Depth> 291 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

Area (m ²)	CN	Description
160.0	98	Roofs, HSG C
160.0		100.00% Impervious Area

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

Subcatchment 53S: Proposed Concrete Driveway

Hydrograph



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Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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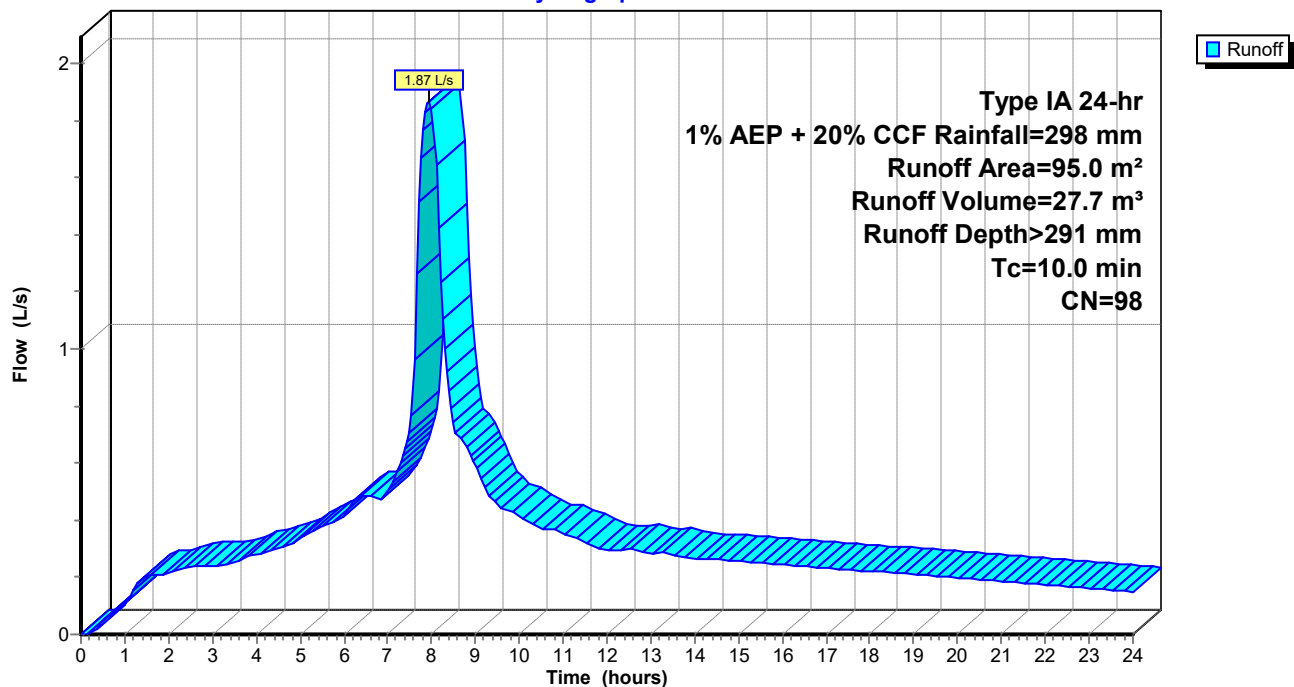
Summary for Subcatchment 55S: Proposed Concrete Path / PatioRunoff = 1.87 L/s @ 7.94 hrs, Volume= 27.7 m³, Depth> 291 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

Area (m ²)	CN	Description
95.0	98	Roofs, HSG C
95.0		100.00% Impervious Area

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

Subcatchment 55S: Proposed Concrete Path / Patio

Hydrograph



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Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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Summary for Reach 52R: 100mmØ @ 1%

Inflow Area = 187.0 m², 100.00% Impervious, Inflow Depth > 289 mm for 1% AEP + 20% CCF event
Inflow = 2.68 L/s @ 8.17 hrs, Volume= 54.0 m³
Outflow = 2.69 L/s @ 8.17 hrs, Volume= 54.0 m³, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 0.75 m/s, Min. Travel Time= 0.2 min

Avg. Velocity= 0.48 m/s, Avg. Travel Time= 0.3 min

Peak Storage= 0.0 m³ @ 8.17 hrs

Average Depth at Peak Storage= 0.05 m

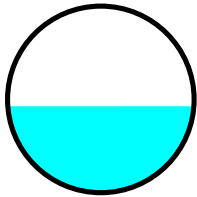
Bank-Full Depth= 0.10 m Flow Area= 0.01 m², Capacity= 6.10 L/s

100 mm Round Pipe

n= 0.011 PVC, smooth interior

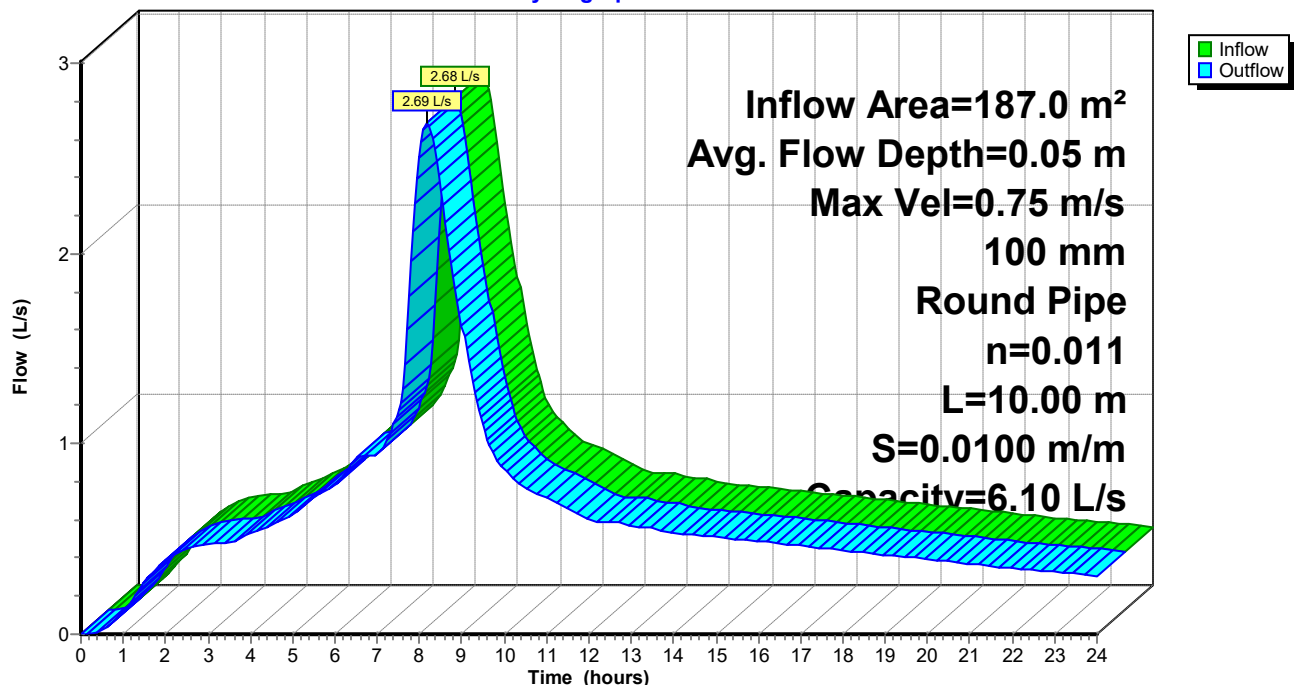
Length= 10.00 m Slope= 0.0100 m/m

Inlet Invert= -1.000 m, Outlet Invert= -1.100 m



Reach 52R: 100mmØ @ 1%

Hydrograph



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Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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Summary for Reach 54R: 100mmØ @ 1%

Inflow Area = 255.0 m², 100.00% Impervious, Inflow Depth > 291 mm for 1% AEP + 20% CCF event
Inflow = 5.01 L/s @ 7.94 hrs, Volume= 74.2 m³
Outflow = 5.01 L/s @ 7.94 hrs, Volume= 74.2 m³, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 0.87 m/s, Min. Travel Time= 0.2 min

Avg. Velocity= 0.53 m/s, Avg. Travel Time= 0.3 min

Peak Storage= 0.1 m³ @ 7.94 hrs

Average Depth at Peak Storage= 0.07 m

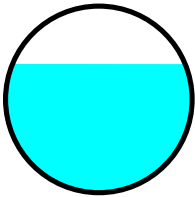
Bank-Full Depth= 0.10 m Flow Area= 0.01 m², Capacity= 6.10 L/s

100 mm Round Pipe

n= 0.011 PVC, smooth interior

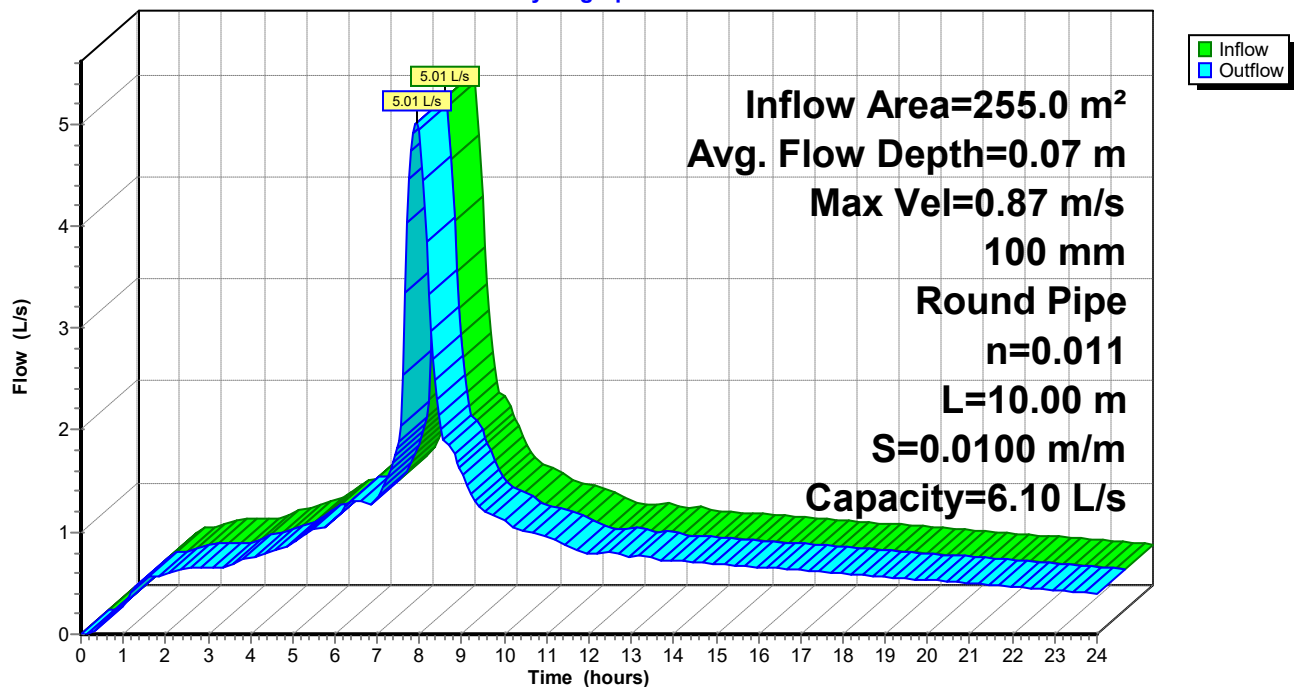
Length= 10.00 m Slope= 0.0100 m/m

Inlet Invert= -1.000 m, Outlet Invert= -1.100 m



Reach 54R: 100mmØ @ 1%

Hydrograph



145884

Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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Summary for Reach 56R: 100mmØ @ 2%

Inflow Area = 442.0 m², 100.00% Impervious, Inflow Depth > 290 mm for 1% AEP + 20% CCF event
Inflow = 7.46 L/s @ 8.00 hrs, Volume= 128.2 m³
Outflow = 7.46 L/s @ 8.01 hrs, Volume= 128.2 m³, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.24 m/s, Min. Travel Time= 0.1 min

Avg. Velocity= 0.79 m/s, Avg. Travel Time= 0.2 min

Peak Storage= 0.1 m³ @ 8.01 hrs

Average Depth at Peak Storage= 0.07 m

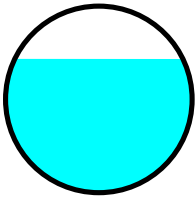
Bank-Full Depth= 0.10 m Flow Area= 0.01 m², Capacity= 8.63 L/s

100 mm Round Pipe

n= 0.011 PVC, smooth interior

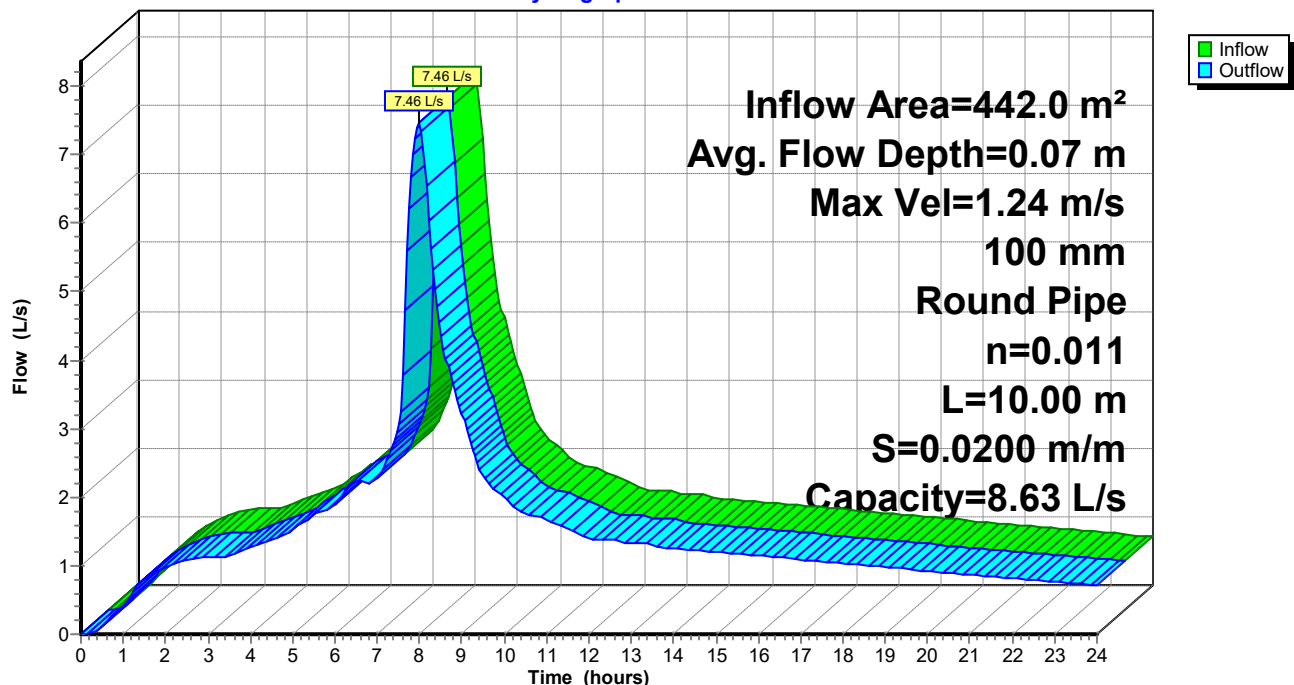
Length= 10.00 m Slope= 0.0200 m/m

Inlet Invert= -1.100 m, Outlet Invert= -1.300 m



Reach 56R: 100mmØ @ 2%

Hydrograph



145884

Type IA 24-hr 1% AEP + 20% CCF Rainfall=298 mm

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Summary for Pond 51P: 2 x 25,000L Rainwater Tanks

Inflow Area = 187.0 m², 100.00% Impervious, Inflow Depth > 291 mm for 1% AEP + 20% CCF event
 Inflow = 3.67 L/s @ 7.94 hrs, Volume= 54.4 m³
 Outflow = 2.68 L/s @ 8.17 hrs, Volume= 54.0 m³, Atten= 27%, Lag= 13.7 min
 Primary = 2.68 L/s @ 8.17 hrs, Volume= 54.0 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 0.175 m @ 8.17 hrs Surf.Area= 20.4 m² Storage= 3.6 m³Plug-Flow detention time= 20.2 min calculated for 54.0 m³ (99% of inflow)

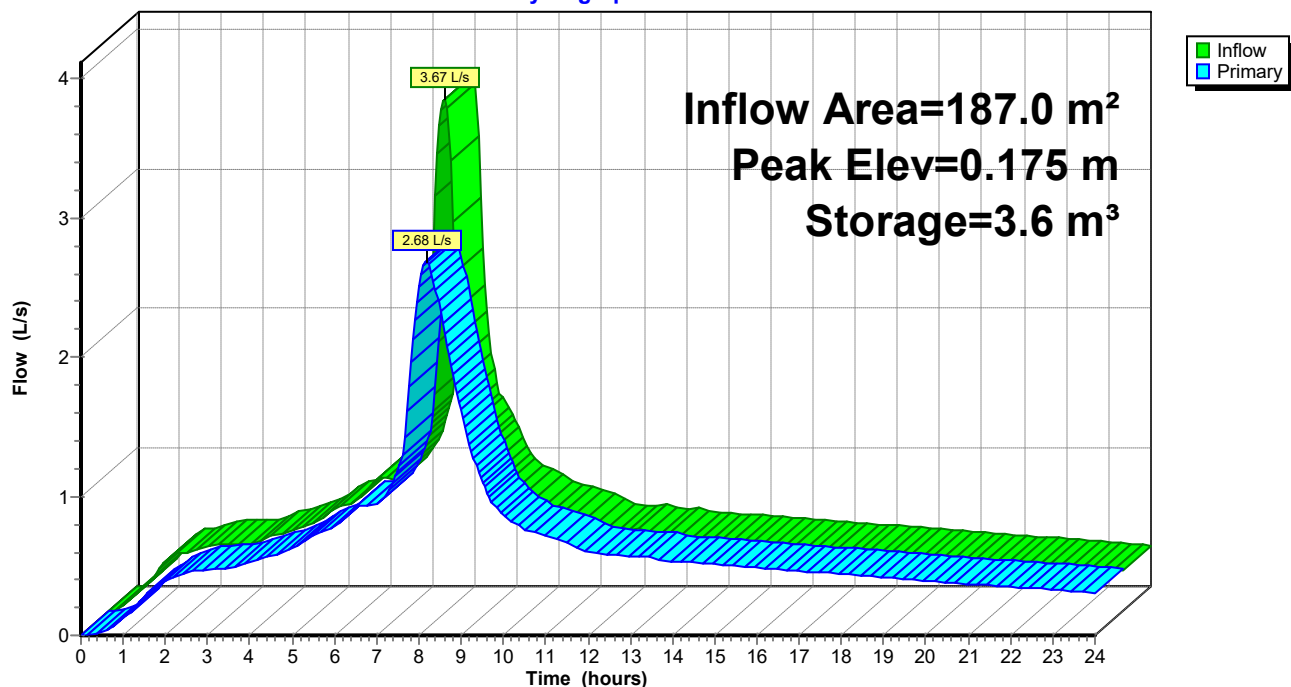
Center-of-Mass det. time= 13.5 min (657.8 - 644.3)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	52.9 m ³	3.60 mD x 2.60 mH Vertical Cone/Cylinder x 2

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	58 mm Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=2.68 L/s @ 8.17 hrs HW=0.175 m (Free Discharge)←**1=Orifice/Grate** (Orifice Controls 2.68 L/s @ 1.02 m/s)**Pond 51P: 2 x 25,000L Rainwater Tanks**

Hydrograph



145884

Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 50S: Proposed Runoff Area=187.0 m² 100.00% Impervious Runoff Depth>161 mm
Tc=10.0 min CN=98 Runoff=2.05 L/s 30.0 m³

Subcatchment 53S: Proposed Runoff Area=160.0 m² 100.00% Impervious Runoff Depth>161 mm
Tc=10.0 min CN=98 Runoff=1.75 L/s 25.7 m³

Subcatchment 55S: Proposed Concrete Runoff Area=95.0 m² 100.00% Impervious Runoff Depth>161 mm
Tc=10.0 min CN=98 Runoff=1.04 L/s 15.3 m³

Reach 52R: 100mmØ @ 1% Avg. Flow Depth=0.04 m Max Vel=0.66 m/s Inflow=1.69 L/s 29.8 m³
100 mm Round Pipe n=0.011 L=10.00 m S=0.0100 m/m Capacity=6.10 L/s Outflow=1.69 L/s 29.8 m³

Reach 54R: 100mmØ @ 1% Avg. Flow Depth=0.05 m Max Vel=0.76 m/s Inflow=2.80 L/s 40.9 m³
100 mm Round Pipe n=0.011 L=10.00 m S=0.0100 m/m Capacity=6.10 L/s Outflow=2.80 L/s 40.9 m³

Reach 56R: 100mmØ @ 2% Avg. Flow Depth=0.05 m Max Vel=1.10 m/s Inflow=4.38 L/s 70.7 m³
100 mm Round Pipe n=0.011 L=10.00 m S=0.0200 m/m Capacity=8.63 L/s Outflow=4.38 L/s 70.7 m³

Pond 51P: 2 x 25,000L Rainwater Tanks Peak Elev=0.087 m Storage=1.8 m³ Inflow=2.05 L/s 30.0 m³
Outflow=1.69 L/s 29.8 m³

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Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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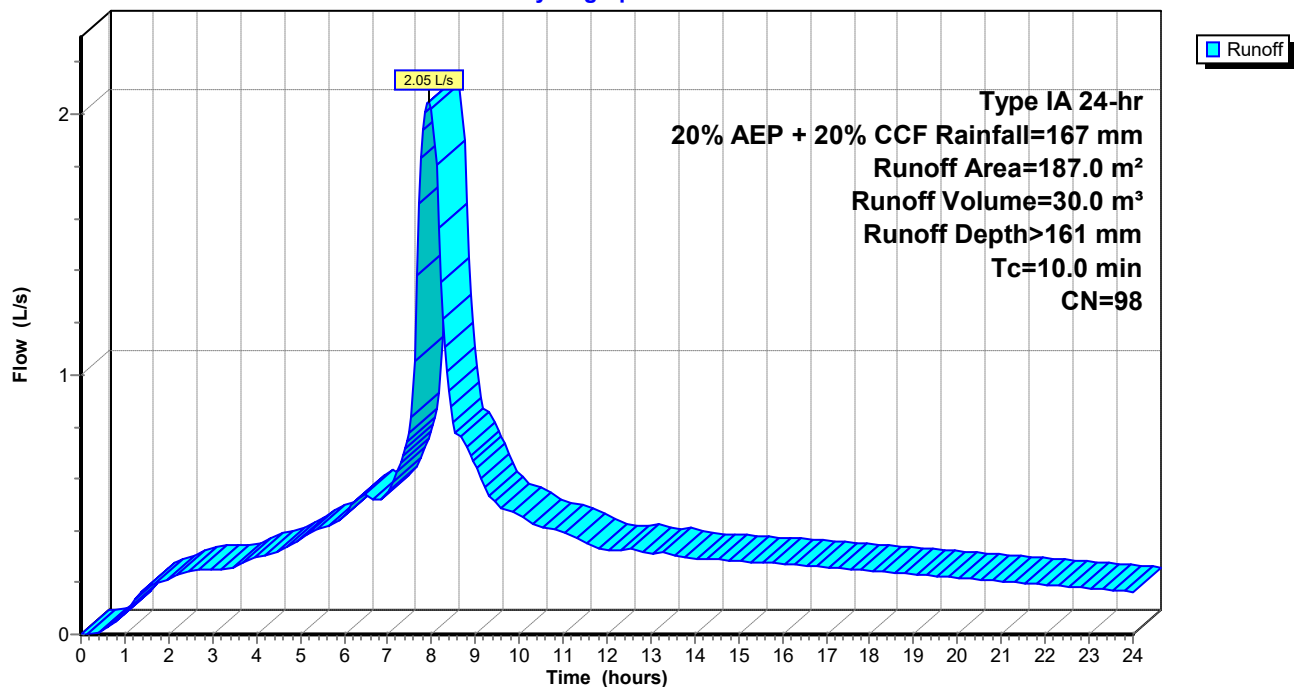
Summary for Subcatchment 50S: Proposed Apartment Roof AreaRunoff = 2.05 L/s @ 7.94 hrs, Volume= 30.0 m³, Depth> 161 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

Area (m ²)	CN	Description
187.0	98	Roofs, HSG C
187.0		100.00% Impervious Area

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

Subcatchment 50S: Proposed Apartment Roof Area

Hydrograph



145884

Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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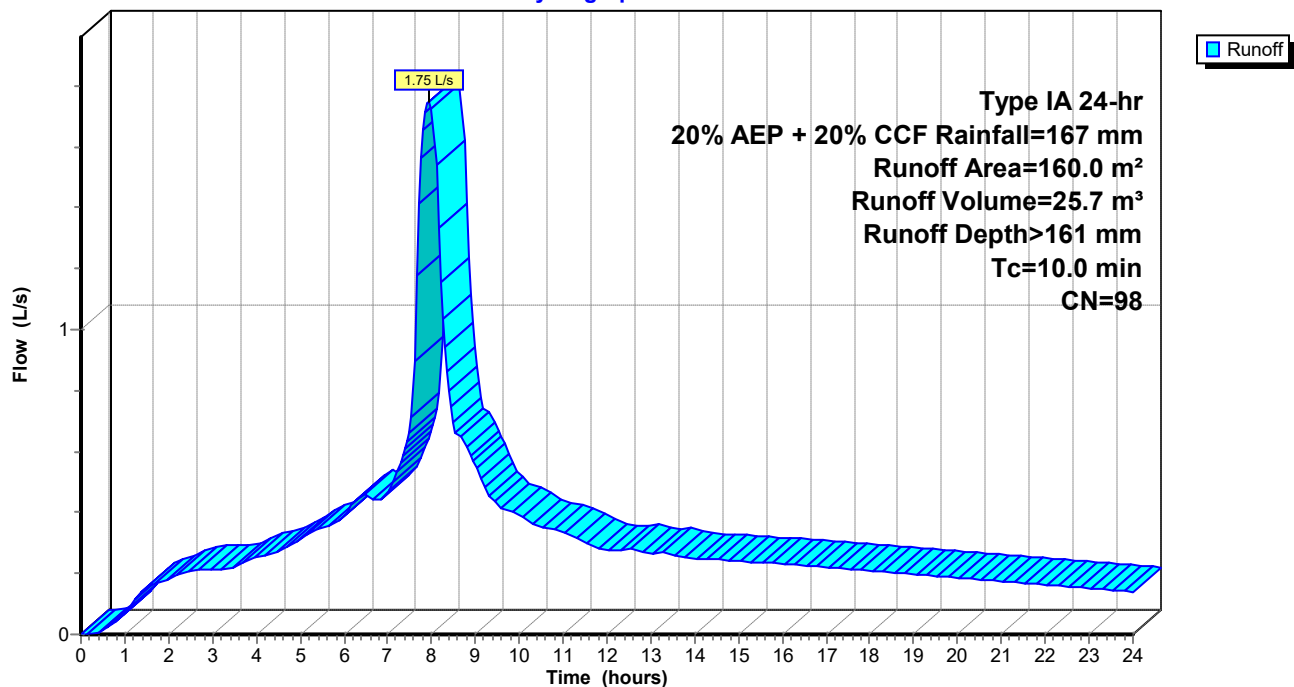
Summary for Subcatchment 53S: Proposed Concrete DrivewayRunoff = 1.75 L/s @ 7.94 hrs, Volume= 25.7 m³, Depth> 161 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

Area (m ²)	CN	Description
160.0	98	Roofs, HSG C
160.0		100.00% Impervious Area

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

Subcatchment 53S: Proposed Concrete Driveway

Hydrograph



145884

Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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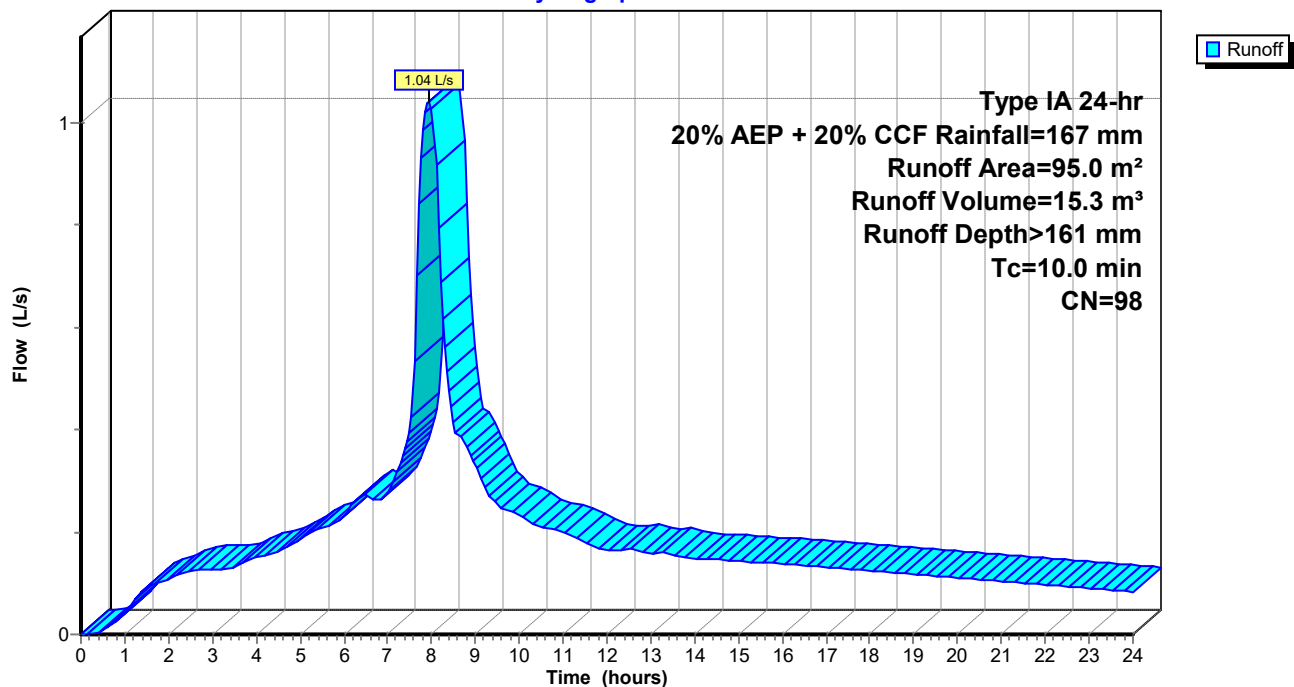
Summary for Subcatchment 55S: Proposed Concrete Path / PatioRunoff = 1.04 L/s @ 7.94 hrs, Volume= 15.3 m³, Depth> 161 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

Area (m ²)	CN	Description
95.0	98	Roofs, HSG C
95.0		100.00% Impervious Area

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

Subcatchment 55S: Proposed Concrete Path / Patio

Hydrograph



145884

Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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Summary for Reach 52R: 100mmØ @ 1%

Inflow Area = 187.0 m², 100.00% Impervious, Inflow Depth > 159 mm for 20% AEP + 20% CCF event
Inflow = 1.69 L/s @ 8.13 hrs, Volume= 29.8 m³
Outflow = 1.69 L/s @ 8.13 hrs, Volume= 29.8 m³, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 0.66 m/s, Min. Travel Time= 0.3 min

Avg. Velocity= 0.41 m/s, Avg. Travel Time= 0.4 min

Peak Storage= 0.0 m³ @ 8.13 hrs

Average Depth at Peak Storage= 0.04 m

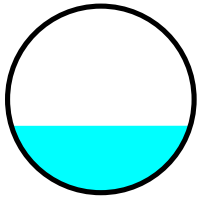
Bank-Full Depth= 0.10 m Flow Area= 0.01 m², Capacity= 6.10 L/s

100 mm Round Pipe

n= 0.011 PVC, smooth interior

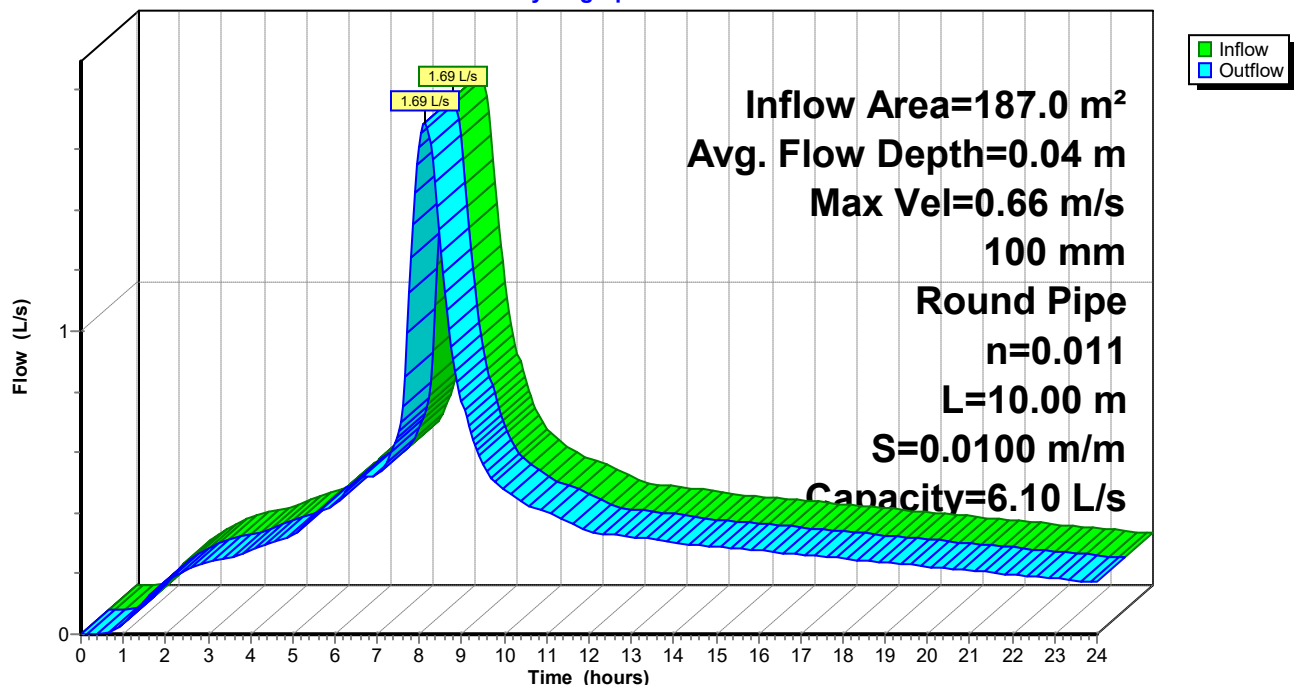
Length= 10.00 m Slope= 0.0100 m/m

Inlet Invert= -1.000 m, Outlet Invert= -1.100 m



Reach 52R: 100mmØ @ 1%

Hydrograph



145884

Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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Summary for Reach 54R: 100mmØ @ 1%

Inflow Area = 255.0 m², 100.00% Impervious, Inflow Depth > 161 mm for 20% AEP + 20% CCF event
Inflow = 2.80 L/s @ 7.94 hrs, Volume= 40.9 m³
Outflow = 2.80 L/s @ 7.94 hrs, Volume= 40.9 m³, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

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

Avg. Velocity= 0.45 m/s, Avg. Travel Time= 0.4 min

Peak Storage= 0.0 m³ @ 7.94 hrs

Average Depth at Peak Storage= 0.05 m

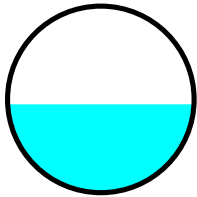
Bank-Full Depth= 0.10 m Flow Area= 0.01 m², Capacity= 6.10 L/s

100 mm Round Pipe

n= 0.011 PVC, smooth interior

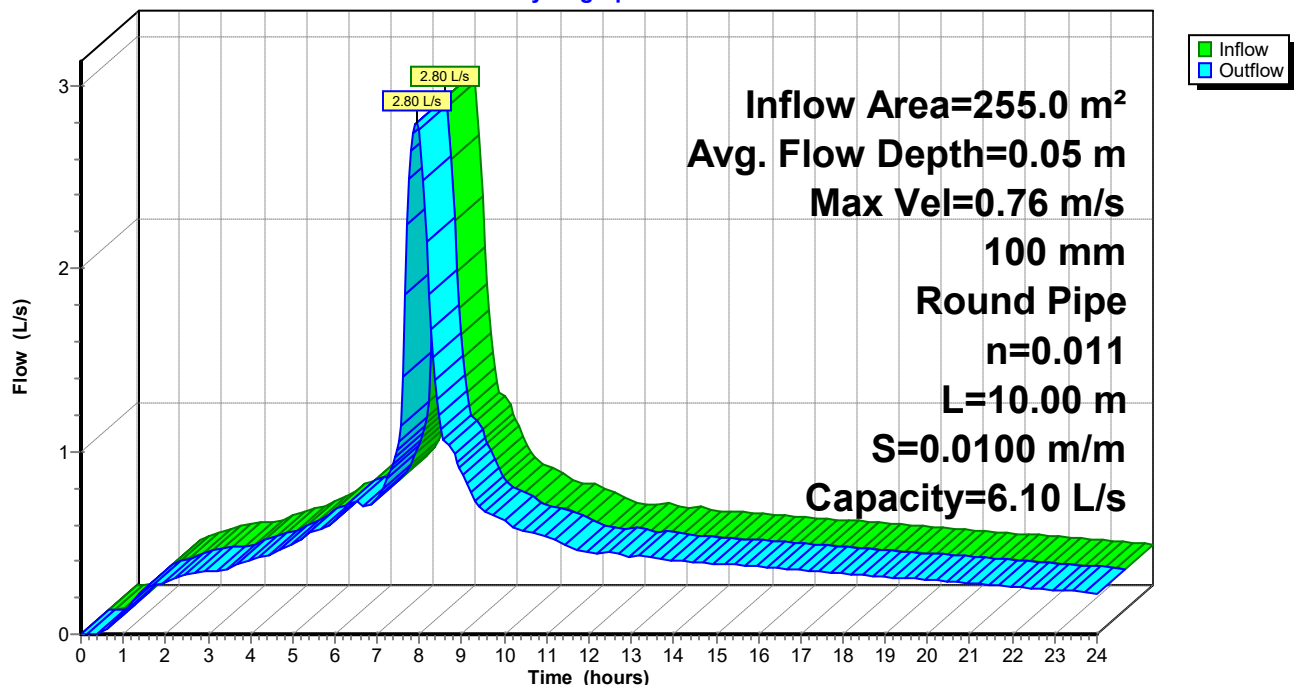
Length= 10.00 m Slope= 0.0100 m/m

Inlet Invert= -1.000 m, Outlet Invert= -1.100 m



Reach 54R: 100mmØ @ 1%

Hydrograph



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Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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Summary for Reach 56R: 100mmØ @ 2%

Inflow Area = 442.0 m², 100.00% Impervious, Inflow Depth > 160 mm for 20% AEP + 20% CCF event
Inflow = 4.38 L/s @ 8.00 hrs, Volume= 70.7 m³
Outflow = 4.38 L/s @ 8.00 hrs, Volume= 70.7 m³, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.10 m/s, Min. Travel Time= 0.2 min

Avg. Velocity= 0.67 m/s, Avg. Travel Time= 0.2 min

Peak Storage= 0.0 m³ @ 8.00 hrs

Average Depth at Peak Storage= 0.05 m

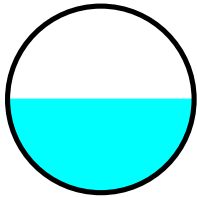
Bank-Full Depth= 0.10 m Flow Area= 0.01 m², Capacity= 8.63 L/s

100 mm Round Pipe

n= 0.011 PVC, smooth interior

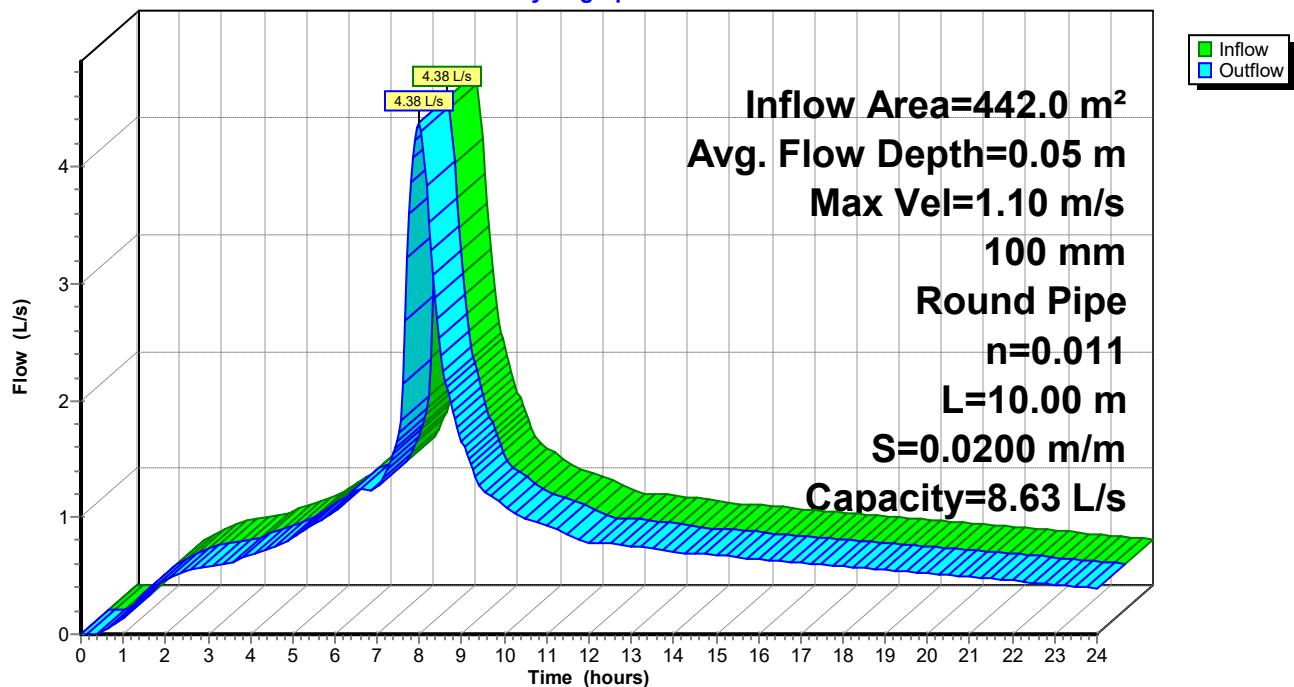
Length= 10.00 m Slope= 0.0200 m/m

Inlet Invert= -1.100 m, Outlet Invert= -1.300 m



Reach 56R: 100mmØ @ 2%

Hydrograph



145884

Type IA 24-hr 20% AEP + 20% CCF Rainfall=167 mm

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Summary for Pond 51P: 2 x 25,000L Rainwater Tanks

Inflow Area = 187.0 m², 100.00% Impervious, Inflow Depth > 161 mm for 20% AEP + 20% CCF event
 Inflow = 2.05 L/s @ 7.94 hrs, Volume= 30.0 m³
 Outflow = 1.69 L/s @ 8.13 hrs, Volume= 29.8 m³, Atten= 18%, Lag= 11.2 min
 Primary = 1.69 L/s @ 8.13 hrs, Volume= 29.8 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 0.087 m @ 8.13 hrs Surf.Area= 20.4 m² Storage= 1.8 m³Plug-Flow detention time= 22.4 min calculated for 29.7 m³ (99% of inflow)

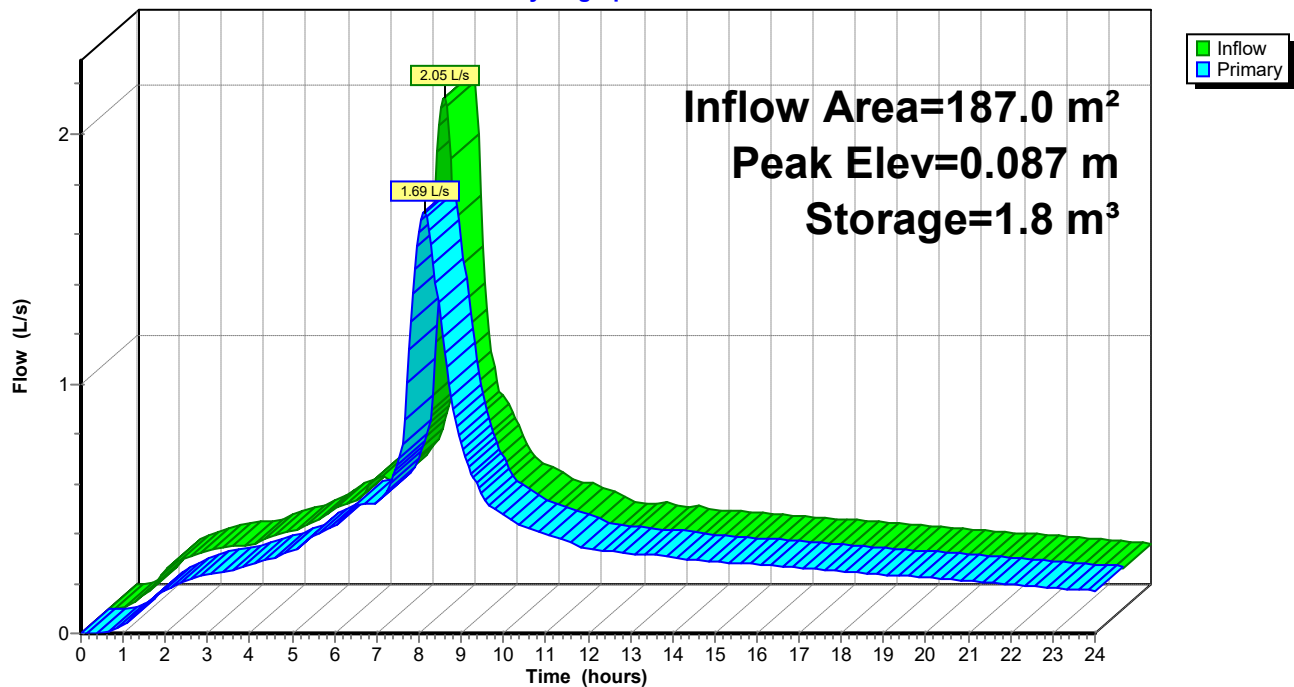
Center-of-Mass det. time= 15.7 min (667.4 - 651.7)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	52.9 m ³	3.60 mD x 2.60 mH Vertical Cone/Cylinder x 2

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	58 mm Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=1.69 L/s @ 8.13 hrs HW=0.087 m (Free Discharge)←**1=Orifice/Grate** (Orifice Controls 1.69 L/s @ 0.64 m/s)**Pond 51P: 2 x 25,000L Rainwater Tanks**

Hydrograph



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Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 50S: Proposed Runoff Area=187.0 m² 100.00% Impervious Runoff Depth>121 mm
Tc=10.0 min CN=98 Runoff=1.55 L/s 22.6 m³

Subcatchment 53S: Proposed Runoff Area=160.0 m² 100.00% Impervious Runoff Depth>121 mm
Tc=10.0 min CN=98 Runoff=1.33 L/s 19.3 m³

Subcatchment 55S: Proposed Concrete Runoff Area=95.0 m² 100.00% Impervious Runoff Depth>121 mm
Tc=10.0 min CN=98 Runoff=0.79 L/s 11.5 m³

Reach 52R: 100mmØ @ 1% Avg. Flow Depth=0.03 m Max Vel=0.62 m/s Inflow=1.33 L/s 22.4 m³
100 mm Round Pipe n=0.011 L=10.00 m S=0.0100 m/m Capacity=6.10 L/s Outflow=1.33 L/s 22.4 m³

Reach 54R: 100mmØ @ 1% Avg. Flow Depth=0.04 m Max Vel=0.71 m/s Inflow=2.12 L/s 30.8 m³
100 mm Round Pipe n=0.011 L=10.00 m S=0.0100 m/m Capacity=6.10 L/s Outflow=2.12 L/s 30.8 m³

Reach 56R: 100mmØ @ 2% Avg. Flow Depth=0.04 m Max Vel=1.03 m/s Inflow=3.37 L/s 53.1 m³
100 mm Round Pipe n=0.011 L=10.00 m S=0.0200 m/m Capacity=8.63 L/s Outflow=3.37 L/s 53.1 m³

Pond 51P: 2 x 25,000L Rainwater Tanks Peak Elev=0.066 m Storage=1.3 m³ Inflow=1.55 L/s 22.6 m³
Outflow=1.33 L/s 22.4 m³

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Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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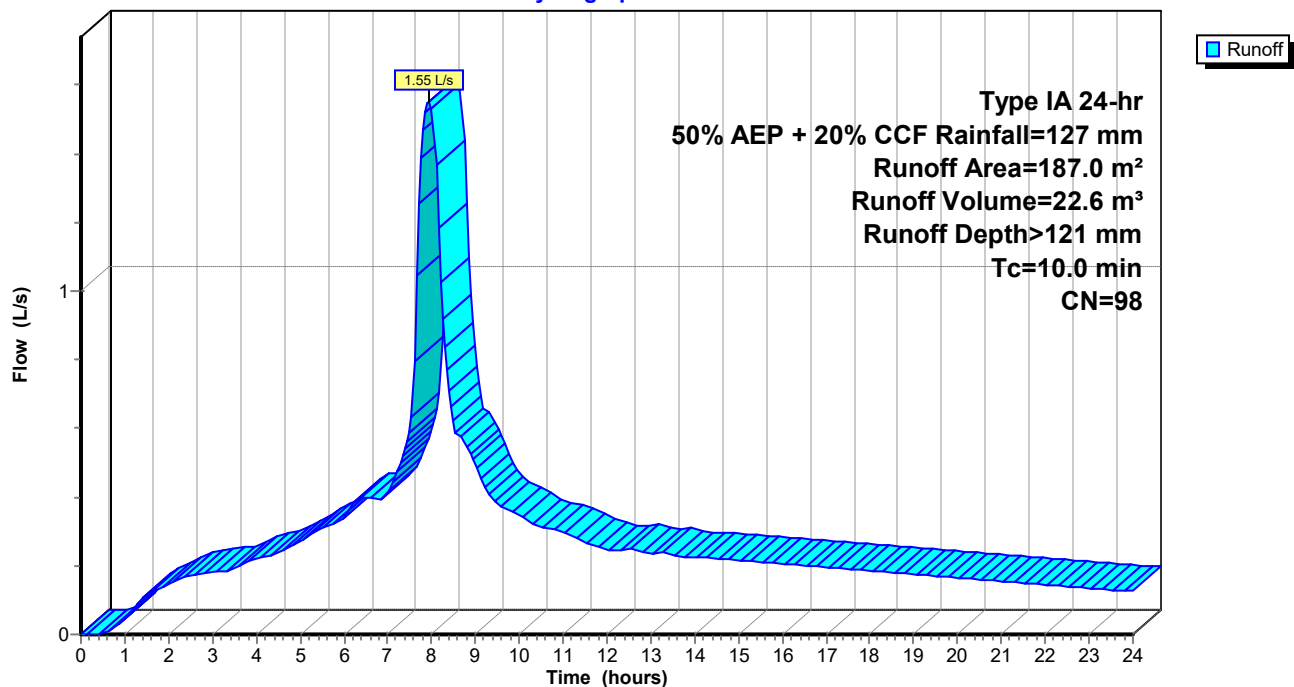
Summary for Subcatchment 50S: Proposed Apartment Roof AreaRunoff = 1.55 L/s @ 7.94 hrs, Volume= 22.6 m³, Depth> 121 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

Area (m ²)	CN	Description
187.0	98	Roofs, HSG C
187.0		100.00% Impervious Area

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

Subcatchment 50S: Proposed Apartment Roof Area

Hydrograph



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Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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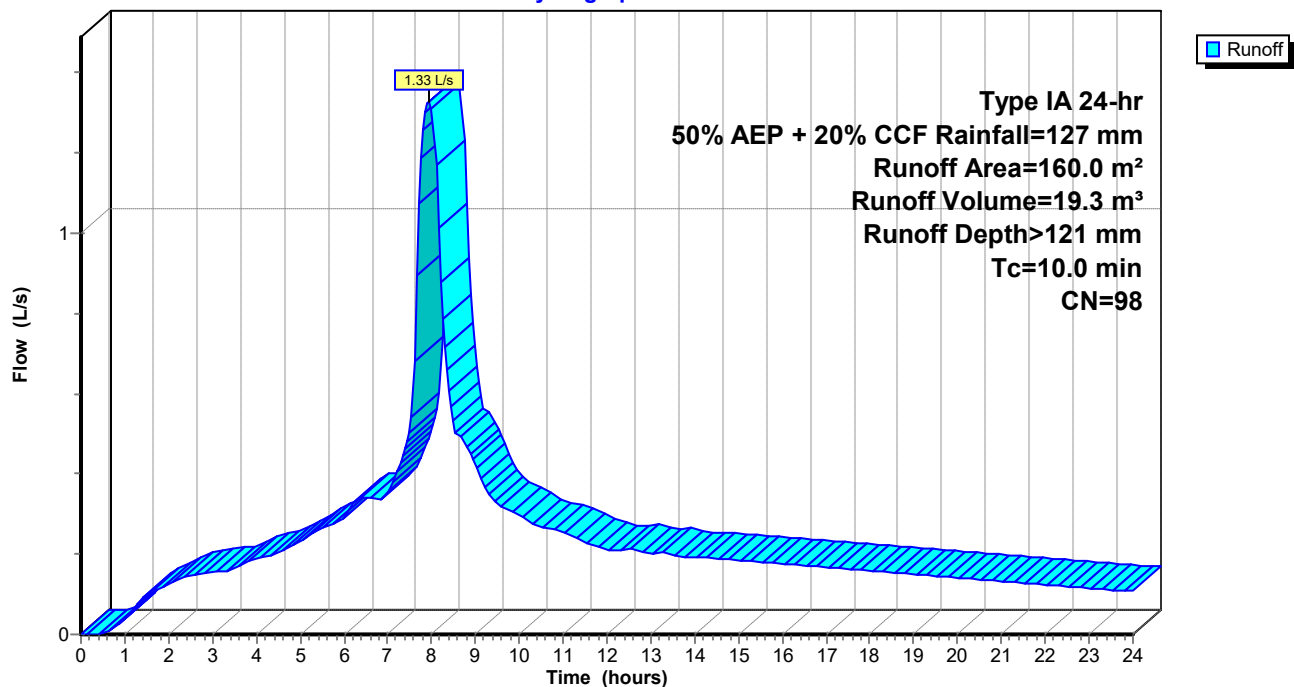
Summary for Subcatchment 53S: Proposed Concrete DrivewayRunoff = 1.33 L/s @ 7.94 hrs, Volume= 19.3 m³, Depth> 121 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

Area (m ²)	CN	Description
160.0	98	Roofs, HSG C
160.0		100.00% Impervious Area

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

Subcatchment 53S: Proposed Concrete Driveway

Hydrograph



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Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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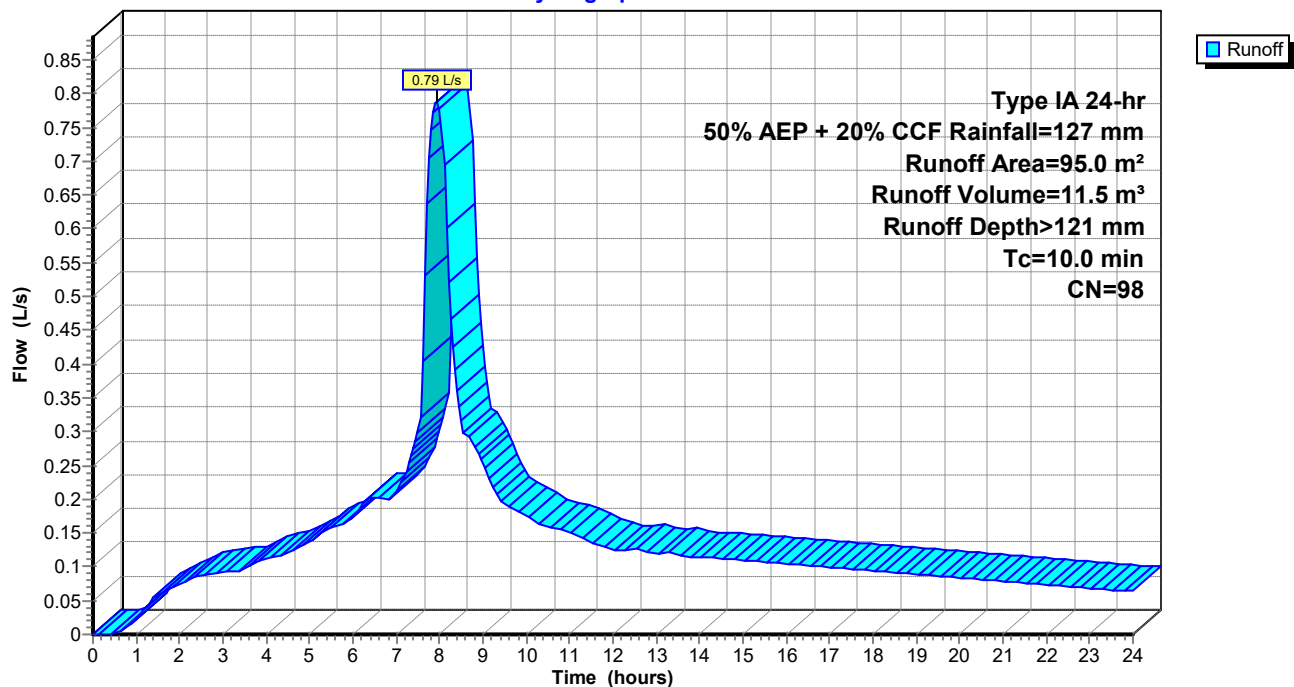
Summary for Subcatchment 55S: Proposed Concrete Path / PatioRunoff = 0.79 L/s @ 7.94 hrs, Volume= 11.5 m³, Depth> 121 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

Area (m ²)	CN	Description
95.0	98	Roofs, HSG C
95.0		100.00% Impervious Area

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

Subcatchment 55S: Proposed Concrete Path / Patio

Hydrograph



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Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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Summary for Reach 52R: 100mmØ @ 1%

Inflow Area = 187.0 m², 100.00% Impervious, Inflow Depth > 120 mm for 50% AEP + 20% CCF event
Inflow = 1.33 L/s @ 8.11 hrs, Volume= 22.4 m³
Outflow = 1.33 L/s @ 8.11 hrs, Volume= 22.4 m³, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 0.62 m/s, Min. Travel Time= 0.3 min

Avg. Velocity= 0.38 m/s, Avg. Travel Time= 0.4 min

Peak Storage= 0.0 m³ @ 8.11 hrs

Average Depth at Peak Storage= 0.03 m

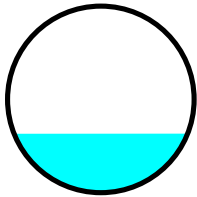
Bank-Full Depth= 0.10 m Flow Area= 0.01 m², Capacity= 6.10 L/s

100 mm Round Pipe

n= 0.011 PVC, smooth interior

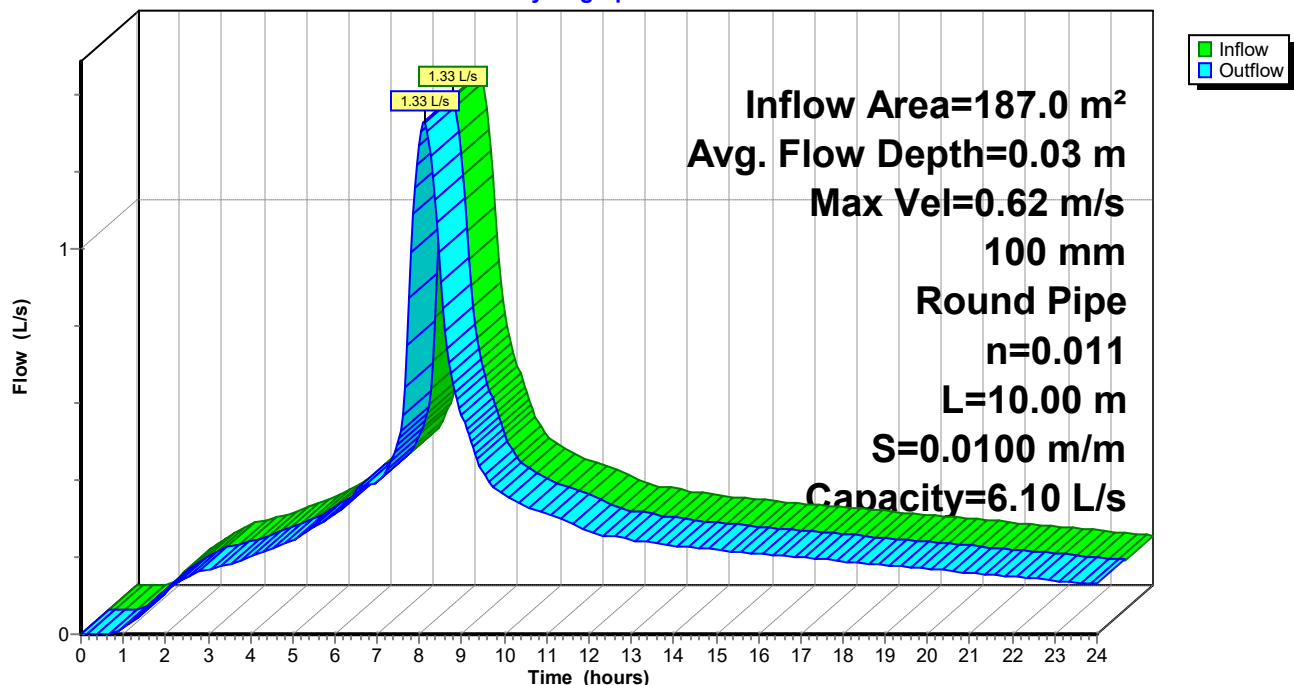
Length= 10.00 m Slope= 0.0100 m/m

Inlet Invert= -1.000 m, Outlet Invert= -1.100 m



Reach 52R: 100mmØ @ 1%

Hydrograph



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Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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Summary for Reach 54R: 100mmØ @ 1%

Inflow Area = 255.0 m², 100.00% Impervious, Inflow Depth > 121 mm for 50% AEP + 20% CCF event
Inflow = 2.12 L/s @ 7.94 hrs, Volume= 30.8 m³
Outflow = 2.12 L/s @ 7.94 hrs, Volume= 30.8 m³, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 0.71 m/s, Min. Travel Time= 0.2 min

Avg. Velocity= 0.41 m/s, Avg. Travel Time= 0.4 min

Peak Storage= 0.0 m³ @ 7.94 hrs

Average Depth at Peak Storage= 0.04 m

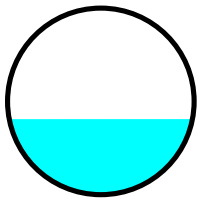
Bank-Full Depth= 0.10 m Flow Area= 0.01 m², Capacity= 6.10 L/s

100 mm Round Pipe

n= 0.011 PVC, smooth interior

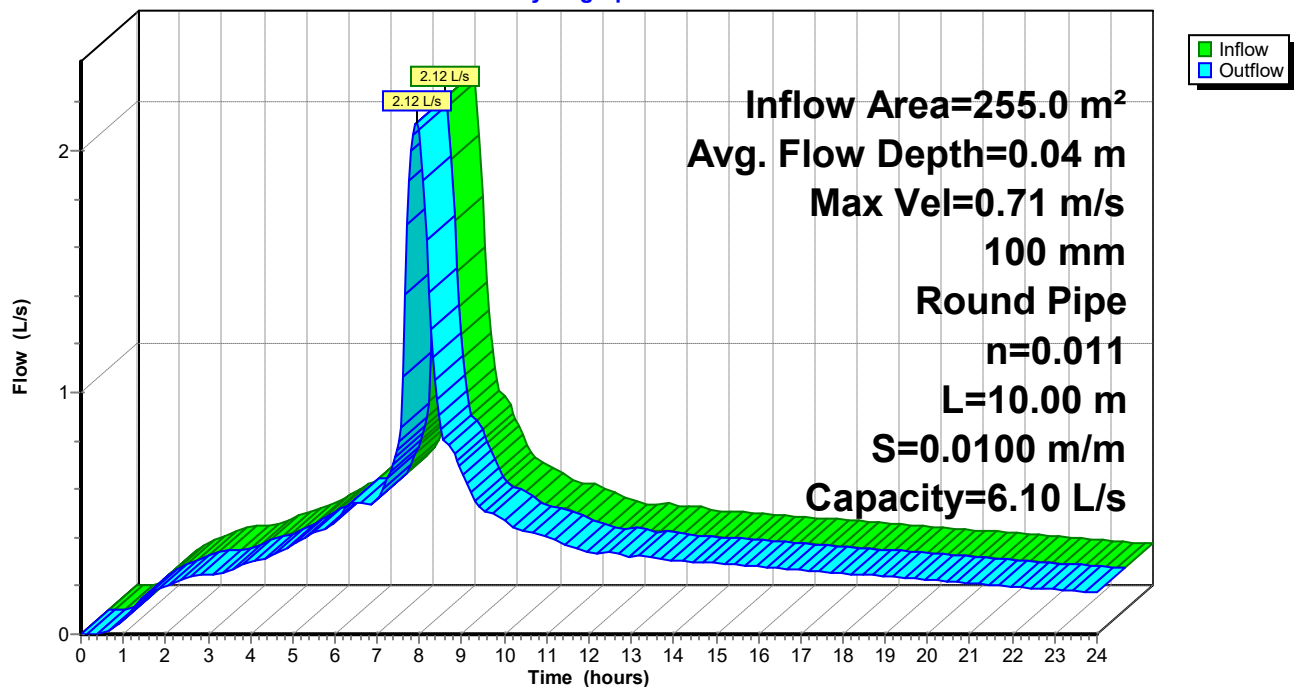
Length= 10.00 m Slope= 0.0100 m/m

Inlet Invert= -1.000 m, Outlet Invert= -1.100 m



Reach 54R: 100mmØ @ 1%

Hydrograph



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Type IA 24-hr 50% AEP + 20% CCF Rainfall=127 mm

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Summary for Reach 56R: 100mmØ @ 2%

Inflow Area = 442.0 m², 100.00% Impervious, Inflow Depth > 120 mm for 50% AEP + 20% CCF event
Inflow = 3.37 L/s @ 8.01 hrs, Volume= 53.1 m³
Outflow = 3.37 L/s @ 8.01 hrs, Volume= 53.1 m³, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.03 m/s, Min. Travel Time= 0.2 min

Avg. Velocity= 0.62 m/s, Avg. Travel Time= 0.3 min

Peak Storage= 0.0 m³ @ 8.01 hrs

Average Depth at Peak Storage= 0.04 m

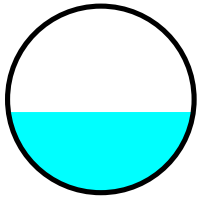
Bank-Full Depth= 0.10 m Flow Area= 0.01 m², Capacity= 8.63 L/s

100 mm Round Pipe

n= 0.011 PVC, smooth interior

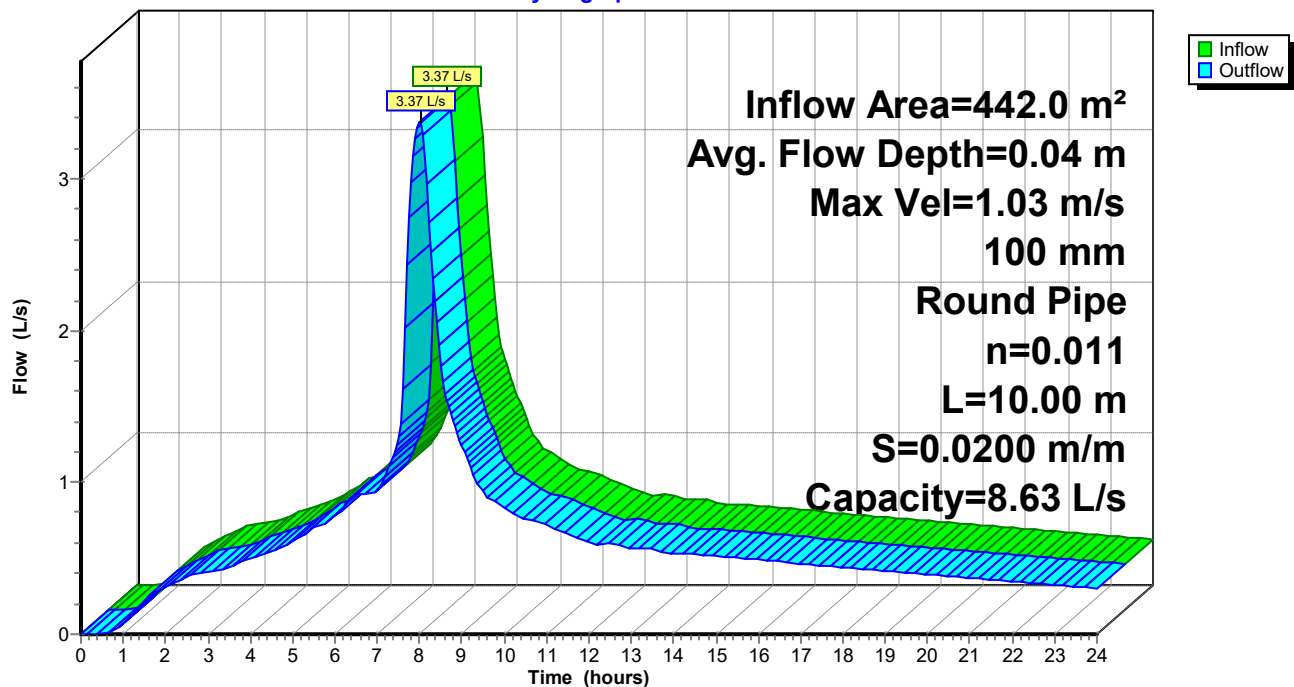
Length= 10.00 m Slope= 0.0200 m/m

Inlet Invert= -1.100 m, Outlet Invert= -1.300 m



Reach 56R: 100mmØ @ 2%

Hydrograph



Summary for Pond 51P: 2 x 25,000L Rainwater Tanks

Inflow Area = 187.0 m², 100.00% Impervious, Inflow Depth > 121 mm for 50% AEP + 20% CCF event
 Inflow = 1.55 L/s @ 7.94 hrs, Volume= 22.6 m³
 Outflow = 1.33 L/s @ 8.11 hrs, Volume= 22.4 m³, Atten= 14%, Lag= 10.2 min
 Primary = 1.33 L/s @ 8.11 hrs, Volume= 22.4 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 0.066 m @ 8.11 hrs Surf.Area= 20.4 m² Storage= 1.3 m³

Plug-Flow detention time= 23.2 min calculated for 22.4 m³ (99% of inflow)

Center-of-Mass det. time= 16.4 min (673.0 - 656.7)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	52.9 m ³	3.60 mD x 2.60 mH Vertical Cone/Cylinder x 2

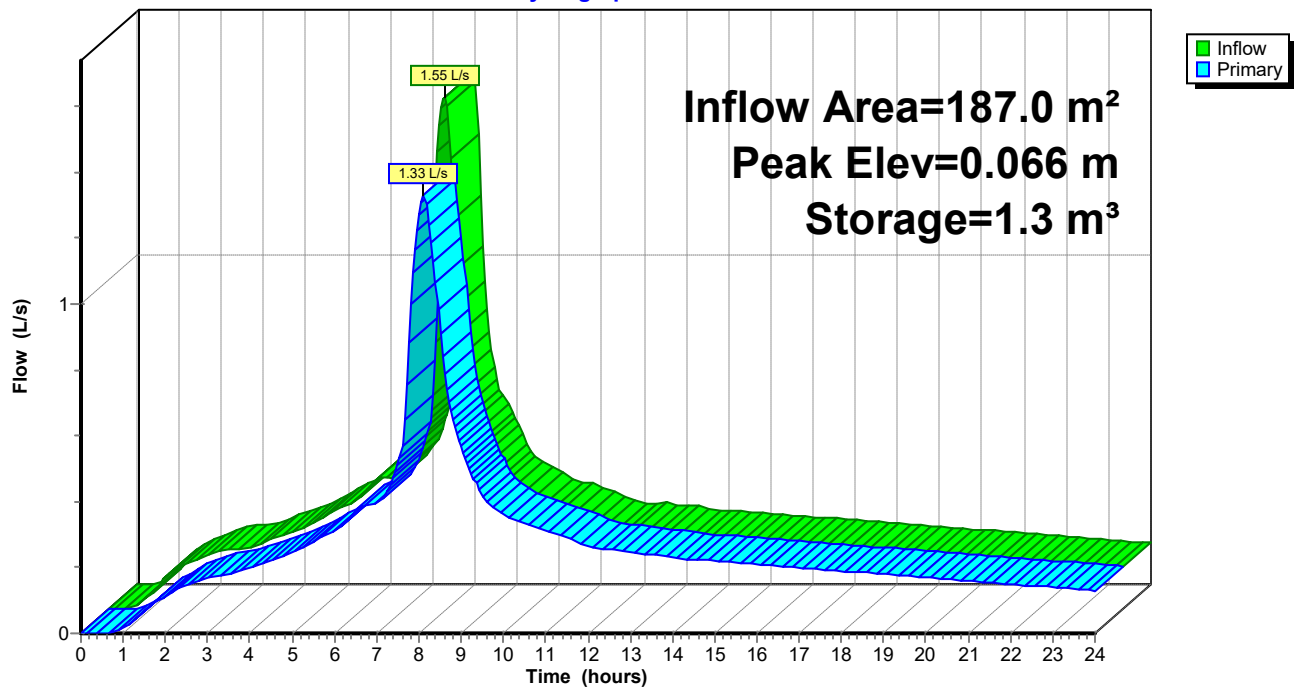
Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	58 mm Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=1.35 L/s @ 8.11 hrs HW=0.066 m (Free Discharge)

←**1=Orifice/Grate** (Orifice Controls 1.35 L/s @ 0.51 m/s)

Pond 51P: 2 x 25,000L Rainwater Tanks

Hydrograph



Archaeological Assessment of Effects: 6 Flagstaff Road, Russell

21 April 2026

G. Kerby



Commissioned by:

Luke Holmes
Auckland

Prepared by:

Geometria Limited
P.O. Box 68-653
Newton
Auckland

Geometria

0.1 Executive Summary

Geometria was engaged by Luke Holmes to assess possible archaeological effects of a proposed boat shed apartment on Part Section 1 Town of Russell (CT 512/218), Deed 856, at 6 Flagstaff Road, Russell. The proposal includes buried water tanks, a concrete patio, a retaining wall and the new building foundation that could potentially modify archaeological remains through shallow earthworks plus deeper excavation required for the water tanks. No archaeological sites were identified on the property, although minor on-site investigation identified the presence of historic archaeological material on site within modified strata and a thick and widespread fill layer across the site. The extent of modification to the property and lack of intact archaeology suggests that an archaeological authority is not required from Heritage New Zealand Pouhere Taonga. Owing to the significant historical activity in Russell an accidental discovery protocol has been recommended.

0.2 Quality Information

Document: Archaeological Assessment of Effects for 6 Flagstaff Road

Ref.: 2026-413

Date: 21 April 2026

Prepared by: Georgia Kerby

0.3 Revision History

Revision	Revision Date	Details	Authorised Name
Draft	7 April	Draft	G. Kerby
Final	21April	Final	J. Carpenter

0.4 Glossary

Classic	The later period of New Zealand settlement
Midden	The remains of food refuse usually consisting of shells, and bone, but can also contain artefacts
Pā	A site fortified with earthworks and palisade defences
Pit	Rectangular excavated pit used to store crops by Māori
Terrace	A platform cut into the hill slope used for habitation
Wahi tapu	Sites of spiritual significance to Māori

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File ref.: OneDrive\Documents\Geometria\2026\2026-413_6_Flagstaff_Road

Title Image: Southwest view to subject property.

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1.0 Introduction

Luke Holmes commissioned Geometria Ltd to undertake an archaeological survey and assessment of a proposed boat shed apartment on Part Section 1 Town of Russell (CT 512/218), Deed 856, at 6 Flagstaff Road, Russell, Bay of Islands (Figure 1).

The property is 1,012m² in size and consists of a narrow, flat grassed area directly west of Flagstaff Road which is backed by two residential properties. Nearly half of the north side consists of steeply sloping hill up to a retaining wall, the upper portion of which is covered in native and introduced trees and shrubs. The underlying geology, as with the majority of Russell, consists of weathered to yellow-brown soft sandy clay to depths of 30m and medium grained sandstone interbedded with grey to black mudstone (Petty 1981). Draft plans by Absolute Build show the footprint of the boat shed apartment and required cuts including 78m³ to 3m depth for the buried water tanks and 47m³ to 40cm depth for the retaining wall and building platform, plus an extra 34m³ of topsoil removal as part of the building platform (Figure 2, Figure 3, Figure 4). An existing stormwater pipe runs along the south boundary and an existing metalled driveway will form the basis of the new driveway.

This report assesses the potential archaeological effects of the construction of the boat shed apartment and installation of associated services. Under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA), all archaeological sites are protected from any modification, damage or destruction except by the authority of Heritage New Zealand Pouhere Taonga (HNZPT).

This survey and assessment uses archaeological techniques to assess archaeological values and does not seek to locate or identify wāhi tapu or other places of cultural or spiritual significance to Māori. Such assessments may only be made by Tangata Whenua, who may be approached independently of this report for advice. Likewise, such an assessment by Tangata Whenua does not constitute an archaeological assessment and permission to undertake ground disturbing activity on and around archaeological sites and features may only be provided by Heritage New Zealand Pouhere Taonga and may only be monitored or investigated by a qualified archaeologist approved through the archaeological authority process.

2.0 Statutory Requirements

There are two main pieces of legislation in New Zealand that control work affecting archaeological sites. These are the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA; previously the Historic Places Act 1993) and the Resource Management Act 1991 (RMA).

2.1 The Heritage New Zealand Pouhere Taonga Act 2014

Under the HNZPTA all archaeological sites are protected from any modification, damage or destruction except by the authority of Heritage New Zealand Pouhere Taonga. Section 6 of the HNZPTA defines an archaeological site as:

- "(a) any place in New Zealand, including any building or structure (or part of a building or structure), that—
 - (i) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and
 - (ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and
- (b) includes a site for which a declaration is made under section 43(1)"



Figure 1. Location of subject property, 6 Flagstaff Road, Russell.

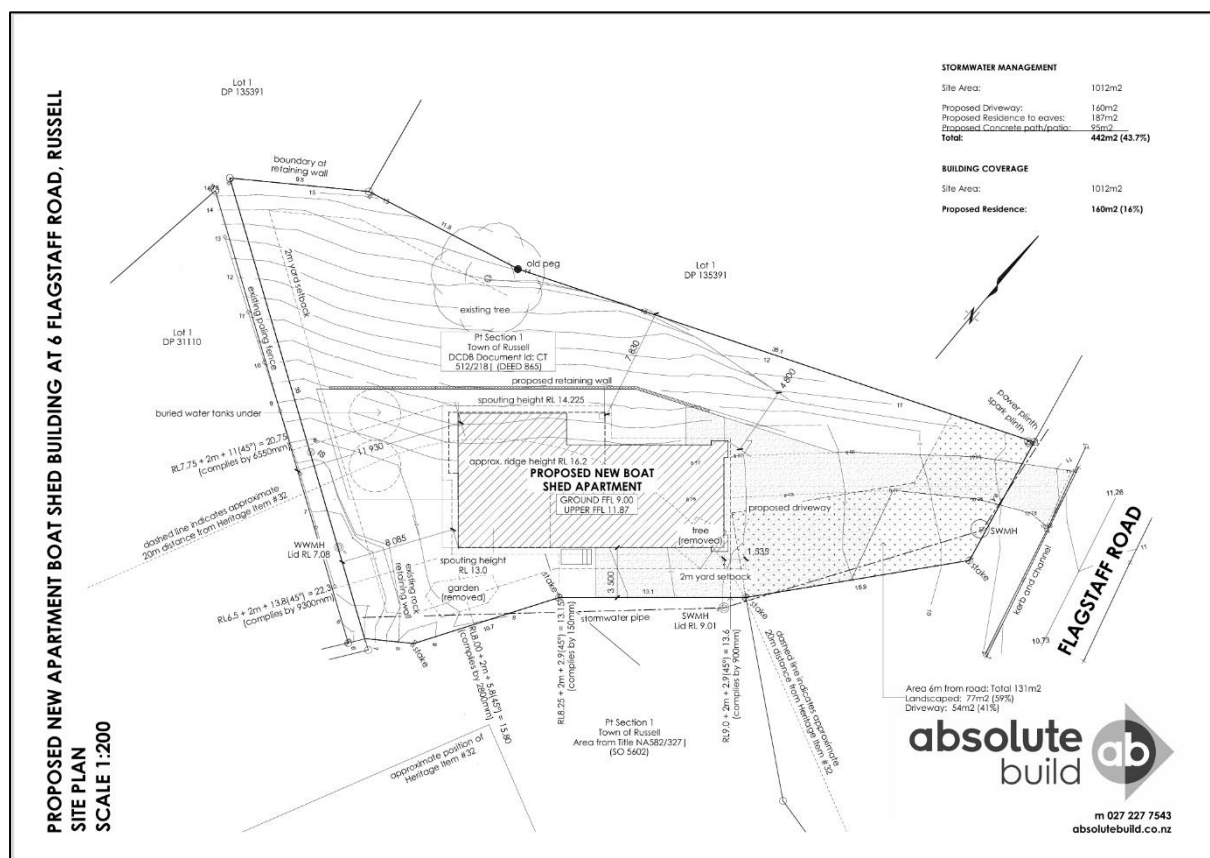


Figure 2. Absolute Build Plans P1 (17/03/2026).

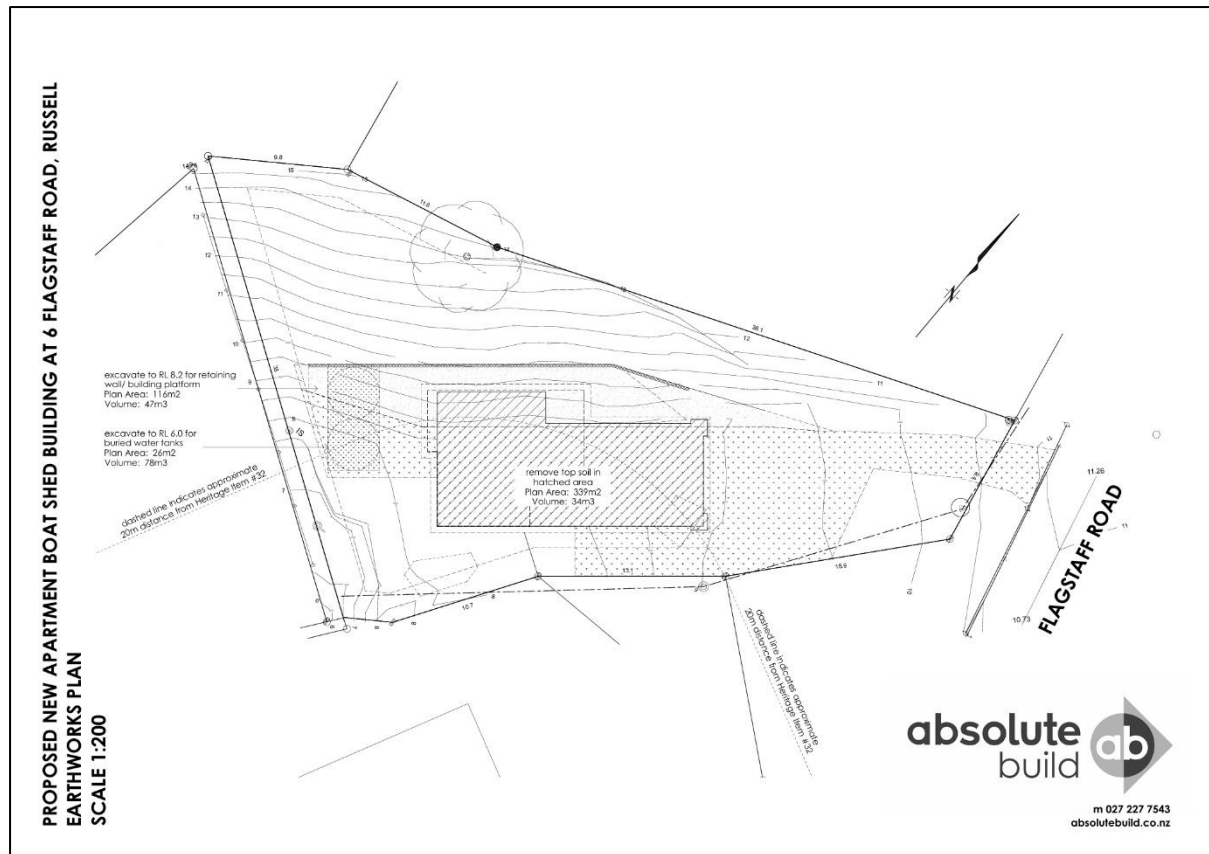


Figure 3. Absolute Build Plans P2 (17/03/2026).

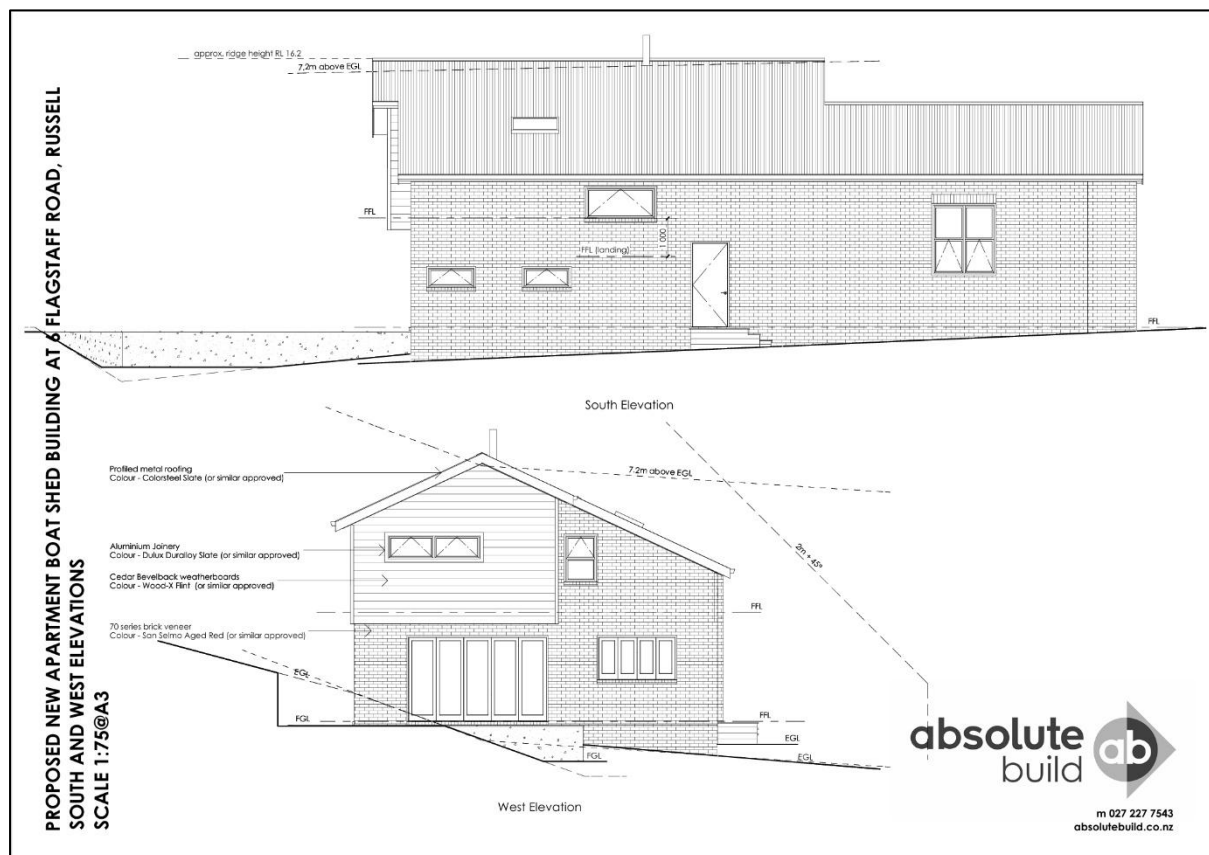


Figure 4. Absolute Build Plans P6 (17/03/2026).

To be protected under the HNZPTA an archaeological site must have physical remains that pre-date 1900 and that can be investigated by scientific archaeological techniques. Sites from 1900 or post-1900 can be declared archaeological under section 43(1) of the Act.

If a development is likely to impact on an archaeological site, an authority to modify or destroy this site can be sought from the local Heritage New Zealand Pouhere Taonga office under section 44 of the Act. Where damage or destruction of archaeological sites is to occur Heritage New Zealand usually requires mitigation. Penalties for modifying a site without an authority include fines of up to \$300,000 for the destruction of a site.

Most archaeological evidence consists of sub-surface remains and is often not visible on the ground. Indications of an archaeological site are often very subtle and hard to distinguish on the ground surface. Sub-surface excavations on a suspected archaeological site can only take place with an authority issued under Section 56 of the HNZPTA issued by the Heritage New Zealand.

The archaeological authority process applies to all archaeological sites, regardless of whether:

- The site is recorded in the NZ Archaeological Association Site Recording Scheme or included in the Heritage New Zealand List,
- The site only becomes known about as a result of ground disturbance, and/ or
- The activity is permitted under a district or regional plan, or a resource or building consent has been granted

Heritage New Zealand also maintains the New Zealand Heritage List/ Rārangi Kōrero of Historic Places, Historic Areas, Wahi Tupuna, Wahi Tapu and Wahi Tapu Areas. The List can include archaeological sites. Its purpose is to inform members of the public about such places.

2.2 The Resource Management Act 1991

Archaeological sites and other historic heritage may also be considered under the Resource Management Act 1991 (RMA). The RMA establishes (under Part 2) in the Act's purpose (Section 5) the matters of national importance (Section 6), and other matters (Section 7) and all decisions by a Council are subject to these provisions. Sections 6e and 6f identify historic heritage (which includes archaeological sites) and Māori heritage as matters of national importance.

Councils have a responsibility to recognise and provide for the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wahi tapu, and other taonga (Section 6e). Councils also have the statutory responsibility to recognise and provide for the protection of historic heritage from inappropriate subdivision, use and development within the context of sustainable management (Section 6f). Responsibilities for managing adverse effects on heritage arise as part of policy and plan preparation and the resource consent processes.

Historic heritage includes:

- historic sites, structures, places, and areas
- archaeological sites;
- sites of significance to Māori, including wahi tapu;
- surroundings associated with the natural and physical resources (RMA section 2).

These categories are not mutually exclusive and some archaeological sites may include above ground structures or may also be places that are of significance to Māori.

Where resource consent is required for any activity the assessment of effects is required to address cultural and historic heritage matters (RMA 4th Schedule and the district plan assessment criteria [if appropriate]).

3.0 Methodology

3.1 Site Assessment

The methods used to assess the presence and state of archaeological remains on the property included both a desktop review and field survey. The desktop survey involved an investigation of written records relating to the history of the property. These included regional archaeological publications and unpublished reports, New Zealand Archaeological Association Site Record Files or NZAA SRF (ArchSite - www.archsite.org.nz - is the online repository of the NZAA SRF), and land plans held at Land Information New Zealand. The field survey included pedestrian surface survey, probing and spade testing.

3.2 Significance Assessment

HNZPT has provided guidelines setting out criteria that are specific to archaeological sites (HNZPT 2006:9-10). The archaeological values of sites relate mainly to their information potential, that is, the extent to which they can provide evidence relating to local, regional and national history through the use of archaeological investigation techniques, and the research questions to which the site could contribute. The surviving extent, complexity and condition of sites are the main factors in their ability to provide information through archaeological investigation. Other relevant values could include historical, technological, architectural and cultural.

Where archaeological sites, features and/or values are present within the proposed subdivision the following criteria are used to assess their significance:

The first set of criteria assess the potential of the site to provide a better understanding of New Zealand's past using scientific archaeological methods. These categories are focussed on the intra-site level.

3.2.1 Condition and Integrity.

How complete is the site? Are parts of it already damaged or destroyed? What information can be provided by the investigation of the site using archaeological methods.

A complete, undisturbed site with visible/accessible physical features would have high value, a partly destroyed or damaged site would have moderate value and a site suffering from extensive modification or damage would be of low value.

3.2.2 Diversity

How diverse are the visible/accessible physical features, and those features which might be expected below the surface and amenable to archaeological investigation of the site?

A complex site like a pā or kāinga with pits, terraces, defensive works, midden and stratified occupation deposits or other visible/accessible physical features and which could be expected to have a variety of subsurface features and associated with a long-term occupation by a large group of people would be of high significance. A smaller site, such as a complex of a few terraces, pits and midden which might be associated with a family-level occupation and used for a short period of time would be of moderate significance. A site with only one or two known or expected feature types, such as a small midden which overlay several ovens and with no other associated features is of low value.

3.2.3 Rarity and Uniqueness

How rare or unique is the site as a type? Are there features within the site that are not commonly found or are unusual?

Rarity can be described in a local, regional and national context. If the site is not rare at all, it has low significance in this category. If the site is rare in a local context only it is of low significance, if the site is rare in a regional context, it has moderate significance and it is of high significance if the site is rare nationwide. Coastal shell midden with relatively homogenous contents and not specifically associated with a larger occupation or other features are ubiquitous in Taitokerau/Northland and are the most common site type nationally, and would generally be of low archaeological significance. Small pit and terrace complexes are moderately common and typically moderately significant. Pā sites, although still numbered in the thousands nationally, are rarer and are of high significance. Sites from the earliest period of human occupation in Aotearoa New Zealand, so-called “Archaic” sites associated with the cooked remains of moa and other extinct or locally extirpated species and Polynesian-style artefact forms are incredibly rare and unique and are of the highest significance, despite being a kind of midden.

The second set of criteria puts the archaeological site into its broader context including the wider archaeological landscape, amenity values, and historic context and associations with events and people, and the values the present-day communities of interest hold in the site.

3.2.4 Archaeological Context

What is the context of the site within the surrounding archaeological sites?

The question here is the part the site plays within the surrounding known archaeological sites. A site which sits amongst similar surrounding sites without any specific features of note, such as a coastal midden with other midden nearby is of low significance. A site which occupies a central or prominent position such as a large pā with surrounding satellite occupation, horticultural and other sites which might reasonably be associated with it is of high significance.

3.2.5 Landscape Context and Amenity Values

What is the context of the site within the landscape? Does it have visual, education, recreation or other amenity values

This question is linked to the one above but focuses onto the position of the site in the landscape. If it is a dominant site with many features still visible from public places it has high significance, but if the sites’ position in the landscape is ephemeral with little or no features visible it is of low significance. This assessment is also concerned with the amenity value of a site such as whether it is publicly accessible and used for recreational or other activities, available and useful for interpretation and education activities. A prominent pā in a public reserve with walking tracks, an urupa visible from the road, or the site of a first waka or ship landing, church service or other important event regardless of whether anything physical is visible would be of high significance. Subsurface features on private land and not otherwise associated with any important person or even would be assessed as having low significance.

3.2.6 Historic Context and Community Associations

What is the historic context of the site and is it associated with important historic events or people? How do communities of interest, be they the mana whenua, other descendant communities or local inhabitants feel about the site?

This is the question of known cultural association either by tangata whenua or other descendant groups. Sites linked with important historic events or people have higher the significance while sites with no known history are of lesser significance. Likewise sites ascribed value by communities of interest are of higher significance than those sites the community is unaware of or does not care about. An overall significance assessment derives from weighing up the different significance values across of the six categories.

4.0 Historical Background

The historic significance of Russell/Kororāreka has been recognised for more than sixty years, with major popular syntheses Ross (1946), Jack Lee (1983) and King (1992) and many other works also available.

According to traditional histories, the Bay of Islands was controlled by the Ngātiawa people until the 16th century when the people of the Hokianga and Kaikohe were coalescing as Ngāpuhi. Ngare Raumati, part of Ngātiwai, held Kororāreka through the 17th and early 18th century. After killing Waipahihi, a chief of Ngāti Manu of Paihia, Ngare Raumati ceded Kororāreka as compensation and Ngāti Manu controlled the area when the first European, Captain Stewart, stepped foot on the beach in 1805.

The local Māori refused to sell land initially, but had relented by 1814 when Thomas Hansen, Captain of the *Active*, arrived in the Bay of Islands with Rev. Samuel Marsden. A substantial Māori population lived around a pā overseen by the Ngāti Manu chief Whareumu, with the settlement extending along the beach. The first European to take up residence was John Johnston, a sawyer and trader who had huts and saw pits in the area by 1827 but the European population remained small until the 1820s. Increasing stops by whalers looking for supplies and entertainment saw the population grow from this point on, and following the “Girls War” the Ngāti Manu influence declined in favour of Ngāpuhi. At this time large scale land purchases by Europeans began. Between 1830 and 1840 Russell became an important port for merchants and whalers and in the absence of a strong government became a rough and tumble frontier town. Elements of a civil society evolved locally in the lead up to the Treaty of Waitangi, with a Kororāreka Association of Vigilantes formed in 1838 to deal with local lawbreakers, the establishment of a local newspaper and banking company, and the call for subscriptions for road building from the local community (Figure 5, Figure 6). Following the Treaty and the subsequent removal of the seat of colonial government to Auckland, Russell declined somewhat.

At the time of the chopping down of the flagstaff and subsequent sack of the town by Hone Heke and his allies in 1845, Kororāreka had a population of about 400. Although the town was soon re-established after Heke burned it to the ground apart from the churches and mission buildings, it entered a period of slow decline, exacerbated by the shift of the South Pacific whaling fleet to more northern latitudes, and the American Civil War which removed even more foreign ships from local waters. In 1876 Russell had two hotels, a dozen stores, a custom house and courthouse, post office, telegraph office, schoolhouse and 12 prefabricated cottages for miners; the establishment of a manganese mine in 1872 (closed in 1895) and a large mullet cannery in 1889 having provided the major economic stimulus to the town in the late 19th century.

4.1 Section 1 Block 288A

The subject property lies within what was originally surveyed Section 1 of the Township of Russell, part of early European settler Joel Samuel Polack’s pre-Treaty of Waitangi purchases at Kororareka. Polack originally purchased a piece of land of uncertain acreage at the north end of Kororareka. The land extended from the beach at the Wahi Tapu associated with the Girls War (the boat ramp spit) along the old track over to Tapeka/Queen Street, and down the eastern side of the unnamed stream running to the north end of the beach.

The land was referred to as the Paramata 1 Block, and it was sold for four muskets, two 25 lbs. casks of gunpowder 8 9 1/4 blankets two back combs two head combs two iron pots two pairs of scissors, six clasp knives, 30 sheets paper, and four cartouche (ammunition) boxes and belts. This was later valued at £36 5s.

The deed of Polack’s Parramata block purchase is contained in Turton’s Deeds (Turton 1882), while Polack himself provides an account of the original purchase and the many traditional interests in the land he had to satisfy, in his own book (Polack 1838: 207-214).

Berghan (2006: 76-77. Northland Block Research Narratives Volume II Old Land Claims. Unpublished report for the Crown Forestry Rental Trust) provides a narrative of the investigation of the Polack purchase contained within the Old Land Claim file, and which lead to the ultimate grants by the Crown Land Commission investigations of pre-Treaty purchases.

Ultimately Polack was granted 9.5 acres in a number of blocks, the largest by far being the block adjoining Wellington St, with two other much smaller parcels either side of what is now Kent St. At some point the northern third of the Polack grant was taken out, possibly by an exchange with the Crown for five suburban acres referenced elsewhere, and the main Wellington St block was reduced to six acres.

Unfortunately for Polack, his material holdings had been substantially reduced owing to the attack on Kororareka on 11 March 1845 by Hone Heke, Te Ruku Kawiti and their allies. Some weeks before the attack, the Chief Police Magistrate of Kororareka, Thomas Beckham, asked Polack to allow his premises to be used for the protection of the inhabitants of the town, (by then renamed Russell) in case the town was attacked.

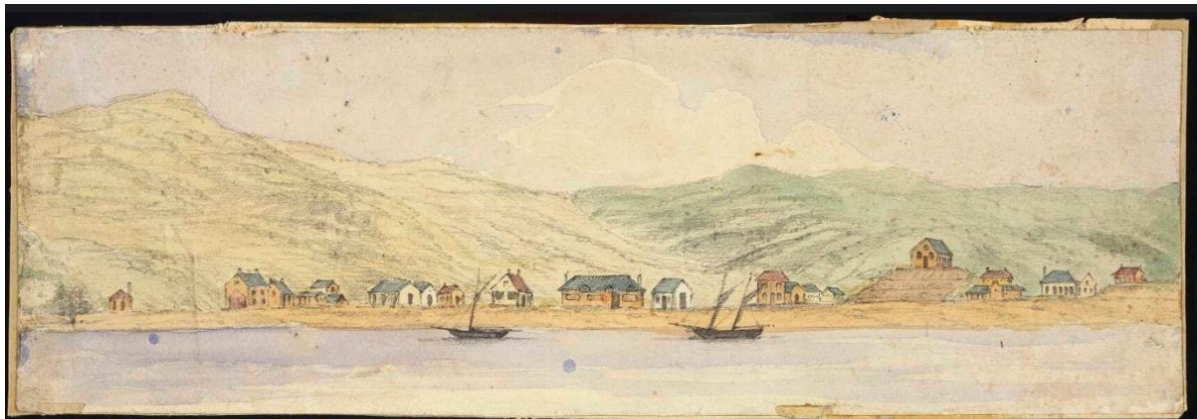
These premises, located on the foreshore behind the Wahi Tapu spit, comprised a large house with two upper rooms and 12 lower rooms, a cottage with two upper rooms and four lower rooms, which housed a ship chandlery, a brewery, and a cellar. At the time this was the second largest building complex in the colony, after Government House in Auckland. It had been the headquarters of the Kororareka Association in 1838, the first organisation to attempt to enforce law and order in the lawless settlement. In the 1840s, at the time of Hone Heke's and Te Ruki Kawiti's attack, it housed the Supreme County Court, with a Grand Jury room, a Petty Jury room, and rooms for the magistrate.

Samuel Polack's stockade may have extended to the general vicinity of the subject property, based on descriptions and paintings, until it was destroyed on 11 March 1845 during the Maori attack on Kororareka.

Subsequent transactions relating to Polack's Grant are contained in Deeds Index Book 1E County of Bedford, Claim 288A, folio 32 and folio 175. Polack conveyed part of Section 1 to Johnson in 1858 and part of Section 2 to Hill in 1859. In 1861 Polack sold another part of Section 1 to Treven and part of 2 to Thomson. In 1863 Thomson sold his holding to Baker. Lot 1 of Section one was conveyed to Nathan. In 1884 Nathan conveyed the land to Masfield, who sold to Ryan in 1894, with Ryan selling to Martin in 1907. In 1924, J. C. Martin subdivided Pt Section 1 Township of Russell, creating the subject property and the other small lots along Wellington Street.

The 1889 Leahy Plan (SO 920C) and 1890 Wheeler plan (SO 5602) do not show any structures on the subject property but Dr Samuel Ford's house is shown where it still stands, just north of the Wellington Street/Flagstaff/Queen St intersection, along with an outbuilding at the northeast corner of that parcel. A brief review of available aerial imagery and historic paintings and photographs suggest the subject property remained unoccupied into the mid-20th century.

Aerial images from the mid to late twentieth century show little use or development of the subject property or the neighbouring properties (Figure 16, Figure 17, Figure 18). In the 1951 aerial (Figure 16), a flattened area and/or pathway is evident in the south corner of the property, which makes up a large portion of the flat area of the property, with the slope partly planted out. More recent aerial imagery from 2204 and 2018 has revealed that some form of earthworks, being topsoil removal or more, has taken place in two instances which combined span the entire flat area on the subject property (Figure 19, Figure 20).



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Claim 288^A ^{at 1st} Kororarika Bay of Islands
43 E C

No.	Receipt of Instrument.	Nature of Instrument.	Date of Instrument.	Where Recorded.	Reference.	SIGNATURE.
43 E	11 Am 1 Dec 1858	Crown Grant	25 July 1849	E 1. 28	C	J. H. P. P. P.
44 E	1 1/2 P M 17 Dec 1858	Conveyance	17 Dec 1858	- 29	1 E. 458	J. H. P. P. P.
56 E	11 Am 5 Dec 1859	Conveyance	8 Nov 1859	E 1. 42	1 E. 459	George M. P.
84	11 Am 7 Nov 1861	Conveyance	5 Feb 1861	E 1. 76	1 E. 465	Edmund P. P.
94	1 m p 1 P M 29 Oct 1861	Conveyance	10 Sep 1861	E 1. 85	1 E 32	Edmund P. P.
94 E	1 m p 1 P M 29 Oct 1861	Conveyance	10 Sep 1861	E 1. 85	1 E 32	Edmund P. P.
116	1 P M 15 Dec 1863	Conveyance	30 Oct 1863	E 1. 106	1 E. 470	Edmund P. P.
48507	10 Am 17 May 1871	Memorial	5 May 1871			
59575	1 10 July 1878	Mortgage	2 Oct 1872	24 M. 760	1 E 32	J. O'Brien
77880	11 30 29 Sep 1882	Conveyance	29 Sep 1882	E 1. 916		Edmund P. P.
102442	4 Feb 1882	Probate	10 Sep 1882	E 1. 916		Edmund P. P.
128006	11 11 July 1891	Conveyance	2 July 1891	R 18 121	1 E. 175	Edmund P. P.
420235	12-6-1957	Conveyance	12 May 1957	605 183	TE 211	Edmund P. P.
420205	21-2-1962	Conveyance	12-2-1962	605 289	1 E 211	Edmund P. P.

What remains in this table and will be the subject of a necessary application shortly (Edmund P. P.)

Edmund P. P.

Plan 865-

128006 Nathaniel P. P.

420205 at 1st to 1st to 1st

Figure 7: Deeds Index 1E County of Bedford: 32.

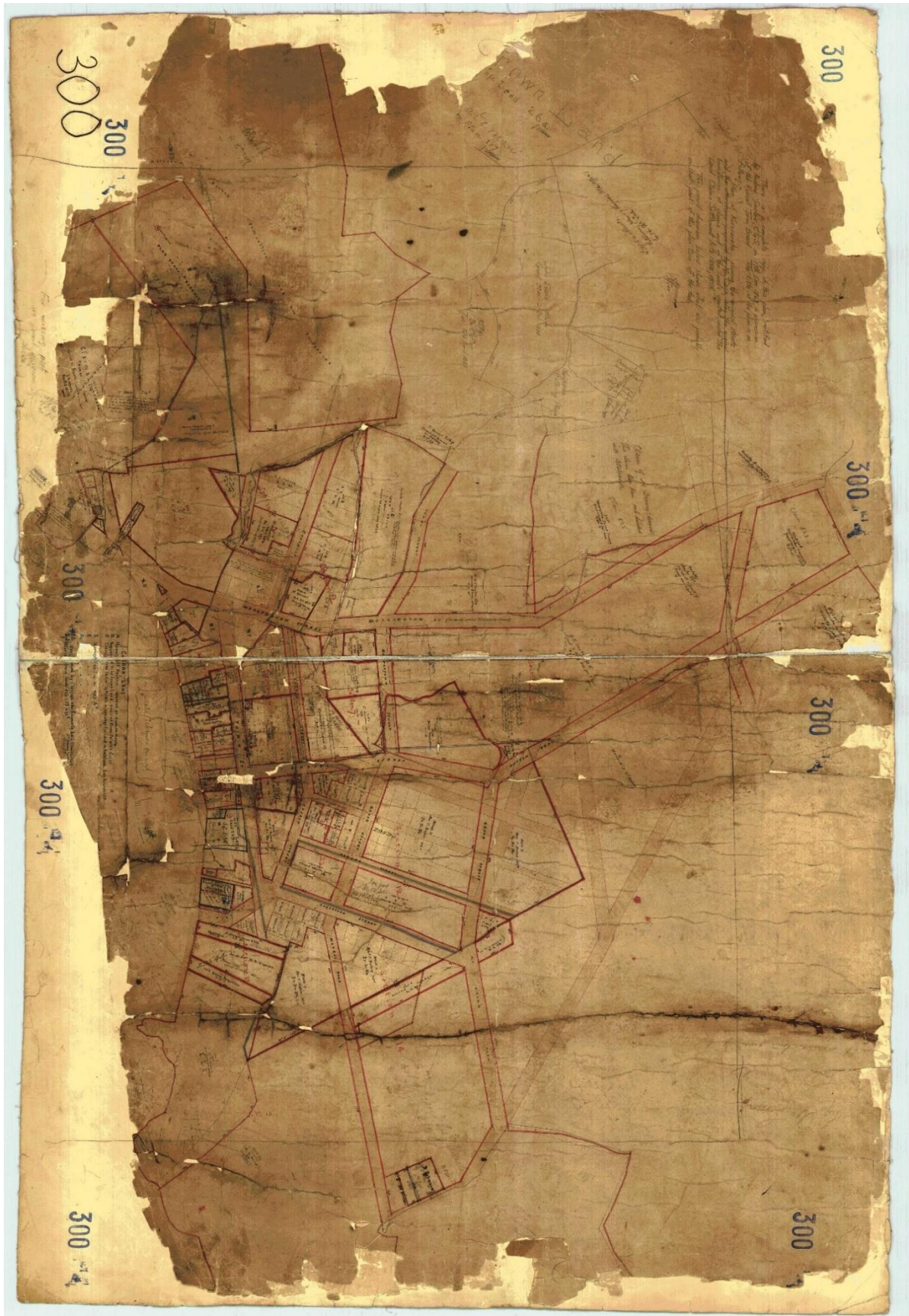


Figure 8. OLC 300 (1863).



Figure 9. Detail from OLC 300 (1863).



Figure 10. SO 920C (1890).





Figure 12. SO 5602 (1890).

175						
Kororarareka Bay of Islands						
No.	Receipt of Instrument.	Nature of Instrument.	Date of Instrument.	Where Recorded.	Reference.	SIGNATURE.
Plan 865						
128006	11 11 July 1894	Conveyance	2 July 1894	R45.121	1E. 32	M. H. H. H. H. H.
116748	1 21 April 1899	Conveyance	23 Mar. 1899	R65.367		
189954	10.30 26 July 1902	Conveyance	24 July 1902	R84-353		O. V. Cunningham
184727	11 8 July 1907	Conveyance	18 June 1907	R85. 320		H. H. H. H. H.
230461	11 15 Sept 1913	Conveyance	3 Sept 1913	R225 323	1E 193.	Rammond & Co.
243433	12 29 July 1915	Conveyance	26 July 1915	R247.429	1E 196.	W. H. H. H.
276226	12 16 Feb. 1920	Conveyance	15 Jan 1920	R306. 459	1E 199.	
300159	10.20 24 July 1921	Conveyance	31 Jan 1921	R353-669	1E 636.	
308015	2. 12 April 1922	Conveyance	6 April 1922	R380. 418	1E 641.	
338322	2.40 20 Sept 1924	Conveyance	7 Aug 1924	R.448. 47	1E.206.	
361688	10.45 23 June 1926	Conveyance	6 May 1926	R.490.145	1E.208	
363083	11.30 2 Aug 1926	Agreement	23 April 1926	R. 196 683		
367543	10 8 Dec 1926	Probate	5 Aug 1926	R. 497.212		
Recorded 1/10/27						
BRUDDI UNDER THE LAND TRANSFER ACT, VOL. 512						
Folio 221						
9. 10. 1928						
281R						
Plan						
128006 Nathaniel to Masfield 5.37 pt 1						
116748 Masfield 400s to Masfield						
189954 Masfield to Ryan.						
184727 Ryan to Martin 400s.						
300461 Martin 400s to London pt.						
243433 Martin 400s to Deller part.						
276226 Martin 400s to Lewis part.						
300159 Martin 400s to Rimer part.						
308015 Martin 400s to Flynn part.						
338322 Martin 400s to Green (part).						
361688 Martin 400s to Kirkpatrick (part).						
363083 Martin 400s to Holt part.						

Figure 13: Deeds Index 1E Country of Bedford: 175.

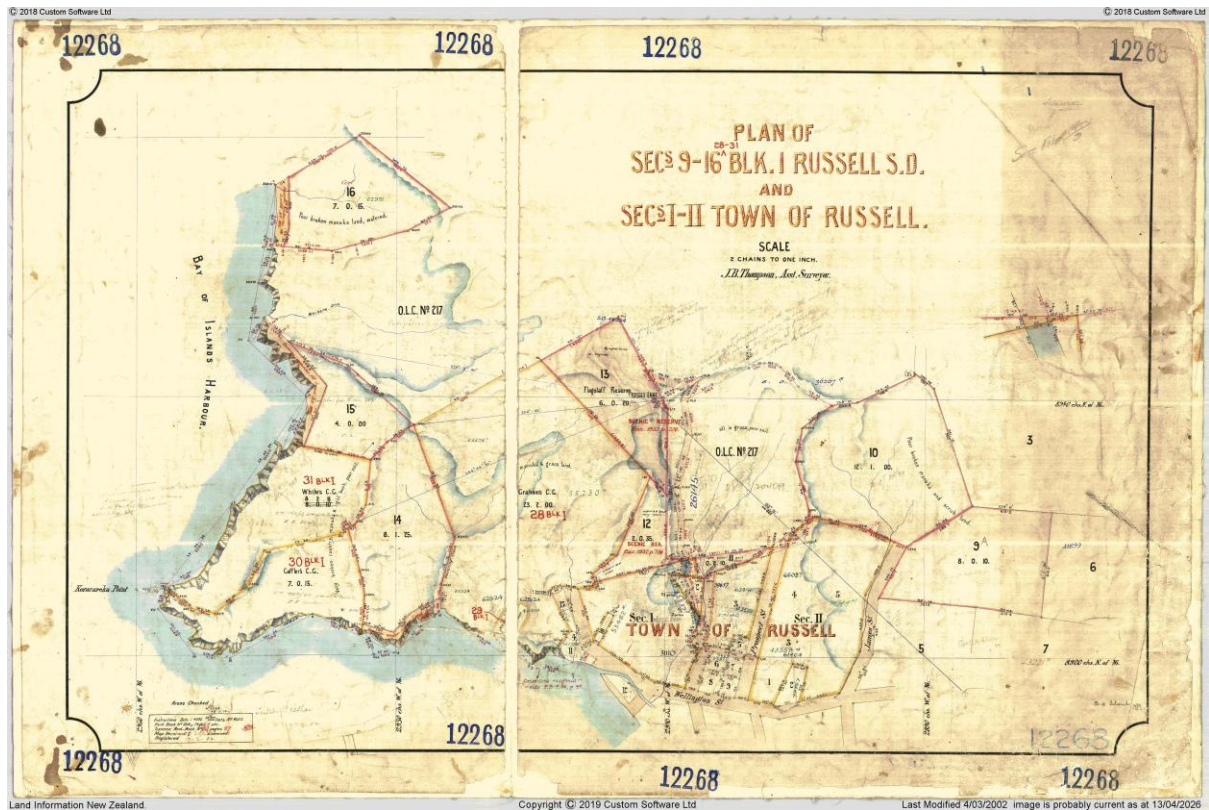
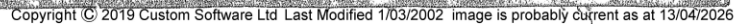


Figure 14: SO 12268 (1894).



18

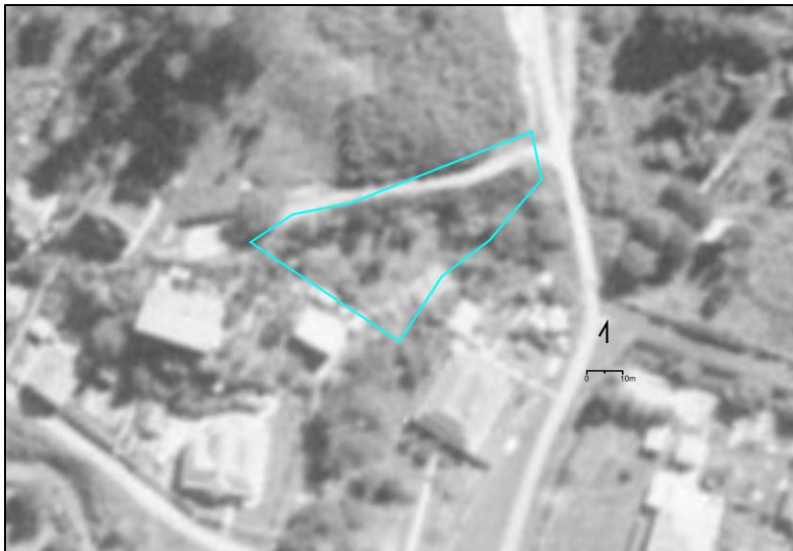


Figure 16. Aerial image from 1951. CROWN 209 544 12 (Retrolens). Subject property outlined in blue.



Figure 17. Aerial image from 1971. CROWN 3406 4480 11 (Retrolens). Subject property outlined in blue.



Figure 18. Aerial image from 1981. CROWN 5932 J 54 (Retrolens). Subject property outlined in blue.



Figure 19. Aerial photo showing work at the northeast end of the subject property in 2004. Google Earth Satellite.

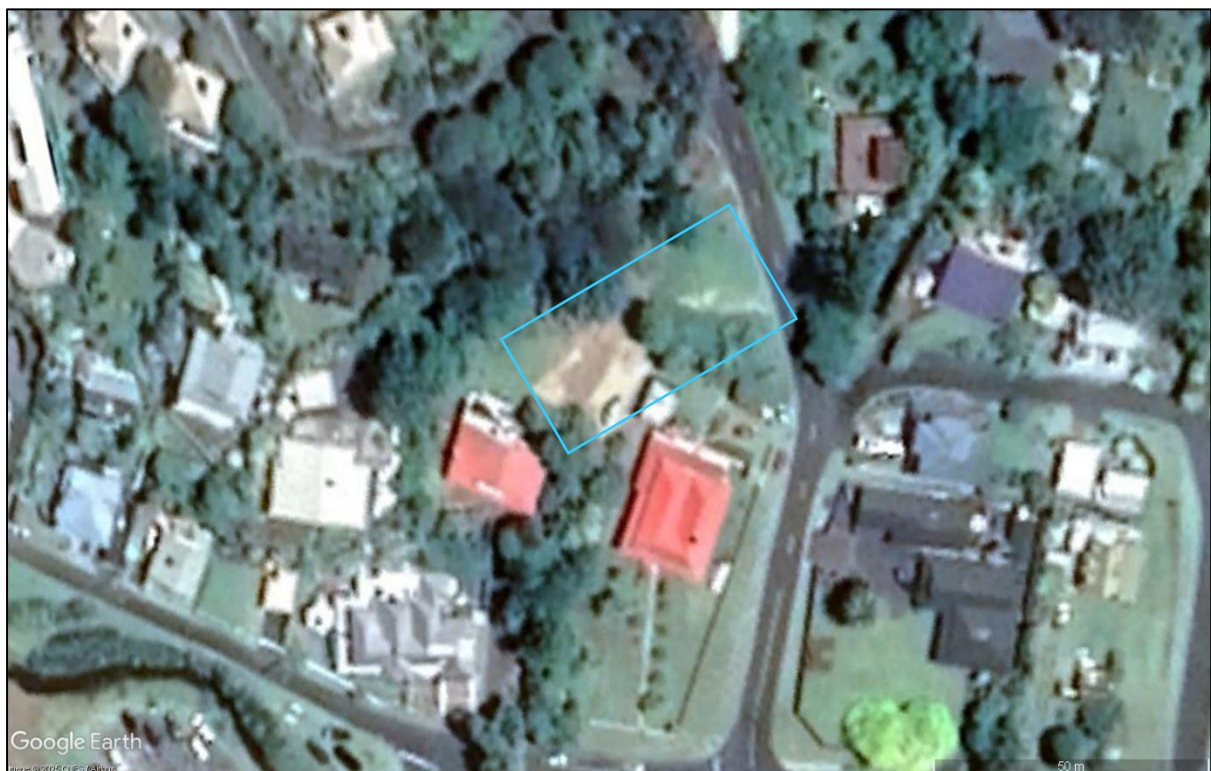


Figure 20. Aerial photo showing work at the northeast end of the subject property in 2018. Google Earth Satellite.

5.0 Archaeological Background

The occupational history of Kororāreka/Russell has produced a dense archaeological landscape. The archaeology of the area spans the physical remains of the pre-historic Māori occupation, the pre-Treaty heyday of sailors, whalers and grogshops, the razing of the town at the start of the Northern war, and the rebuild and slow decline at the end of the nineteenth century, prior to the reinvigoration of the town as a sport fishing mecca and tourist attraction.

The archaeological potential of Russell was noted in the Russell Planning Review in the late 1980s and numerous submissions drew attention to the importance of the archaeology and history of the area. This was recognised when the Planning Review recommended the identification of archaeological features and their investigation or preservation depending on circumstances so as to enhance the historic significance of the area (Nugent and Salmond 1988: 8). The subsequent technical report by Mclean and Maingay (1988) identified 87 sites associated with the early settlement of Russell, all but 25 being located between York Street and the foreshore. There have been more than a dozen archaeological investigations in Russell, associated with the development of the area since the late 1980s. Larger excavations have occurred at the south end of town in the vicinity of Pompallier House and the Department of Conservation Visitors Centre (the Hall House site, the Blomfield House site, James Callaghan's tannery, The Arlidge-Hung House, The Gables). Extensive monitoring and testing occurred during the development of the Russell sewerage and wastewater schemes, and smaller testing and monitoring excavations have occurred at sites along The Strand, Cass Street and Wellington Street over the last 25 years. Artefacts and features have been found during archaeological investigation or monitoring of relatively small scale developments on properties which are already modified, including the installation of a fuel tank at the wharf, foundations for a new house on The Strand, re-piling and associated drainage works at the police station (e.g. Best 1995a and b; Best 2003). In 1993, W. England undertook trench-line monitoring and test excavations next to inspection covers as part of the Russell Sewerage Scheme reticulation (England 1993, 1994) across The Strand, York Street, and areas in between. Small-scale subdivision and residential development on Wellington Street has revealed historic and prehistoric midden and cooking features (Hensley 2003). Monitoring of cable trenches along The Strand and Cass Street has also revealed artefacts and charcoal-rich historic midden twenty centimetres below the asphalt (Maingay 2002; Maingay 2003). Having been involved in more investigations at Russell than any other archaeologist, S. Best has a comprehensive understanding of the archaeological potential of the area. In his concluding comments to the Hall House site excavation he states that "As with all archaeological investigations so far carried out at Russell on the back beach, despite the extremely limited extent...of the test holes, features and artefacts from the towns early past were discovered" (Best & Turner 1997:56). He has noted that because of the good bearing quality of the Russell beach ridge/foredune shingle, extant buildings in Russell tend to lack substantial excavation for piles or concrete slab floors meaning considerable undisturbed archaeological remains are likely to be present in many areas (Best 2000: 25). Rather less has been found behind the beach ridge in the vicinity of the old swamp east of York Street, or around its margins or on the higher ground

5.1 Previous Archaeological Work

A review of ArchSite, the national database of recorded archaeological sites, managed by the New Zealand Archaeological Association (NZAA) has identified 10 sites within 200m and five within 100m of the subject property (Table 1, Figure 21). The site types are varied and include Māori middens, terraces and ovens and a historic track, a timber dam and historic house and public building remains.

The closest sites include Q05/1162, which is the remains of the historic goal building, identified from a record by W. J. Wheeler from 1890, taken from OLC 300 1863.

Q05/1303, Q05/1304 and Q05/1305 were all found at DP 53482 Lot 1, 33 Wellington Street, during work to install a new driveway and garage between 2003 and 2007.

Q05/1303 consisted of a shallow scatter of fragmented cockle shell and fire cracked rocks in a scoop as well as a surface scatter of Willow pattern transfer printed ceramics and early 1800s green and amber bottle glass.

Q05/304 consisted of a large oven with fire cracked rocks, charcoal stained beach shingle and fragments of ochre. There were also eight small fire scoops containing small fragments of fire cracked rock, charcoal and beach shingle, and a cockle midden in a scoop. No bone or shell were present. One piece each of chert and retouched obsidian were recorded.

Q05/305 consisted of two small cockle middens. One also contained a peach stone, pig bone, a metal nail, cast iron and Willow patterned ceramics.

Q05/1539 is the site of James Mill's house. Mills was a shoemaker who purchased Allotment 3 Section 5 Township of Russell along with George Taylor Keetley in 1867, with Mills taking sole ownership in 1878. The Mills house is shown on photographs and paintings dating from the 1860s and is illustrated on the 1890 Wheeler survey plan of Russell Township SO 5602D. Spade testing around the existing mid-twentieth century dwelling produced a number of artefacts, including forty small pieces of bone (sheep/pig vertebra), ceramic and glass. Three of these are early markers: a piece of polychrome hand-painted saucer, part of a carinated London-shape cup, and a black beer bottle top with a rounded lip. These would have been made c.1830-c.1850. There were also pieces of case gin bottles. (Best & McReady; Carpenter 2018).

Table 1. Recorded archaeological sites within c. 100m of Part Section 1 Town of Russell (CT 512/218), Deed 856, at 6 Flagstaff Road, Russell.

Site Number	NZTM Coordinates	Type	Description
Q05/1162	E 1701912 N 6097675	Building - police station/ gaol	Goal building recorded by W. J. Wheeler 1890 and taken from OLC 300 1863.
Q05/1303	E 1701942 N 6097705	Midden	Shell and fire cracked rock in fire scoop. Surface glass and ceramics.
Q05/1304	E 1701952 N 6097745	Midden/oven	Oven, fire scoops, shell midden, obsidian and chert.
Q05/1305	E 1701952 N 6097735	Midden	Two historic middens with cockle shell; one also with peach stone, pig bone, metal and ceramics.
Q05/1539	E 1701960 N 6097553	Site of 1860s house	The site of James Mill's house.

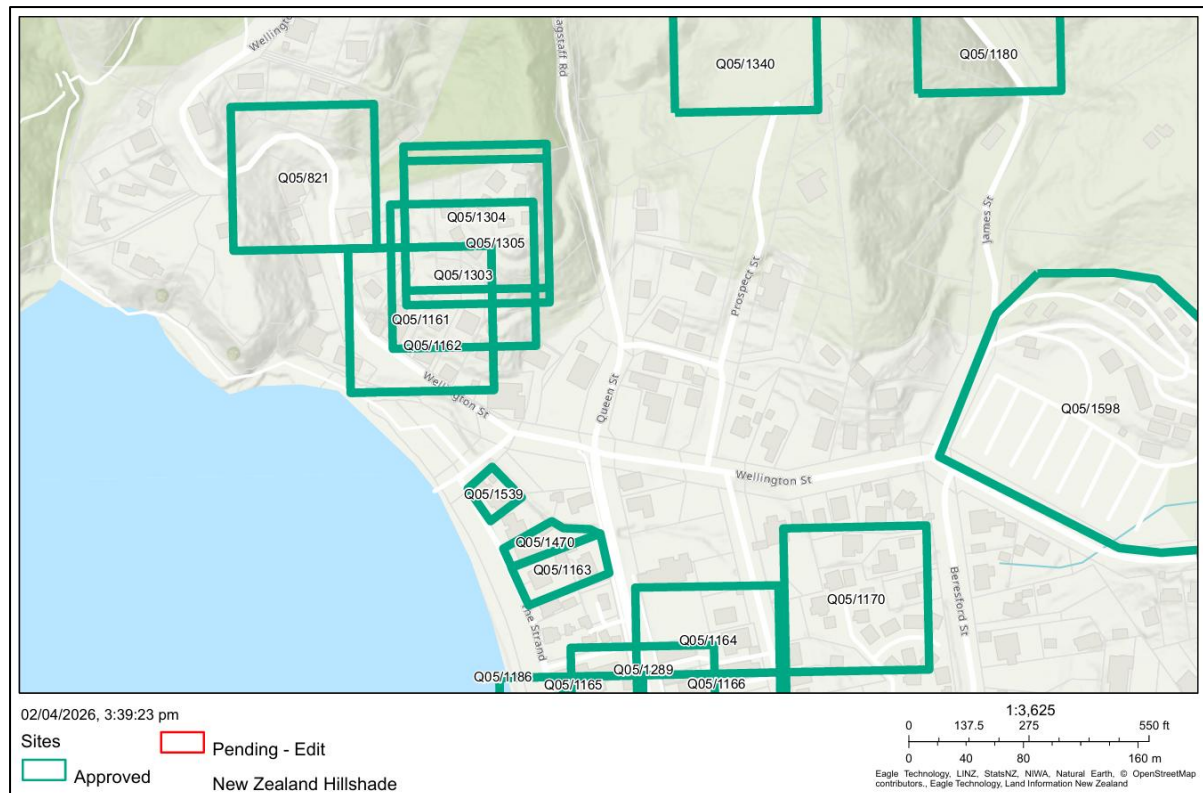


Figure 21. Archaeological sites recorded near the subject property, Russell. ArchSite 2026.

6.0 Other Heritage Sites and Features

The house located on the neighbouring property (Pt Sec 1 Town of Russell (RT NA582/327), 2 Queen Street and Wellington Street) is recorded as Historic Site 32 in the Far North District Plan and is No. 408, a Historic Place Category 2 building on the Heritage New Zealand Pouhere Taonga Heritage List/Rārangi Kōrero. The house must have been built at least prior to 1890 as it is visible on plan SO 5602 from 1890.

Additionally, a portion of the Russell township is considered a Heritage Precinct (No. 4). While the subject property is not contained within the Heritage Precinct boundary, the boundary is in proximity and includes the neighbouring property recorded as Historic Site 32. The subject property is contained within the Russell Township Basin and Gateway Area section of Heritage Precinct 4 of the Far North District Council Operative District Plan.

7.0 Site Inspection

The assessment was undertaken on 31 March 2026. The property was covered in short grass and very flat, except for the upwards sloping northern half and a shallow bank at the southwestern edge. The property was inspected by foot with attention being paid to areas of exposed subsoil including around trees and in banks. The entire property was positioned very close to Historic Site 32 (Figure 23) so it was expected that nineteenth century rubbish and garden features associated with the house may have been present.

Four test squares were spaded across the section (Figure 22, Figure 23). The first test square was excavated to the greatest depth achievable within the test square dimensions, being to c. 70cm depth (Table 2), and it revealed loamy clay topsoil above a fill layer comprised of mixed up and compacted orange-brown clay with lots of small greywacke rocks (Figure 24). The bottom of this layer could not be reached beyond 70cm depth. The same stratigraphy was evident in test pit 2 (Figure 25), while test pits

3 and 4 contained a thinner topsoil layer overlying similar clay fill layers to the other areas of the site (Figure 26, Figure 27). Test pit 4 was excavated to basal solid yellow brown clay at c. 51cm depth. The only cultural evidence identified were a small window pane fragment in the topsoil of test pit 3 and a small transfer-printed whiteware plate fragment in the mixed up fill layer of test pit 4, which was located at the toe of the northern slope (Figure 28).

From the stratigraphy, the impression was that the whole section had been flattened and filled, maybe previously cut and pushed into the north bank. As a result, it is expected that any archaeological remains have been damaged and dispersed in the clay fill layers, as evidenced by the ceramic and glass sherds found in upper mixed fill layers.

Probing was undertaken on the slope and consistently found grit and rocks in the subsoil. A single spade turn over of the turf revealed the same greywacke rocks in loamy clay as shown in the test pits. Two very small, discrete surface scatters of fragmented shell were noted, firstly on the driveway and secondly around a small fruit tree near the neighbour's fence. These appeared to be modern food waste.

Table 2 Results of test pits.

Location	Stratigraphy	Finds
Test Pit 1	0-20cm Dark-brown loamy clay (topsoil) 20-60cm< Mixed compacted yellow-brown clay fill with greywacke	
Test Pit 2	0-15cm Dark-brown loamy clay (topsoil) 15cm< Same as above clay fill	
Test Pit 3	0-15cm Mixed medium-brown loamy clay with small bits of road metal and pebbles 15cm< Same as above clay fill	Small sherd colourless window glass in top 15cm
Test Pit 4	0-1cm Dark-brown loamy clay (topsoil) 1-50cm Mixed yellow-brown and dark-brown clay. Tree roots. Mixed up fill. 50cm< Solid yellow brown clay.	Small blue and white transfer printed ceramic plate sherd in top 10cm (oak leaf motifs)



Figure 22. Location of test pits in relation to the architectural plans, from site visit 31 March 2026.



Figure 23. View looking southeast downhill onto section and test pits 1,2,4 visible. Test pit 3 is obscured by the boat.



Figure 24. Test Pit 1.



Figure 25. Test Pit 2.



Figure 26. Test Pit 3.



Figure 27. Test Pit 4.



Figure 28. Transfer-printed whiteware plate sherd from Test Pit 4.

8.0 Assessment of Archaeological and Other Values

8.1 Significance Assessment

No archaeological site or features were identified on the subject property.

9.0 Assessment of Effects

No evidence of prehistoric Māori activity was evident on the property. The presence of one historic artefact (ceramic dating to pre-1900) suggests that the presence of other archaeological artefacts or features on the property relating to either the Ford house (Historic Site 32, HNZPT List No. 408) or other historic activity in the area is likely. The windowpane fragment could belong to any period. However, the condition and context of the artefact being a small fragment in a fill layer, alongside the finding of clay fill in all test pits across the property indicate that it would be unlikely, but not impossible, for any archaeological features or sites to remain in unmodified condition or at all.

The proposed excavations for the buried water tanks, retaining wall and building platform are unlikely to damage or disturb any remaining archaeological sites or features. The building itself may affect the amenity value of the Ford house (Historic Site 32, HNZPT List No. 408) given its proximity and presence in what was the garden of the house.

10.0 Findings and Recommendations

No archaeological sites or features were identified on the subject property through desktop research and a site survey, although one historic ceramic sherd was present in a fill layer within 10cm below surface. The proposed works will not require an authority from Heritage New Zealand Pouhere Taonga.

However if other archaeological remains or buried cultural deposits are encountered on the property during earthworks for the tanks, retaining wall and building foundation or in the course of other ground disturbing activity on the property like trenching for services, such as layers of shell midden, charcoal-rich or burned soils, oven stones, artefacts like worked stone, bottles, ceramics, iron or building materials, or other unusual cuts/fills etc, onsite agents should cease work within 10m of the suspected feature and Heritage New Zealand Pouhere Taonga and Geometria should be contacted for advice on how to proceed.

11.0 Conclusions

Geometria was engaged by Luke Holmes to assess possible archaeological effects of a proposed boat shed apartment on Part Section 1 Town of Russell (CT 512/218), Deed 856, at 6 Flagstaff Road, Russell. The proposal includes buried water tanks, a concrete patio, a retaining wall and the new building foundation that could potentially modify archaeological remains through shallow earthworks plus deeper excavation required for the water tanks.

No archaeological sites were identified on the property. Test pitting yielded a single artefact however it also revealed the extent of previous modification to the property has had through a thick and widespread fill layer, which may be as recent as 2018. Therefore, an archaeological authority is not required from Heritage New Zealand Pouhere Taonga. Owing to the significant historical activity in Russell an accidental discovery protocol has been recommended.

12.0 References

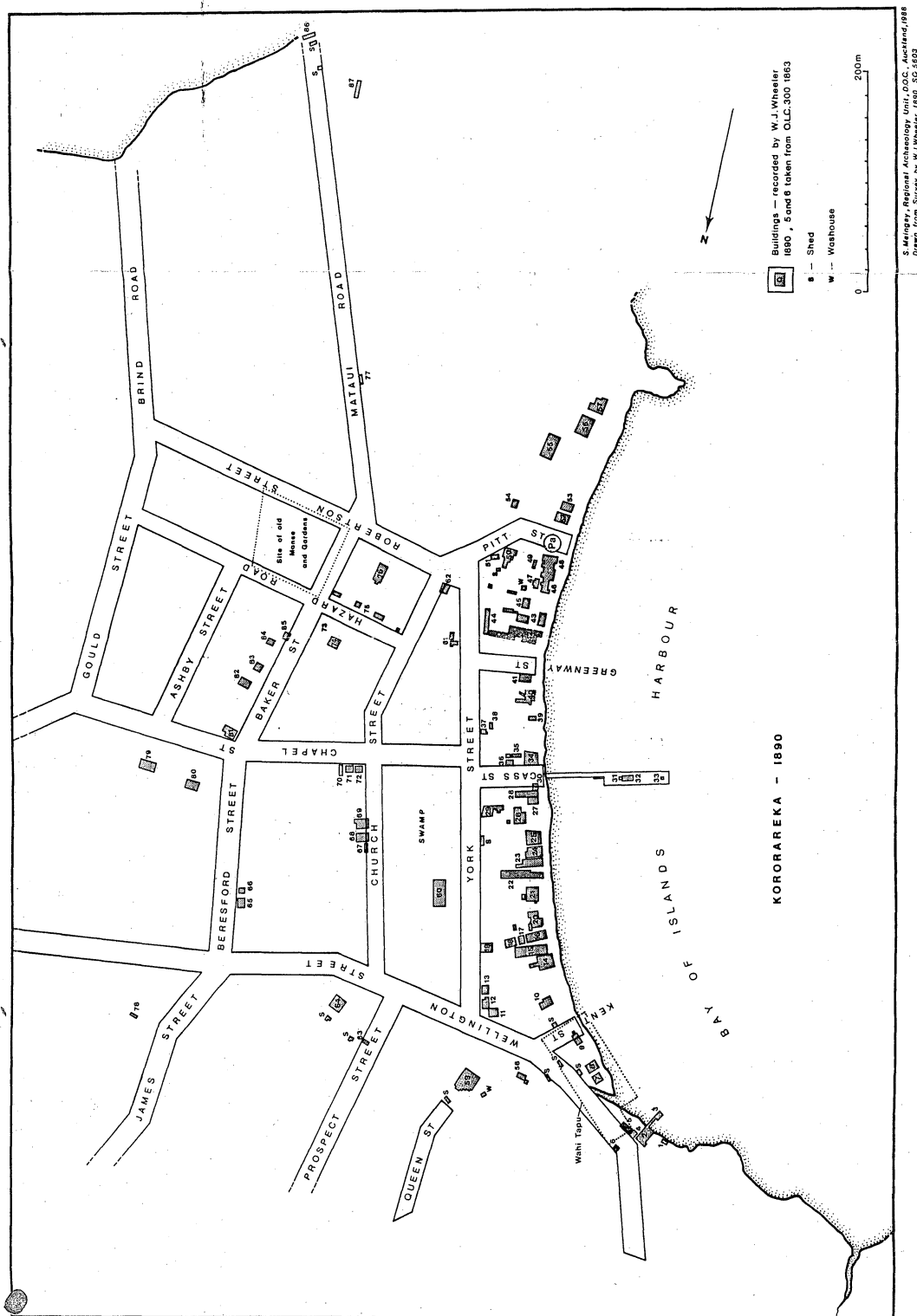
- Berghan, P., 2006. Northland Block Research Narratives VOL. II OLD LAND CLAIMS. Unpublished report for the Crown Forestry Rental Trust. Walhgan Partners, Lower Hutt.
- Best, S. 1995a. Installation of the New Diesel Fuel Tank, The Strand, Russell, by Caltex Oil (NZ) Limited: Archaeological Investigation of Site (Q05 1168). Report for Base Associates.
- Best, S. 1995b. The Arlidge/Hung House Site : Archaeological Investigation of Part Lot 9 Section 9 Russell Township (Kororareka): Interim Report. Report for J.T. Hung and P.G. Arlidge-Hung.
- Best, S. 2000. 47 The Strand, Russell (The Phillips' House): Archaeological Investigation. Unpublished Client Report.
- Best, S. 2003. The Russell Police Station Re-Piling and Drainage Work: Archaeological Site Testing. Report for the New Zealand Police.
- Best, S. and M. Turner, 1997. The Hall House Site, Russell (Q05/1200): Archaeological Investigations. Report for the Department of Conservation Northland Conservancy.
- Best, S. and S. Macready 2010: 49 THE STRAND, RUSSELL, BAY OF ISLANDS: ARCHAEOLOGICAL ASSESSMENT. Unpublished report for Avery Team Architects. Clough and Associates, Auckland.
- Callaghan, E. 2007. Archaeological Survey and Assessment of a Proposed Carpark and Two Footpaths in Russell, Bay of Islands. Unpublished Client Report. Auckland: Northern Archaeological Research Ltd.
- Carpenter, J. 2018. Archaeological Assessment of Proposed Additions to 49 The Strand Russell. Unpublished report for Total Design Ltd. Geometria Ltd, Whāngarei.
- Deeds Index 1E County of Bedford. Archives New Zealand, Wellington.
- England, W. 1993. Preliminary Report of Archaeological Investigations in Connection with the Russell Sewerage Scheme. Preliminary report for the NZ Historic Places Trust.
- England, W. 1994. Archaeological Investigations in Connection with the Russell Sewerage Scheme. Department of Conservation Northland Conservancy Historical Series No. 3.
- Hensley, V. 2003. Archaeological Monitoring Report: 33 Wellington Street, Russell. Report for G.J. Whiteman Trust, Kamo.
- Johnson, L. and E. Callaghan. 2006. Archaeological Survey and Assessment of the Proposed Top Energy Paihia-Russell High Voltage Reticulation Upgrade, Bay of Islands. Unpublished Client Report. Auckland: Northern Archaeological Research.
- Johnson, L. and E. Callaghan, 2014. Archaeological Monitoring of the Robinson Residential Development, 12 Chapel Street, Russell, Bay of Islands (Q05/1171, NZHPT 2014/242).
- Johnson, L. and E. Callaghan, 2021. Archaeological Survey and Assessment of the proposed Classroom Extension and stormwater pipeline, Russell School. Unpublished Report. Auckland: Northern Archaeological Research Ltd.
- Maingay, J. 2002. Archaeological Monitoring of a Cable Trench on the Strand, Russell. Report for the NZ Historic Places Trust.
- Maingay, J. 2003. Archaeological Monitoring of a Drainage Trench at Cass Street, Russell. Report for the NZ Historic Places Trust

- McLean, M. and S. Maingay. 1988. Preliminary Notes on Archaeological Features of Early Pioneer Settlement at Russell, in the Bay of Islands. Unpublished Report Auckland: Department of Conservation.
- Nugent, D. and J. Salmond, 1988. Russell Planning Review. Report for the Department of Conservation, NZ Historic Places Trust.
- Petty, D. 1981. "Bay of Islands" NZMS 290 Sheet Q 04/05, 1:100 000. New Zealand Land Inventory, Rock Types. Department of Lands and Survey, Wellington, New Zealand.

13.0 APPENDIX A: Site Record Forms

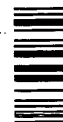
NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION SITE RECORD FORM (NZMS260)		NZAA METRIC SITE NUMBER Q05/1162 DATE VISITED (recorded) 7.3.93 SITE TYPE Gaol site SITE NAME: MAORI OTHER													
NZMS 260 map number Q05 NZMS 260 map name Bay of Islands NZMS 260 map edition Ed.1															
Grid References Easting <u>2 6 1 2 7 0 0</u>		Northing <u>6 6 5 9 5 0 0</u>													
1. Aids to relocation of site (attach a sketch map) Russell; on the opposite side of Wellington street to Q05/1161. (No. 6 on map with Q05/1161)															
2. State of site and possible future damage Not visible; subsurface evidence may be modified by Russell Sewerage Scheme.															
3. Description of site (Supply full details, history, local environment, references, sketches, etc. If extra sheets are attached, include a summary here) Gaol site, recorded by Wheeler on OLC 300, 1863. (SEE Q05/1161 MAP)															
4. Owner Address		Tenant/Manager Address													
5. Nature of information (hearsay, brief or extended visit, etc.) OLC 300 Photographs (reference numbers, and where they are held) Aerial photographs (reference numbers, and clarity of site)															
6. Reported by Address Joan Maingay Dept. of Conservation P.O.Box 842 Whangarei		Filekeeper Date <i>[Signature]</i> 5/5/93													
7. Key words															
8. New Zealand Register of Archaeological Sites (for office use) NZHPT Site Field Code															
Latitude S <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>F</td><td>Q</td></tr> <tr><td>A</td><td>L</td></tr> <tr><td>—</td><td>—</td></tr> </table> Type of site Local environment today Land classification		F	Q	A	L	—	—	Longitude E <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>D</td><td>C</td></tr> <tr><td>—</td><td>—</td></tr> <tr><td>M</td><td>A</td></tr> </table> Present condition and future danger of destruction Security code Local body		D	C	—	—	M	A
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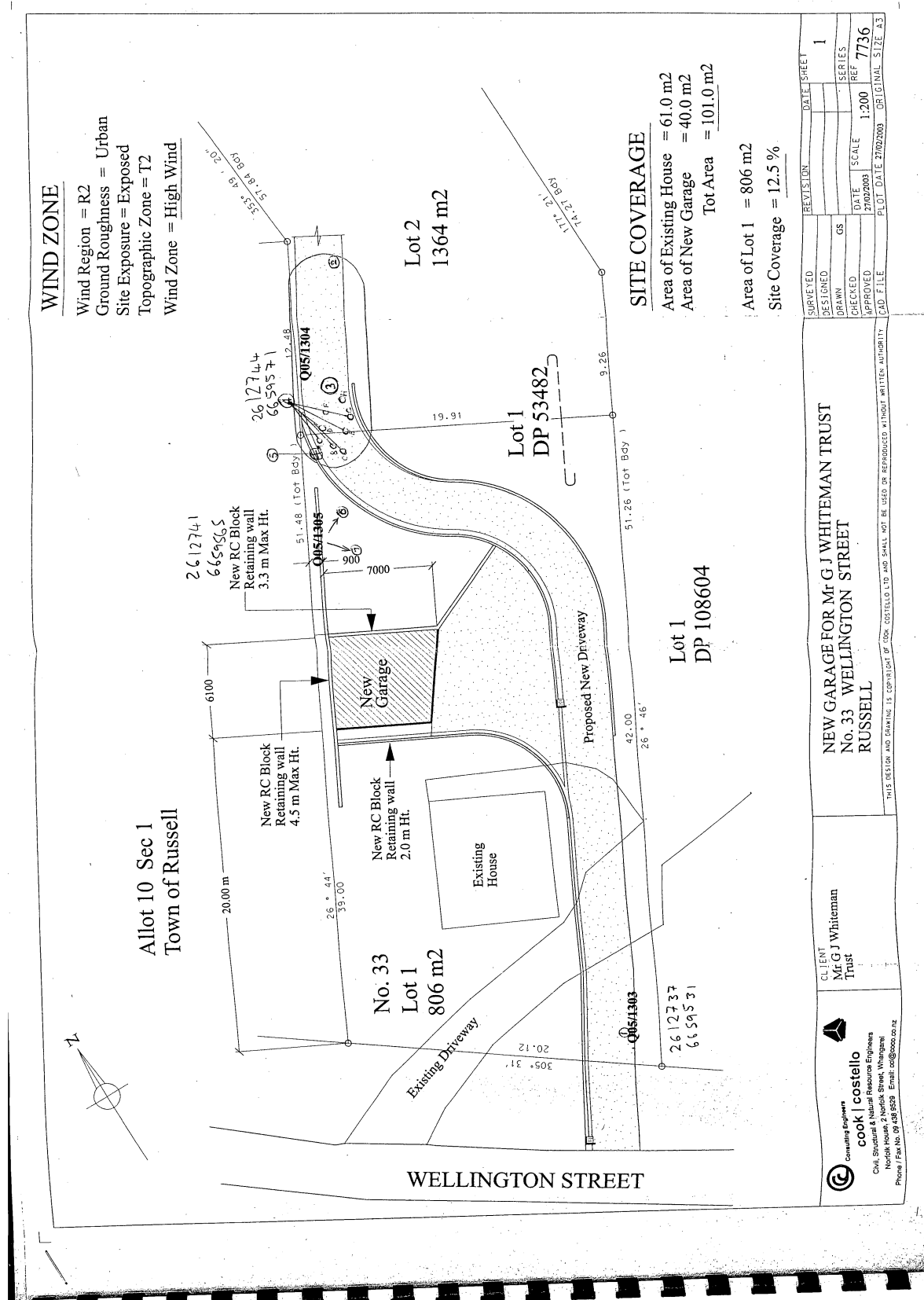




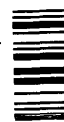
S. Mearns, Regional Archaeology Unit, OLC, Auckland, 1988
Drawn from Survey by W.J. Wheeler, 1890, OLC.300

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION SITE RECORD FORM (NZM260) NZMS 260 map number QO5 NZMS 260 map name Bay of Islands NZMS 260 map edition 2000		NZAA METRIC SITE NUMBER QO5/1303 DATE VISITED 21 NOV 003 SITE TYPE SITE NAME: MAORI MIDDEN OTHER																							
Grid References Easting <table border="1" style="display: inline-table; text-align: center; width: 100px;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td>1</td><td>2</td><td>7</td><td>3</td><td> </td></tr> </table>							1	2	7	3		Northing <table border="1" style="display: inline-table; text-align: center; width: 100px;"> <tr><td> </td><td> </td><td>5</td><td>9</td><td>6</td><td> </td></tr> <tr><td> </td><td> </td><td>5</td><td>3</td><td> </td><td> </td></tr> </table>				5	9	6				5	3		
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1. Aids to relocation of site (<i>attach a sketch map</i>) 33 Wellington St. Russell. Legal description DP 53482. LOT 1 Two metres in from western front boundary																									
2. State of site and possible future damage. Site destroyed during subdivision roadwork.																									
3. Description of site (<i>Supply full details, history, local environment, references, sketches, etc. If extra sheets are attached include a summary here</i>) Site 1. QO5/1303. Maori, Midden. At approximately 150mm below the grassed surface and 2m from western roadside boundary, a shallow scatter of fragmented cockleshell 600mm. x 400mm. resting in a scoop dug into surrounding yellow brown clay plus a cupped hand full of fire damaged stone was found. The necks of two dark amber/green and the bottom of a beer bottle of the early 1800s and shards of willow pattern ceramics together with other pieces of green glass were also recovered from what would have been a surface scatter.																									
4. Owner G.J. Whiteman Tenant/Manager Address 3 Windsor Ave. Address KAMO																									
5. Nature of Information (<i>hearsay, brief or extended visit, etc</i>) Monitor and recording Photographs (<i>reference numbers, and where they are held</i>) Aerial Photographs (<i>reference numbers and clarity of site</i>)																									
6. Reported by Vic Hensley Address R.D.4 KAITAIA		Filekeeper Date <i>26/7/07</i>																							
7. Keywords MAORI. MIDDEN. RUSSELL.																									
8. New Zealand Register of Archaeological Sites (<i>for office use</i>) NZHPT Site Field Code Latitude S Longitude																									
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NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION SITE RECORD FORM (NZM260) NZMS 260 map number Q05 NZMS 260 map name BAY OF ISLANDS NZMS 260 map edition 2000		NZAA METRIC SITE NUMBER Q05/1305 DATE VISITED 21 Oct 003 SITE TYPE HISTORIC SITE NAME: Midden OTHER																					
Grid References Easting <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td>1</td><td>2</td><td>7</td><td>4</td><td> </td></tr></table>							1	2	7	4		Northing <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td>5</td><td>9</td><td>5</td><td>6</td><td> </td></tr></table>							5	9	5	6	
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5	9	5	6																				
1. Aids to relocation of site (<i>attach a sketch map</i>) Wellington St. RUSSELL Legal description DP 53482. Lot 2. Bay of Islands																							
2. State of site and possible future damage. Site destroyed during roofworks																							
3. Description of site (<i>Supply full details, history, local environment, references, sketches, etc. If extra sheets are attached include a summary here</i>) • Sites 6&7, Q05/1305. Midden, historic. 650mm x 35 mm., 460mm x 300mm. Approximately 175 mm below the surface. Both sites contained a mix of cockle shell and brown/yellow subsoil. Site 6 also had one peach stone and 3 small shards of willow pattern ceramics, one piece of pig bone (front leg, elbow), a corroded nail and an unidentifiable shattered section of rust encrusted castiron 70mm. x 80mm. that had a shallow depressed cup.																							
4. Owner G J Whiteman Trust Address 33 Windsor St. KAMO		Tenant/Manager Address																					
5. Nature of Information (<i>hearsay, brief or extended visit, etc</i>) Monitoring and reording Photographs (<i>reference numbers, and where they are held</i>) Aerial Photographs (<i>reference numbers and clarity of site</i>)																							
6. Reported by Vic Hensley Address R.D.4 KAITAIA		Filekeeper <i>[Signature]</i> Date 26/7/07																					
7. Keywords Historic Midden																							
8. New Zealand Register of Archaeological Sites (<i>for office use</i>) NZHPT Site Field Code Latitude S <table border="1" style="width: 100px; height: 40px; margin: 5px 0;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> Type of site Local Environment today Land Classification <table border="1" style="width: 100px; height: 40px;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> Longitude E Present Condition and future danger of destruction Security Code Local body																							



Q05/1304

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION SITE RECORD FORM (NZM260) NZMS 260 map number Q05 NZMS 260 map name BAY OF ISLANDS NZMS 260 map edition 2000				NZAA METRIC SITE NUMBER Q05/1304-3 DATE VISITED 21 NOV 003 SITE TYPE COOKING SCOOP SITE NAME: MAORI OTHER	
Grid References	Easting	1 2 7	Northing	5 9 6 5	
1. Aids to relocation of site (<i>attach a sketch map</i>) Wellington St. RUSSELL Legal description DP 53482. Lot 2. Bay of Islands					
2. State of site and possible future damage. Site destroyed during roadwork					
3. Description of site (<i>Supply full details, history, local environment, references, sketches, etc. If extra sheets are attached include a summary here</i>) ALL MAORI SITE GROUPED UNDER ONE SITE NUMBER Q05/1304 • Site 3. Q05/1304-3. Maori, Large cooking scoop. Located 200mm. beneath the surface, round, 1300cm. across x 215mm. deep. The top had been slightly scuffed by the digger but did not lessen the value of the site. The scoop had been dug into the yellow clay and contained fire fractured stone of large fist size to fragments and small stained fragments of red ochre. There was a large amount of beach shingle stained black by charcoal scattered liberally throughout the fire scoop. No fish, bone or shell was evident (plate 2)					
4. Owner		G J Whiteman Trust		Tenant/Manager	
Address		33 Windsor St. KAMO		Address	
5. Nature of Information (<i>hearsay, brief or extended visit, etc</i>) Monitoring and recording Photographs (<i>reference numbers, and where they are held</i>) Aerial Photographs (<i>reference numbers and clarity of site</i>)					
6. Reported by Vic Hensley				Filekeeper	
Address R.D.4 KAITAIA				Date <i>26/7/07</i>	
7. Keywords Maori Cooking scoop Russell					
8. New Zealand Register of Archaeological Sites (<i>for office use</i>) NZHPT Site Field Code					
Latitude S		Type of site		Longitude E	
		Local Environment today			
Land Classification				Present Condition and future danger of destruction Security Code Local body	

Q05/1304

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION SITE RECORD FORM (NZM260) NZMS 260 map number Q05 NZMS 260 map name BAY OF ISLANDS NZMS 260 map edition 2000		NZAA METRIC SITE NUMBER Q05/1304-4 DATE VISITED 21 OCT 003 SITE TYPE Small cooking fire scoops SITE NAME: MAORI OTHER																					
Grid References Easting <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td>1</td><td>2</td><td>7</td><td> </td><td> </td></tr> </table>							1	2	7			Northing <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td> </td><td>5</td><td>9</td><td>6</td><td>5</td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>			5	9	6	5					
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1. Aids to relocation of site (<i>attach a sketch map</i>) Wellington St. RUSSELL Legal description DP 53482. Lot 2. Bay of Islands project map included																							
2. State of site and possible future damage. Site destroyed during roadwork																							
3. Description of site (<i>Supply full details, history, local environment, references, sketches, etc. If extra sheets are attached include a summary here</i>) ALL MAORI SITE GROUPED UNDER ONE SITE NUMBER 005/1304 Site 4. Q05/1304-4 Maori. Small cooking fire scoops A series of eight small scoops approximately 200mm below the surface. (A to H inclusive) These small scoops which varied in size from 425mm. x 350mm. down to 300mm. x 300mm. and 185mm to 200mm deep contained walnut sized fragments of heat damaged stone, a dense mix of beach shingle and charcoal lumps. The material was all stained black and there was a complete absence of any other material. The wall of the scoops all showed a browning from heat. These scoops appeared to have had a purpose in common and have been recorded as such																							
4. Owner Address G J Whiteman Trust 33 Windsor St. KAMO		Tenant/Manager Address																					
5. Nature of Information (<i>hearsay, brief or extended visit, etc</i>) Monitoring and recording Photographs (<i>reference numbers, and where they are held</i>) Aerial Photographs (<i>reference numbers and clarity of site</i>)																							
6. Reported by Vic Hensley Address R.D.4 KAITAIA		Filekeeper Date <i>26/7/07</i>																					
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Q05/1304

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION SITE RECORD FORM (NZM260) NZMS 260 map number Q05 NZMS 260 map name Bay of Islands NZMS 260 map edition 2000		NZAA METRIC SITE NUMBER Q05/1304-2 DATE VISITED 21 NOV 003 SITE TYPE MIDDEN SITE NAME: MAORI OTHER													
Grid References Easting 1274		Northing 5965 S 7													
1. Aids to relocation of site (<i>attach a sketch map</i>) Wellington St. RUSSELL Legal description DP 53482. Lot 2. Bay of Islands Site was located at the end of the northern section of an access roadway															
2. State of site and possible future damage. Site destroyed during subdivision roadwork															
3. Description of site (<i>Supply full details, history, local environment, references, sketches, etc. If extra sheets are attached</i>) Site 2. Q05/1304-2. Maori, Midden. Broken cockleshell midden 425mm. x 450mm. in a 175mm deep scooped depression in yellow clay that was peppered with nuggets of red ochre. Surface of midden 225 mm. below surface of topsoil that was contaminated with broken window glass. One piece of obsidian 55mm.x 40mm. x 22mm. deep with a reworked cutting edge. One piece of chert 20mm. x 15mm.. Fire fractured stone from large fist size to walnut size fragments. The walls of the scoop showed signs of browning from exposure to heat.															
4. Owner Address G J Whiteman Trust 33 Windsor St. KAMO		Tenant/Manager Address													
5. Nature of Information (<i>hearsay, brief or extended visit, etc</i>) Monitoring and recording Photographs (<i>reference numbers, and where they are held</i>) Aerial Photographs (<i>reference numbers and clarity of site</i>)															
6. Reported by Vic Hensley Address R.D.4 KAITAIA		Filekeeper Date <i>28/7/07</i>													
7. Keywords Maori Midden															
8. New Zealand Register of Archaeological Sites (<i>for office use</i>) NZHPT Site Field Code															
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Type of site Local Environment today Land Classification		Present Condition and future danger of destruction Security Code Local body													



Alex Billot

From: Stuart Bracey <SBracey@heritage.org.nz>
Sent: Monday, 4 May 2026 9:48 am
To: Alex Billot
Cc: Bill Edwards; James Robinson; Atareiria Heihei; Lisa Ahn; Rochelle
Subject: RE: 6 Flagstaff Rd, Russell HNZPT comments

Morena Alex,
HNZPT has reviewed the Archaeological Assessment completed at 6 Flagstaff Road, Russell, by Luke Holmes, Geometria.

HNZPT advises an Accidental Discovery Protocol approach is appropriate for the development of this site.

Thanks for engaging with HNZPT early in the development process.

Cheers,
Stuart

Stuart Bracey | Kaiwhakamāhere | Heritage Planner | Northern Region | Heritage New Zealand Pouhere Taonga | L10 SAP Tower 151 Queen Street Auckland CBD | Private Box 105 291 Auckland City 1143 | mobile 027 684 0833 | visit www.heritage.org.nz and learn more about NZ's heritage places.

Tairangahia a tua whakarere; Tatakihia nga reanga o amuri ake nei – Honouring the past; Inspiring the future

This communication may be a privileged communication. If you are not the intended recipient, then you are not authorised to retain, copy or distribute it. Please notify the sender and delete the message in its entirety.

From: Alex Billot <Alex@northplanner.co.nz>
Sent: Thursday, 23 April 2026 12:06 pm
To: Stuart Bracey <SBracey@heritage.org.nz>
Cc: Bill Edwards <BEdwards@heritage.org.nz>; James Robinson <jrobinson@heritage.org.nz>; Atareiria Heihei <AHeihei@heritage.org.nz>; Lisa Ahn <LAhn@heritage.org.nz>; Rochelle <rochelle@northplanner.co.nz>
Subject: RE: 6 Flagstaff Rd, Russell HNZPT comments

Kia ora Stu,

Please find attached the Archaeological Assessment completed for the proposed building at 6 Flagstaff Road. Plans are also attached for ease of reference.

Once HNZPT have had a chance to review the archaeological report, please let us know if HNZPT have any queries or are happy to provide approval to the proposal.

Thanks in advance.

Kind regards,



Alex Billot
Resource Planner

Offices in Kaitia & Kerikeri
☎ 09 408 1866
Northland Planning & Development 2020
Limited

*My office hours are Monday, Tuesday,
Thursday & Friday 9am – 2pm.*

From: Stuart Bracey <SBracey@heritage.org.nz>
Sent: Tuesday, 17 March 2026 2:31 pm
To: Northland Planning Development <info@northplanner.co.nz>
Cc: Bill Edwards <BEwards@heritage.org.nz>; James Robinson <jrobinson@heritage.org.nz>; Atareiria Heihei <AHeihei@heritage.org.nz>; Lisa Ahn <LAhn@heritage.org.nz>
Subject: RE: 6 Flagstaff Rd, Russell HNZPT comments

Hi Rochelle,

I advise HNZPT had the opportunity to an initial look at this development proposal for a new house located at 6 Flagstaff Road, Russell today. We provide the following preliminary comments:

1. Height of the structure – HNZPT has no concerns
2. Building within the kororareka zone – HNZPT has no concerns due to the range of housing designs in the location.
3. Building and earthworks within 20m of a scheduled and Listed house – HNZPT note that the development site is located up the slope behind the Heritage building. As such HNZPT has no concerns.
4. Archeological Assessment Report. Due to the high level of recorded archeological discoveries in the Koroareka location HNZPT request an Archaeological assessment be carried out based on an onsite investigation (including bore investigation).

Please contact me directly if you have any further queries.

Cheers,
Stuart

Stuart Bracey | Kaiwhakamāhere | Heritage Planner | Northern Region | Heritage New Zealand Pouhere Taonga | L10 SAP
Tower 151 Queen Street Auckland CBD | Private Box 105 291 Auckland City 1143 | mobile 027 684 0833 | visit
www.heritage.org.nz and learn more about NZ's heritage places.

Tairangahia a tua whakarere; Tatakihia nga reanga o amuri ake nei – Honouring the past; Inspiring the future

This communication may be a privileged communication. If you are not the intended recipient, then you are not authorised to retain, copy or distribute it. Please notify the sender and delete the message in its entirety.

From: Northland Planning Development <info@northplanner.co.nz>

Sent: Tuesday, 17 March 2026 9:54 am

To: Stuart Bracey <SBracey@heritage.org.nz>

Subject: 6 Flagstaff Rd, Russell

You don't often get email from info@northplanner.co.nz. [Learn why this is important](#)

Morena Stu,

Very draft plans for general discussion at your meeting this morning.

Consent triggered for the height of the structure (over 7.2m), SW coverage, (potentially fire risk), buildings in kororareka zone, and buildings and earthworks within 20m of a historic building.

Looking forward to any general feedback you have. Feel free to message me if you need any other site photos.

Regards,



Rochelle Jacobs

Director / Senior Planner

Offices in Kaitaia & Kerikeri

☎ 09 408 1866 | 📠 027 449 8813

Northland Planning & Development 2020 Limited



WHAKARATONGA IWI

FIRE
EMERGENCY

NEW ZEALAND

Non-Reticulated Firefighting Water Supplies, Vehicular Access & Vegetation Risk Reduction Application for New and Existing Residential Dwellings and Sub-Divisions



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Section A - Firefighting Water Supplies and Vegetation Risk Reduction Waiver

“Fire and Emergency New Zealand strongly recommends the installation of automatic fire detection system devices such as smoke alarms for early warning of a fire and fire suppression systems such as sprinklers in buildings (irrespective of the water supply) to provide maximum protection to life and property”.

Waiver Explanation Intent

Fire and Emergency New Zealand [FENZ] use the New Zealand Fire Service [NZFS] Code of Practice for firefighting water supplies (SNZ PAS 5409:2008) (The Code) as a tool to establish the quantity of water required for firefighting purposes in relation to a specific hazard (Dwelling, Building) based on its fire hazard classification regardless if they are located within urban fire districts with a reticulated water supply or a non-reticulated water supply in rural areas. The code has been adopted by the Territorial Authorities and Water Supply Authorities. The code can be used by developers and property owners to assess the adequacy of the firefighting water supply for new or existing buildings.

The Area Manager under the delegated authority of the Fire Region Manager is responsible for approving applications in relation to firefighting water supplies. The Area Manager may accept a variation or reduction in the amount of water required for firefighting for example; a single level dwelling measuring 200^m² requires 45,000L of firefighter water under the code, however the Area Managers in Northland have excepted a reduction to 10,000L.

This application form is used for the assessment of proposed water supplies for firefighting in non-reticulated areas only and is referenced from (Appendix B – Alternative Firefighting Water Sources) of the code. This application also provides fire risk reduction guidance in relation to vegetation and the 20-metre dripline rule under the Territorial Authority's District Plan. Fire and Emergency New Zealand are not a consenting authority and the final determination rests with the Territorial Authority.

For more information in relation to the code of practice for Firefighting Water supplies, Emergency Vehicle Access requirements, Home Fire Safety advice and Vegetation Risk Reduction Strategies visit www.fireandemergency.nz

Section B – Applicant Information

Applicants Information	
Name:	Luke Holmes
Address:	6 Flagstaff Road, Russell
Contact Details:	09 408 1866 - Northland Planning & Development)
Return Email Address:	info@northplanner.co.nz

Section C – Property Details

Property Details	
Address of Property:	6 Flagstaff Road, Russell
Lot Number/s:	Part Block I Old Land Claim No 288A
Dwelling Size: (Area = Length & Width)	Proposed residence to eaves is 187m2 but two floor areas combined is 221m2
Number of levels: (Single / Multiple)	Two

1. Fire Appliance Access to alternative firefighting water sources - Expected Parking Place & Turning circle

Fire and Emergency have specific requirements for fire appliance access to buildings and the firefighting water supply. This area is termed the hard stand. The roading gradient should not exceed 16%. The roading surface should be sealed, able to take the weight of a 14 to 20-tonne truck and trafficable at all times. The minimum roading width should not be less than 4 m and the property entrance no less 3.5 metres wide. The height clearance along access ways must exceed 4 metres with no obstructions for example; trees, hanging cables, and overhanging eaves.

1 (a) Fire Appliance Access / Right of Way	
Is there at least 4 metres clearance overhead free from obstructions?	☒ YES ☐ NO
Is the access at least 4 metres wide?	☐ YES ☒ NO
Is the surface designed to support a 20-tonne truck?	☒ YES ☐ NO
Are the gradients less than 16%	☒ YES ☐ NO
Fire Appliance parking distance from the proposed water supply is Parking will be available immediately outside the location of the proposed dwelling, with buried tanks at rear. See Site plan metres	

If access to the proposed firefighting water supply is not achievable using a fire appliance, firefighters will need to use portable fire pumps. Firefighters will require at least a one-metre wide clear path / walkway to carry equipment to the water supply, and a working area of two metres by two metres for firefighting equipment to be set up and operated.

1 (b) Restricted access to firefighting water supply, portable pumps required
Has suitable access been provided? ☒ YES ☐ NO
Comments: Fire fighting water supply is available via water tanks on site.

Internal FENZ Risk Reduction comments only:

Click or tap here to enter text.

2. Firefighting Water Supplies (FFWS)

What are you proposing to use as your firefighting water supply?

2 (a) Water Supply Single Dwelling	
Tank	☒ Concrete Tank ☐ Plastic Tank ☐ Above Ground (Fire Service coupling is required - 100mm screw thread suction coupling) ☐ Part Buried (max exposed 1.500 mm above ground) ☒ Fully Buried (access through filler spout) Volume of dedicated firefighting water 10,000L litres

2 (b) Water Supply Multi-Title Subdivision Lots / Communal Supply	
Tank Farm	☐ Concrete Tank ☐ Plastic Tank ☐ Above Ground (Fire Service coupling is required - 100mm screw thread suction coupling) ☐ Part Buried (max exposed 1.500mm above ground) ☐ Fully Buried (access through filler spout) Number of tanks provided Click or tap here to enter text. Number of Tank Farms provided Click or tap here to enter text. Water volume at each Tank Farm Click or tap here to enter text. Litres Volume of dedicated firefighting water Click or tap here to enter text. litres

2 (c) Alternative Water Supply	
Pond:	Volume of water: Unknown
Pool:	Volume of water: Click or tap here to enter text.
Other:	Specify: Coastal marine area to the west
	Volume of water: Unknown

Internal FENZ Risk Reduction comments only:

[Click or tap here to enter text.](#)

3. Water Supply Location

The code requires the available water supply to be at least 6 metres from a building for firefighter safety, with a maximum distance of 90 metres from any building. This is the same for a single dwelling or a Multi-Lot residential subdivision. Is the proposed water supply within these requirements?

3 (a) Water Supply Location	
Minimum Distance:	<i>Is your water supply at least 6 metres from the building?</i> ☒ YES ☐ NO
Maximum Distance	<i>Is your water supply no more than 90 metres from the building?</i> ☒ YES ☐ NO

3 (b) Visibility
How will the water supply be readily identifiable to responding firefighters? E.g.: tank is visible to arriving firefighters or, there are signs / markers posts visible from the parking place directing them to the tank etc.
Comments: Water tanks will be buried as per the site plans.

3 (c) Security
How will the FFWS be reasonably protected from tampering? E.g.: light chain and padlock or, cable tie on the valve etc.
Explain how this will be achieved: This is not of a concern

Internal FENZ Risk Reduction comments only:

Click or tap here to enter text.

4. Adequacy of Supply

The volume of storage that is reserved for firefighting purposes must not be used for normal operational requirements. Additional storage must be provided to balance diurnal peak demand, seasonal peak demand and normal system failures, for instance power outages. The intent is that there should always be sufficient volumes of water available for firefighting, except during Civil Défense emergencies or by prior arrangement with the Fire Region Manager.

4 (a) Adequacy of Water supply

Note: *The owner must maintain the firefighting water supply all year round. How will the usable capacity proposed be reliably maintained? E.g. automatically keep the tank topped up, drip feed, rain water, ballcock system, or manual refilling after use etc.*

Comments:

Tanks will store water captured from the roof of the dwelling and can be topped up via water supply companies if required .

Internal FENZ Risk Reduction comments only:

Click or tap here to enter text.

5. Alternative Method using Appendix's H & J

If Table 1 + 2 from the Code of Practice is not being used for the calculation of the Firefighting Water Supply, a competent person using appendix H and J from the Code of Practice can propose an alternative method to determine firefighting water supply adequacy.

Appendix H describes a method for determining the maximum fire size in a structure. Appendix J describes a method for assessing the adequacy of the firefighting water supply to the premises.

5 (a) Alternative Method Appendix H & J

If an alternative method of determining the FFWS has been proposed, who proposed it?

Name: Click or tap here to enter text.

Contact Details: Click or tap here to enter text.

Proposed volume of storage?

Litres: Click or tap here to enter text.

Comments:

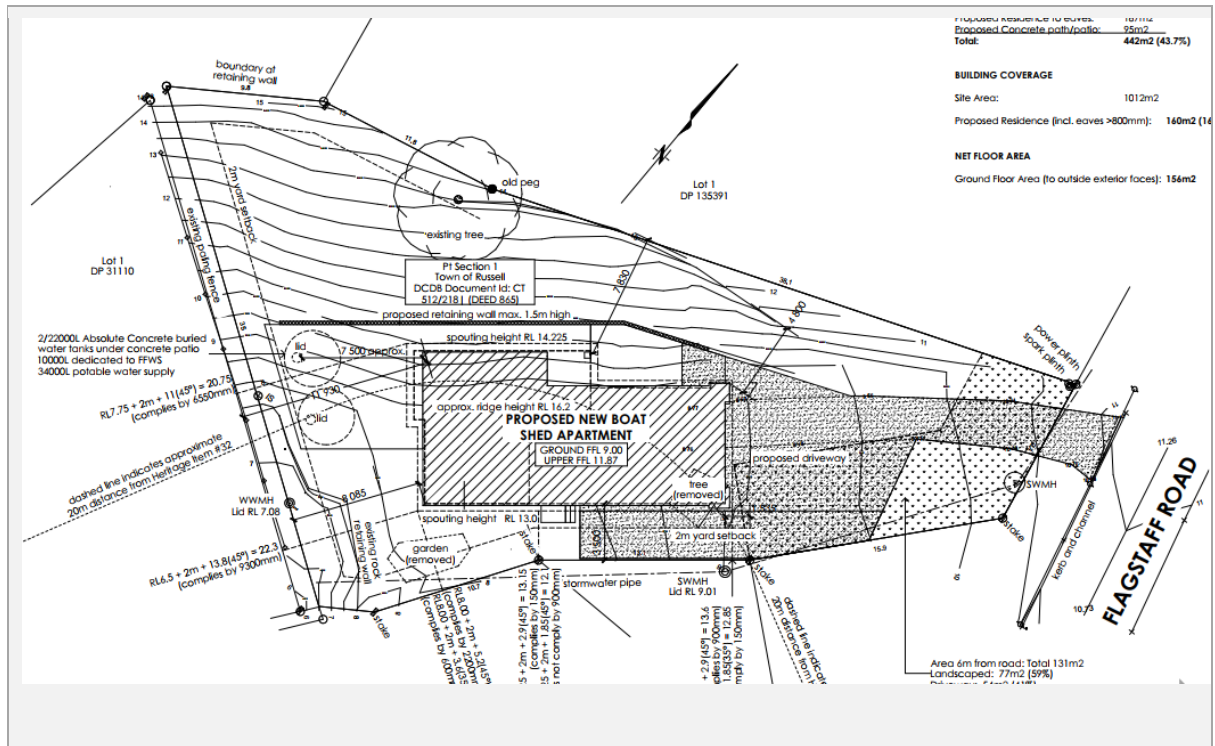
Click or tap here to enter text.

** Please provide a copy of the calculations for consideration.*

Internal FENZ Risk Reduction comments only:

Click or tap here to enter text.

Please provide a diagram identifying the location of the dwelling/s, the proposed firefighting water supply and the attendance point of the fire appliance to support your application.



Internal FENZ Risk Reduction comments only:

Click or tap here to enter text.

7. Vegetation Risk Reduction - Fire + Fuel = Why Homes Burn

Properties that are residential, industrial or agricultural, are on the urban–rural interface if they are next to vegetation, whether it is forest, scrubland, or in a rural setting. Properties in these areas are at greater risk of wildfire due to the increased presence of nearby vegetation.

In order to mitigate the risk of fire spread from surrounding vegetation to the proposed building and vice-versa, Fire Emergency New Zealand recommends the following;

I. Fire safe construction

Spouting and gutters – Clear regularly and consider screening with metal mesh. Embers can easily ignite dry material that collects in gutters.

Roof – Use fire resistant material such as steel or tile. Avoid butanol and rubber compounds.

Cladding – Stucco, metal sidings, brick, concrete, and fibre cement cladding are more fire resistant than wood or vinyl cladding.

II. Establish Safety Zones around your home.

Safety Zone 1 is your most important line of defence and requires the most consideration. Safety Zone 1 extends to 10 metres from your home, you should;

- a) Mow lawn and plant low-growing fire-resistant plants; and*
- b) Thin and prune trees and shrubs; and*
- c) Avoid tall trees close to the house; and*
- d) Use gravel or decorative crushed rock instead of bark or wood chip mulch; and*
- e) Remove flammable debris like twigs, pine needles and dead leaves from the roof and around and under the house and decks; and*
- f) Remove dead plant material along the fence lines and keep the grass short; and*
- g) Remove over hanging branches near powerlines in both Zone 1 and 2.*

III. Safety Zone 2 extends from 10 – 30 metres of your home.

- a) Remove scrub and dead or dying plants and trees; and*
- b) Thin excess trees; and*
- c) Evenly space remaining trees so the crowns are separated by 3-6 metres; and*
- d) Avoid planting clusters of highly flammable trees and shrubs*
- e) Prune tree branches to a height of 2 metres from the ground.*

IV. Choose Fire Resistant Plants

Fire resistant plants aren't fire proof, but they do not readily ignite. Most deciduous trees and shrubs are fire resistant. Some of these include: poplar, maple, ash, birch and willow. Install domestic sprinklers on the exterior of the sides of the building that are less 20 metres from the vegetation. Examples of highly flammable plants are: pine, cypress, cedar, fir, larch, redwood, spruce, kanuka, manuka.

For more information please go to <https://www.fireandemergency.nz/at-home/the-threat-of-rural-fire/>

If your building or dwelling is next to vegetation, whether it is forest, scrubland, or in a rural setting, please detail below what Risk Reduction measures you will take to mitigate the risk of fire development and spread involving vegetation?

7 (a) Vegetation Risk Reduction Strategy

The proposal infringes the 20 metre setback requirement from bush to the north of the property (not located within the site). 2x 25,000L water tanks are proposed on the site to provide potable water supply, stormwater attenuation and 10,000L of dedicated supply for FFWS. The applicant will ensure that 10,000L is available at all times for FFWS. Parking and access to the site is via the north-eastern side with the tanks along the south-western side of the dwelling (which will be buried and located under the proposed concrete patio). The tank access lids will be located 7.5 metres from the dwelling (see site plan).

Internal FENZ Risk Reduction comments only:

Click or tap here to enter text.

8. Applicant

Checklist	
☒	Site plan (scale drawing) – including; where to park a fire appliance, water supply, any other relevant information.
☒	Any other supporting documentation (diagrams, consent).

I submit this proposal for assessment.

Name: Rochelle Jacobs Dated: 5/03/2025

Contact No.: 027 449 8813

Email: info@northplanner.co.nz

Signature: Rochelle Jacobs

9. Approval

In reviewing the information that you have provided in relation to your application being approximately a [Click or tap here to enter text.](#) square metre, Choose an item. dwelling/sub division, and non-sprinkler protected.

The Area Manager of Fire and Emergency New Zealand under delegated authority from the Fire Region Manager, Te Hiku, has assessed the proposal in relation to firefighting water supplies and the vegetation risk strategy. The Manager Choose an item. agree with the proposed alternate method of Fire Fighting Water Supplies. Furthermore; the Manager agrees with the Vegetation Risk Reduction strategies proposed by the applicant.

Name: [Click or tap here to enter text.](#)

Signature: [Click or tap here to enter text.](#) Dated: [Click or tap to enter a date.](#)

P.P on behalf of the Area Manager

Fire and Emergency New Zealand
Te Tai Tokerau / Northland District

APPROVED
By GoffinJ at 11:51 am, Jul 06, 2026

Jason Goffin- Advisor Risk
Reduction

Alex Billot

From: Alex Billot
Sent: Wednesday, 8 July 2026 9:05 pm
To: 'd.hepi@xtra.co.nz'; 'Merkenzie@gmail.com'; 'rewiri.boyce@xtra.co.nz';
'standinginwater@gmail.com'; 'karataumarere@gmail.com';
'ngatikutahapu@gmail.com'; 'office@patukeha.nz'; 'marae@kororareka.nz';
'honetiatoa@hotmail.com'; 'ngatimanurcas@ngatimanu.com'; 'b.p.king@xtra.co.nz';
'russell.hook61@gmail.com'; 'waikaremaoricommittee@gmail.com';
'clive@ngatiwai.iwi.nz'; 'edith.tahere@ngapuhi.org'; 'moana.tuwhare@ngapuhi.org'
Cc: Rochelle
Subject: Land Use Resource consent application - 6 Flagstaff Road, Russell
Attachments: Appendix 3 - Plan Set.pdf; Appendix 5 - Archaeological Assessment.pdf

Tēnā koutou,

We are in the process of preparing a land use resource consent application to construct a new dwelling at 6 Flagstaff Road, Russell. The site is currently vacant and this will be the first dwelling on the site. The plan set is attached to this email.

As part of the pre-application process, we are sending the application to relevant Iwi/Hapu for comment. It is our intention to lodge the application to FNDC within the next two weeks, so if you could please review the below information and attached plans and advise whether there are any comments or further information required, that would be greatly appreciated.

Consent is required under the Operative District Plan for building height, stormwater management, excavations and fire risk to residential units within the Russell Township Zone and Russell Township Basing and Gateway Area – HP4. The proposal is a '**Discretionary Activity**' overall under the ODP.

Under the Proposed District Plan – Decisions Version (PDP-DV), the site is zoned as Kororāreka Russell Township and within the Kororāreka Russell Heritage Overlay Area Part D as well as the Coastal Environment Overlay. The site is within 20 metres of a Scheduled Heritage Item noted as 'House (including picket fence) reference 32, which is within the adjoining site to the south of the subject site.



Within the Kororāreka Russell Township zone, the proposal results in infringements given the dwelling will exceed the permitted height as well as incur a sunlight infringement along the southern boundary. The proposal also infringes the permitted impermeable surface coverage for the underlying zone. Within the Kororāreka Russell Heritage Overlay Part D the proposal requires consent as the building will be within 20m of a scheduled heritage resource as well as exterior colours being outside of the BS5252 colour range (the proposed colours are listed within the Plan Set and will be recessive). As earthworks will be within 20m of the scheduled heritage resource, consent is also sought under HA-R5 Earthworks. Within the Coastal Environment, consent is sought given the proposal infringes the permitted height as well as for extent of earthworks exceeding 100m² and 1m cut height. Consent is also sought under the Earthworks Chapter for volume and setback of earthworks from boundary. The proposal is a **'Restricted Discretionary Activity'** under the PDP-DV.

An Archaeological Assessment has been completed for the site which determined that there were no archaeological sites identified within the site (also attached). This was sent to Heritage NZ Pouhere Taonga (HNZPT) who advised that the proposal should proceed under the guidance of an ADP. HNZPT also confirmed that they had no objections to the proposed design or proximity to the Heritage Item to the south given nature of development in the area.

The proposed design is considered suitable for the site and surrounding environment. Given the extensive development in the area, the proposal is considered to be consistent with built development within the surrounding environment. The permitted setback provisions for the zone have been complied with, enabling ample separation distance from adjoining sites. The building height only slightly infringes the permitted height and

has done so given the purpose of the building being for storage of a boat as well as a place of residence. The physical constraints of the site have limited the building potential and the design provided is considered to be the best outcome for the site. Effects from the slightly higher building height which exceeds the permitted threshold, are considered to be less than minor.

The proposed colour scheme is considered a natural recessive colour scheme and of low reflectivity. The materials and colours provided will be coherent with other built development in the area and the use of the aged red brick will tie in with the heritage colours in the area.

Roof – Coloursteel Slate LRV 9% (or similar approved)

Aluminium joinery – Dulux Duralloy Slate (or similar approved)

Upper storey – Cedar Bevelback Weatherboards – Colour – Wood-X Flint (or similar approved)

Lower storey – Brick Veneer – Colour – San Selmo Aged Red (or similar approved)

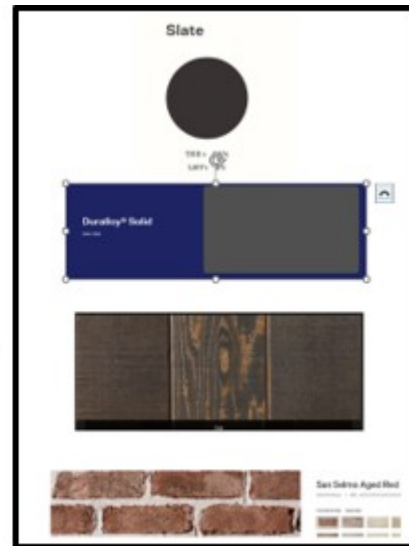


Figure 12: Examples of proposed colours.

If you could please review the above and the attached documents, that would be greatly appreciated.

If you have any questions or comments, please do not hesitate to get in touch with our office.

Nga mihi,



Alex Billot
Resource Planner

Offices in Kaitia & Kerikeri
☎ 09 408 1866
Northland Planning & Development 2020
Limited

*My office hours are Monday, Tuesday,
Thursday & Friday 9am – 2pm.*

Alex Billot

From: Rochelle
Sent: Tuesday, 7 July 2026 11:06 am
To: Alex Billot
Subject: FW: Definition of Urban



Rochelle Jacobs

Director / Senior Planner

Offices in Kaitaia & Kerikeri

☎ 09 408 1866 | 📠 027 449 8813

Northland Planning & Development 2020 Limited

From: Rochelle
Sent: Tuesday, July 7, 2026 11:04 AM
To: Sarah Trinder <sarah.trinder@fndc.govt.nz>
Cc: 'pdp@fndc.govt.nz' <pdp@fndc.govt.nz>
Subject: Definition of Urban

Hi Sarah,

Wondering if you might be able to add back in the definition of Urban to clarify what areas NH-R5 PER-2 applies to.

NH-R5	Wild fire - Buildings used for a vulnerable activity (excluding accessory buildings)
All zones	Activity status: Permitted Where: PER-1 Any building used for a vulnerable activity (excluding accessory buildings) that: 1. is located on a site that has access to a fire hydrant where reticulated water supply is available 2. provides for water supply for firefighting purposes in accordance with non-reticulated water supply specified in Table 2 of SNZ PAS 4509:2009 Firefighting Water Supplies Code of Practice. PER-2 Any building used for a vulnerable activity (excluding accessory buildings) that is in a zone is set back at least 20m from the dripline of any contiguous scrub or forest.

In hearing 13 the s42a relied on this being defined so it was clear what areas this related to.

¹⁵ Defined in the PDP as “*means an area of land zoned Urban; Township; Mixed Use; or Light Industrial that currently has adequate infrastructure or is signalled to develop infrastructure, in the Long Term Plan or the 30 Year Plan recommended through Hearing 4 is to refer to spaces that reflect the final list of urban zones in the PDP.*”

Then in hearing 17 the definition was deleted on the basis that there was no reference in the remainder of the plan. This clearly has been an error.

URBAN	means an area of land zoned a. General Residential b. Kororāreka Russell c. Mixed Use; or d. Light Industrial that currently has adequate infrastructure or is signalled to develop infrastructure, in the Long Term Plan or the 30 Year Plan recommended through Hearing 4 is to refer to spaces that reflect the final list of urban zones in the PDP. NOTE: Land zoned Hearing 4 is to refer to spaces that reflect the final list of urban zones in the PDP. have access to, or be provided with, infrastructure so is not in
-------	--

Urban Environment Allotment	Removal of the definition as it is within the PDP.
-----------------------------	--

259. In regard to the broader use of the term '*Urban*', Section report acknowledges that the term also has no reference to PDP. As it does not contribute to the interpretation of any removal is also recommended.

Any assistance on this matter would be much appreciated.

Cheers,



Rochelle Jacobs

Director / Senior Planner

Offices in Kaitia & Kerikeri

☎ 09 408 1866 | 📠 027 449 8813

Northland Planning & Development 2020 Limited

Relevant Assessment Criteria under the ODP and PDP

Operative District Plan (Discretionary Activity Status)

Building Height, Scale & Sunlight – Chapter 11.2

- (a) The extent to which adjacent properties will be adversely affected in terms of visual domination, overshadowing, loss of privacy and loss of access to sunlight and daylight.*
- (b) The ability to mitigate any adverse effects by way of increased separation distances between buildings or the provision of landscaping and screening.*
- (c) The extent of the building area and the scale of the building and the extent to which they are compatible with both the built and natural environments in the vicinity.*
- (d) The spatial relationship between the new building and adjacent residential units, and the outdoor space used by those units.*
- (e) The nature of the activity to be carried out within the building and its likely generated effects.*

Stormwater Management – Chapter 11.3

- (a) The extent to which building site coverage and impermeable surfaces result in increased stormwater runoff and contribute to total catchment impermeability and the provisions of any catchment or drainage plan for that catchment.*
- (b) The extent to which Low Impact Design principles have been used to reduce site impermeability.*
- (c) Any cumulative effects on total catchment impermeability.*
- (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.*
- (e) The physical qualities of the soil type.*
- (f) Any adverse effects on the 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.*
- (h) The extent to which paved, impermeable surfaces are necessary for the proposed activity.*
- (i) The extent to which landscaping may reduce adverse effects of run-off.*
- (j) Any recognised standards promulgated by industry groups.*

(k) The means and effectiveness of mitigating stormwater run-off to that expected by the permitted activity threshold.

(l) The extent to which the proposal has considered and provided for climate change.

(m) The extent to which stormwater detention ponds and other engineering solutions are used to mitigate any adverse effects.

Soils & Minerals (Earthworks) – Chapter 12.3.7

(a) the degree to which the activity may cause or exacerbate erosion and/or other natural hazards on the site or in the vicinity of the site, particularly lakes, rivers, wetlands and the coastline;

(b) any effects on the life supporting capacity of the soil;

(c) any adverse effects on stormwater flow within the site, and stormwater flow to or from other properties in the vicinity of the site including public roads;

(d) any reduction in water quality;

(e) any loss of visual amenity or loss of natural character of the coastal environment;

(f) effects on Outstanding Landscape Features and Outstanding Natural Features (refer to Appendices 1A and 1B in Part 4, and Resource Maps);

(g) the extent to which the activity may adversely affect areas of significant indigenous vegetation or significant habitats of indigenous fauna;

(h) the extent to which the activity may adversely affect heritage resources, especially archaeological sites;

(i) the extent to which the activity may adversely affect the cultural and spiritual values of Maori, especially Sites of Cultural Significance to Maori and waahi tapu (as listed in Appendix 1F in Part 4, and shown on the Resource Maps);

(j) any cumulative adverse effects on the environment arising from the activity;

(k) the effectiveness of any proposals to avoid, remedy or mitigate any adverse effects arising from the activity;

(l) the ability to monitor the activity and to take remedial action if necessary;

(m) the criteria in Section 11.20 Development Plans in Part 2.

(n) the criteria (p) in Section 17.2.7 National Grid Yard.

Proposed District Plan -Decisions Version (Restricted Discretionary Activity Status)

KRT-S1 Maximum Height

- (a) the character and amenity of the surrounding environment;*
- (b) dominance in relation to the road and adjoining sites, including potential loss relation to vacant sites;*
- (c) loss of privacy to adjoining sites, including potential loss in relation to vacant sites;*
- (d) shading and loss of access to sunlight to adjoining sites;*
- (e) the ability to mitigate any adverse effects by way of increased separation distances between buildings or the provision of landscaping and screening;*
- (f) natural hazard mitigation and site constraints; and*
- (g) the visual effect of the building or structure in relation to ridgelines, headlands or peninsula*

KRT-S2 – Height in Relation to Boundary Assessment Criteria

- a. loss of privacy to adjoining [sites](#), including potential loss in relation to vacant [sites](#);*
- b. shading and loss of access to sunlight to adjoining [sites](#), including [buildings](#) and outdoor areas;*
- c. dominance in relation to adjoining [sites](#);*
- d. location and proximity of adjacent [residential units](#) and their outdoor space; and*
- e. [natural hazard](#) mitigation and [site](#) constraints.*

KRT-R2 Impermeable Surfaces

- a. the extent to which [landscaping](#) or vegetation may reduce adverse [effects](#) of run-off;*
- b. the effectiveness of the proposed method for controlling [stormwater](#) on [site](#);*
- c. the availability of [land](#) for disposal of effluent and [stormwater](#) on the [site](#) without adverse [effects](#) on adjoining [waterbodies](#) (including [groundwater](#) and [aquifers](#)) or on adjoining [sites](#) or downstream [sites](#); and*
- d. whether [water](#) sensitive design methods and use of green spaces can be used;*
- e. any cumulative [effects](#) on total catchment impermeability;*
- f. [natural hazard](#) mitigation and [site](#) constraints; and*
- g. extent of potential adverse [effects](#) on cultural, spiritual, heritage and/or [amenity values](#) of any affected [waterbodies](#).*

EW-R1 Earthworks

- a. the location, scale and volume;*

- b. depth and [height](#) of cut and fill;*
- c. the nature of filling material and whether it is compacted;*
- d. the extent of exposed surfaces or stockpiling of fill;*
- e. erosion, [dust](#) and sediment controls;*
- f. the risks of [natural hazards](#), particularly flood events;*
- g. [stormwater](#) controls;*
- h. flood storage, [overland flow paths](#) and drainage patterns;*
- i. the stability of [land](#), [buildings](#) and [infrastructure](#);*
- j. natural character, landscape, natural features, [historic heritage](#), spiritual and cultural values;*
- k. the life-supporting capacity of soils;*
- l. the location and use of [infrastructure](#);*
- m. temporary or permanent nature of any adverse [effect](#);*
- n. traffic and [noise effects](#);*
- o. time of year [earthworks](#) will be carried out and duration of the activity; and*
- p. impact on visual and [amenity values](#).*

OPERATIVE DISTRICT PLAN – COASTAL ENVIRONMENT OBJECTIVES AND POLICIES

OBJECTIVES	
10.3.1	<i>To manage coastal areas in a manner that avoids adverse effects from subdivision, use and development. Where it is not practicable to avoid adverse effects from subdivision use or development, but it is appropriate for the development to proceed, adverse effects of subdivision use or development should be remedied or mitigated.</i>
10.3.2	<i>To preserve and, where appropriate in relation to other objectives, to restore, rehabilitate protect, or enhance: (a) the natural character of the coastline and coastal environment; (b) areas of significant indigenous vegetation and significant habitats of indigenous fauna; (c) outstanding landscapes and natural features; (d) the open space and amenity values of the coastal environment; (e) water quality and soil conservation (insofar as it is within the jurisdiction of the Council)</i>
10.3.3	<i>To engage effectively with Maori to ensure that their relationship with their culture and traditions and taonga is identified, recognised, and provided for</i>
10.3.4	<i>To maintain and enhance public access to and along the coast whilst ensuring that such access does not adversely affect the natural and physical resources of the coastal environment, including Maori cultural values, and public health and safety</i>
10.3.5	<i>To secure future public access to and along the coast, lakes and rivers (including access for Maori) through the development process and specifically in accordance with the Esplanade Priority Areas mapped in the District Plan</i>
10.3.6	<i>To minimise adverse effects from activities in the coastal environment that cross the coastal marine area boundary.</i>

10.3.7	<i>To avoid, remedy or mitigate adverse effects on the environment through the provision of adequate land-based services for mooring areas, boat ramps and other marine facilities</i>
10.3.8	<i>To ensure provision of sufficient water storage to meet the needs of coastal communities all year round</i>
10.3.9	<i>To facilitate the sustainable management of natural and physical resources in an integrated way to achieve superior outcomes to more traditional forms of subdivision, use and development through management plans and integrated development.</i>
POLICIES	
10.4.1	<i>That the Council only allows appropriate subdivision, use and development in the coastal environment. Appropriate subdivision, use and development is that where the activity generally: (a) recognises and provides for those features and elements that contribute to the natural character of an area that may require preservation, restoration or enhancement; and (b) is in a location and of a scale and design that minimises adverse effects on the natural character of the coastal environment; and (c) has adequate services provided in a manner that minimises adverse effects on the coastal environment and does not adversely affect the safety and efficiency of the roading network; and (d) avoids, as far as is practicable, adverse effects which are more than minor on heritage features, outstanding landscapes, cultural values, significant indigenous vegetation and significant habitats of indigenous fauna, amenity values of public land and waters and the natural functions and systems of the coastal environment; and (e) promotes the protection, and where appropriate restoration and enhancement, of areas of significant indigenous vegetation and significant habitats of indigenous fauna; and (f) recognises and provides for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga; and (g) where appropriate, provides for</i>

	<i>and, where possible, enhances public access to and along the coastal marine area; and (h) gives effect to the New Zealand Coastal Policy Statement and the Regional Policy Statement for Northland.</i>
10.4.2	<i>That sprawling or sporadic subdivision and development in the coastal environment be avoided through the consolidation of subdivision and development as far as practicable, within or adjoining built up areas, to the extent that this is consistent with the other objectives and policies of the Plan.</i>
10.4.3	<i>That the ecological values of significant coastal indigenous vegetation and significant habitats are maintained in any subdivision, use or development in the coastal environment.</i>
10.4.4	<i>That public access to and along the coast be provided, where it is compatible with the preservation of the natural character and amenity, cultural, heritage and spiritual values of the coastal environment, and avoids adverse effects in erosion prone areas</i>
10.4.5	<i>That access by tangata whenua to ancestral lands, sites of significance to Maori, maahinga mataitai, taiapure and kaimoana areas in the coastal marine area be provided for in the development and ongoing management of subdivision and land use proposals and in the development and administration of the rules of the Plan and by non-regulatory methods. Refer Chapter 2, and in particular Section 2.5, and Council's "Tangata Whenua Values and Perspectives (2004)".</i>
10.4.6	<i>That activities and innovative development including subdivision, which provide superior outcomes and which permanently protect, rehabilitate and/or enhance the natural character of the coastal environment, particularly through the establishment and ongoing management of indigenous coastal vegetation and habitats, will be encouraged by the Council.</i>
10.4.7	<i>To ensure the adverse effects of land-based activities associated with maritime facilities including mooring areas and boat ramps are avoided, remedied or mitigated through the provision of adequate services, including where appropriate: (a) parking; (b) rubbish disposal; (c) waste disposal; (d) dinghy racks.</i>

10.4.8	<i>That development avoids, remedies or mitigates adverse effects on the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga</i>
10.4.9	<i>That development avoids, where practicable, areas where natural hazards could adversely affect that development and/or could pose a risk to the health and safety of peo</i>
10.4.10	<i>To take into account the need for a year-round water supply, whether this involves reticulation or on-site storage, when considering applications for subdivision, use and development</i>
10.4.11	<i>To promote land use practices that minimise erosion and sediment run-off, and storm water and waste water from catchments that have the potential to enter the coastal marine area.</i>
10.4.12	<i>That the adverse effects of development on the natural character and amenity values of the coastal environment will be minimised through: (a) the siting of buildings relative to the skyline, ridges, headlands and natural features; (b) the number of buildings and intensity of development; (c) the colour and reflectivity of buildings; (d) the landscaping (including planting) of the site; (e) the location and design of vehicle access, manoeuvring and parking areas.</i>

OPERATIVE DISTRICT PLAN – RUSSELL TOWNSHIP ZONE - OBJECTIVES AND POLICIES

OBJECTIVES	
10.9.3.1	<i>To achieve the continued growth and development of Russell in a way which maintains its special historic and amenity values and minimises adverse effects on the natural environment.</i>
POLICIES	
10.9.4.1	<i>That opportunities be provided for activities to establish within the zone at a level of effect consistent with the existing development.</i>

10.9.4.2	<i>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.</i>
10.9.4.3	<i>That the portion of a site or of a development that is covered in buildings and other impermeable surfaces be limited to allow for open space and landscaping around buildings and to reduce total impermeable area and its adverse hydrological, ecological and amenity effects</i>
10.9.4.4	<i>That sites, and the buildings and activities which may locate on those sites, have adequate access to sunlight and daylight</i>
10.9.4.5	<i>That activities with net effects that exceed those of a typical single residential unit, be required to avoid, remedy or mitigate those effects with respect to the ecological and the amenity values and general peaceful enjoyment of adjacent residential activities.</i>
10.9.4.6	<i>That a reasonable level of privacy and peaceful enjoyment be provided for residents</i>
10.9.4.7	<i>That the significance of Russell is recognised and its intrinsic historic value is preserved by protecting its special character.</i>
10.9.4.8	<i>That the special character of Russell be protected by: (a) providing additional controls in areas of Russell where groups of buildings, places or objects have significant historical associations or characteristics and protecting those buildings which are most important as examples of period styles; (b) retaining the visual dominance of natural landforms in the Russell Township Basin and Gateway area (as defined on Maps 89 and HP4); (c) ensuring development in the Gateway Area of Matauwhi Bay (as defined on Maps 89 and HP4) reflects its role as an entrance to Russell and that activities are of a scale and size that is consistent with that of Russell itself and appropriate to the character of the Bay; (d) maintaining as far as practicable the informal blending of land uses that have evolved to contribute to the village atmosphere of Russell; (e) protecting and fostering the small</i>

	<i>size and pedestrian scale of Russell; and (f) ensuring public works and the provision of utility services are carried out in a manner consistent with the special character of Russell</i>
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OPERATIVE DISTRICT PLAN – SOILS AND MINERALS - OBJECTIVES AND POLICIES

OBJECTIVES	
12.3.3.1	<i>To achieve an integrated approach to the responsibilities of the Northland Regional Council and Far North District Council in respect to the management of adverse effects arising from soil excavation and filling, and minerals extraction.</i>
12.3.3.2	<i>To maintain the life supporting capacity of the soils of the District.</i>
12.3.3.3	<i>To avoid, remedy or mitigate adverse effects associated with soil excavation or filling.</i>
12.3.3.4	<i>To enable the efficient extraction of minerals whilst avoiding, remedying or mitigating any adverse environmental effects that may arise from this activity.</i>
POLICIES	
12.3.4.1	<i>That the adverse effects of soil erosion are avoided, remedied or mitigated.</i>
12.3.4.2	<i>That the development of buildings or impermeable surfaces in rural areas be managed so as to minimise adverse effects on the life supporting capacity of the soil.</i>
12.3.4.3	<i>That where practicable, activities associated with soil and mineral extraction be located away from areas where that activity would pose a significant risk of adverse effects to the environment and/or to human health. Such areas may include those where: (a) there are people living in close proximity to the site or land in the vicinity of the site is zoned Residential, Rural Living, Coastal Residential or Coastal Living; (b) there are significant</i>

	<i>ecological, landscape, cultural, spiritual or heritage values; (c) there is a potential for adverse effects on lakes, rivers, wetlands and the coastline; (d) natural hazards may pose unacceptable risks.</i>
12.3.4.4	<i>That soil excavation and filling, and mineral extraction activities be designed, constructed and operated to avoid, remedy or mitigate adverse effects on people and the environment.</i>
12.3.4.5	<i>That soil conservation be promoted</i>
12.3.4.6	<i>That mining tailings that contain toxic or bio-accumulative chemicals are contained in such a way that adverse effects on the environment are avoided</i>
12.3.4.7	<i>That applications for discretionary activity consent involving mining and quarrying be accompanied by a Development Plan.</i>
12.3.4.8	<i>That as part of a Development Plan rehabilitation programmes for areas no longer capable of being actively mined or quarried may be required.</i>
12.3.4.9	<i>That soil excavation and filling in the National Grid Yard are managed to ensure the stability of National Grid support structures and the minimum ground to conductor clearances are maintained.</i>
12.3.4.10	<i>To ensure that soil excavation and filling are managed appropriately, normal rural practices as defined in Chapter 3 will not be exempt when determining compliance with rules relating to earthworks, except if the permitted standards in the National Grid Yard specify that activity is exempt.</i>

OPERATIVE DISTRICT PLAN – NATURAL HAZARDS - OBJECTIVES AND POLICIES

OBJECTIVES	
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12.4.3.1	<i>To reduce the threat of natural hazards to life, property and the environment, thereby to promote the well being of the community.</i>
12.4.3.2	<i>To ensure that development does not induce natural hazards or exacerbate the effects of natural hazards.</i>
12.4.3.3	<i>To ensure that natural hazard protection works do not have adverse effects on the environment</i>
12.4.3.4	<i>To ensure that the role in hazard mitigation played by natural features is recognised and protected.</i>
12.4.3.5	<i>To improve public awareness of natural hazards as a means of helping people to avoid them</i>
12.4.3.6	<i>To take into account reasonably foreseeable changes in the nature and location of natural hazards.</i>
12.4.3.7	<i>To avoid fire risk arising from the location of residential units in close proximity to trees, or in areas not near fire fighting services.</i>
POLICIES	
12.4.4.1	<i>That earthworks and the erection of structures not be undertaken in areas where there is a significant potential for natural hazards unless they can be carried out in such a way so as to avoid being adversely affected by the natural hazards, and can avoid exacerbating natural hazards</i>
12.4.4.2	<i>That the natural character of features, such as beaches, sand dunes, mangrove areas, wetlands and vegetation, which have the capacity to protect land values and assets from natural coastal hazards, is protected and enhanced.</i>
12.4.4.3	<i>That protection works for existing development be allowed only where they are the best practicable option compatible with sustainable management of the environment.</i>
12.4.4.4	<i>That the sea level rise, as predicted by the Intergovernmental Panel of Climate Change or Royal Society of NZ, be taken into account when assessing development in areas potentially affected.</i>

12.4.4.5	<i>That information on known natural hazards be made available in order that the public can make informed resource management decisions.</i>
12.4.4.6	<i>That the adverse effects on people, property and the environment from coastal hazards in Coastal Hazard Areas, as identified by the Northland Regional Council, are avoided</i>
12.4.4.7	<i>That the risk to adjoining vegetation and properties arising from fires be avoided.</i>
12.4.4.8	<i>That the location, intensity, design and type of new coastal subdivision, use and development be controlled so that the need for hazard protection works is avoided or minimised.</i>
12.4.4.9	<i>That the role of riparian margins in the mitigation of the effects of natural hazards is recognised and that the continuing ability of riparian margins to perform this role be assured.</i>

PROPOSED FAR NORTH DISTRICT PLAN – KORORAREKA RUSSELL TOWNSHIP ZONE OBJECTIVES AND POLICIES

OBJECTIVES	
KRT-O1	<i>The Kororāreka Russell Township zone provides for residential and non-residential activities that:</i> <i>a. are compatible with the historic heritage values of the zone</i> <i>b. maintain the character and amenity of the receiving environment; and</i> <i>c. recognise and protect any part of a site subject to the coastal environment, or High Natural Character.</i>
KRT-O2	<i>Land use and subdivision in the Kororāreka Russell Township zone recognises and protects the natural character, landscape, historic heritage, indigenous biodiversity, amenity and cultural values of the site and surrounding area</i>
KRT-O3	<i>Non-residential activities contribute to the function and wellbeing of the community while complementing the character, scale and amenity values of the Kororāreka Russell Township zone</i>
KRT-O4	<i>Land use and subdivision in the Kororāreka Russell Township zone is supported by appropriate infrastructure.</i>
KRT-O5	<i>Land use and subdivision in the Kororāreka Russell Township zone provides communities with functional and high amenity living environments.</i>
POLICIES	
KRT-P1	<i>Enable land use and subdivision in the Kororāreka Russell Township zone where:</i> <i>a. landscaping and areas of open space are maintained around buildings on the site;</i> <i>b. it is consistent with scale, character and design anticipated in the surrounding residential environment, which is characterised by:</i> <i>i. Period style buildings and structures, often with significant historical associations;</i> <i>ii. The visual dominance of natural landforms surrounding the township basin;</i> <i>iii. A mix of land uses that create a village atmosphere; and</i>

	iv. Pedestrian scale development; c. there is appropriate infrastructure to support residential and non-residential development; and d. heritage resources are protected.
KRT-P2	Provide for a variety of housing typologies within the Kororāreka Russell Township zone, where land is appropriately serviced by infrastructure and does not compromise historic heritage , character and amenity values .
KRT-P3	Enable non-residential activities that: a. are of a residential scale; b. support the social and economic wellbeing of the community; c. do not detract from the vitality and viability of the adjoining Mixed-Use zone; and d. avoid, remedy or mitigate adverse effects on the residential, amenity values and function of the Kororāreka Russell Township zone.
KRT-P4	Provide for retirement villages where they: a. contribute to the diverse needs of the community; b. can be appropriately serviced by development infrastructure; c. complement the character and amenity values of the Kororāreka Russell Township zone, as defined in KRT-P1; and d. address road safety and efficiency.
KRT-P5	Consider the following matters where relevant when assessing and managing the effects of land use and subdivision in the Kororāreka Russell Township zone: a. the protection of: i. historic heritage; ii. Indigenous biodiversity; iii. the natural character of the coastal environment and margins of wetlands, lakes and rivers;

	iv. <i>landforms;</i> v. <i>sites and areas of significance to Māori and cultural values;</i> <i>and</i> vi. <i>identified and potential public access corridors</i> <i>and esplanade reserves;</i> b. <i>consistency with the scale, design, amenity values and character of Kororāreka Russell, including:</i> i. <i>preserving essential elements of a building's character or restoring original character lost through subsequent unsympathetic modification, such as matching the pitch of roofs, selecting appropriate style and placement of windows and using low levels of ornamentation;</i> ii. <i>a preference for traditional construction methods and materials over modern elements such as concrete blocks or aluminium joinery;</i> iii. <i>providing soft landscaping (including hedging) along site boundaries except on the Strand where hard edges such as fences are more appropriate;</i> iv. <i>avoiding visually obtrusive buildings or structures when viewed from the Strand or Kororāreka Bay and Matauwhi Bay; and</i> v. <i>whether the development maintains the pedestrian scale and layout of Kororāreka Russell;</i> c. <i>for residential activities:</i> i. <i>provision for outdoor living space;</i> ii. <i>privacy for adjoining sites;</i> iii. <i>access to sunlight;</i> d. <i>or non-residential activities:</i> i. <i>scale and compatibility with residential activities</i> ii. <i>hours of operation</i>
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	e. at zone interfaces, any <i>setbacks</i>, fencing, screening or <i>landscaping</i> required to address potential conflicts; f. the adequacy and capacity of available or programmed <i>development infrastructure</i> to accommodate the proposed activity, including: i. opportunities for <i>water</i> sensitive design methods; ii. ability of the <i>site</i> to address <i>stormwater</i> and soakage; and iii. capacity of the <i>wastewater</i> network; g. integration and connectivity within the surrounding <i>road</i> network; h. managing <i>natural hazards</i>; and i. any historical, spiritual, or cultural association held by <i>tangata whenua</i>, with regard to the matters set out in <i>Policy TW-P6</i>.
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PROPOSED FAR NORTH DISTRICT PLAN – HERITAGE AREA OVERLAYS - OBJECTIVES AND POLICIES

OBJECTIVES	
HA-O1	To protect the unique heritage values of each <i>Heritage Area</i> Overlay by: a. identifying and protecting the heritage <i>buildings</i>, objects and <i>sites</i>, and archaeological sites within the <i>Heritage Area</i> Overlay from inappropriate <i>subdivision</i>, use and development; b. maintaining the architectural and historical integrity of scheduled Heritage Resources; c. acknowledging the surrounds or setting of the <i>Heritage Area</i> Overlay which has an important relationship with the values of the scheduled Heritage Resources; d. providing for construction of new, and alteration of existing, <i>buildings</i> or <i>structures</i> when they contribute to the cultural values, character and heritage values of the <i>Heritage Area</i> Overlay; e. providing for the demolition of non-heritage <i>buildings</i> or <i>structures</i> when they do not contribute to the

	cultural values, character and heritage values of the Heritage Area Overlay; and f. considering any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6 when assessing and managing the effects of land use and subdivision on the Heritage Area Overlay.
POLICIES	
HA-P6	To maintain the integrity of the Kororāreka Russell Heritage Area Overlay and protect the heritage values by: a. maintaining the architecture and integrity of the build form within Part A The Strand, recognising the use of veranda, roof forms and materials that reflect an earlier architectural style; b. maintaining Part A The Strand as predominantly a pedestrian area; c. protecting the architecture and integrity of the build form within Part B Wellington Street, recognising the low key informal siting of buildings, bush backdrop and villa or bungalow style build form; d. recognising and protecting the foreground and informal area upon entry of the Village created by the open space of the Christ Church building and yard of Part C Christ Church; e. limiting the scale and form of development in Part D Remainder of Overlay as it provides a backdrop to the village setting and the land entrance to Kororāreka/Russell and also supports the heritage values of Part A The Strand, Part B Wellington Street, and Part C Christchurch; f. ensuring subdivision reflects the form of the early township and the surviving historical boundaries and street layout; g. protecting scheduled archaeological sites from damage or destruction, and retrieving archaeological information whenever unscheduled archaeological sites are discovered; h. acknowledging and protecting the landforms and setting of Kororāreka Russell which have an important relationship to the values of the heritage area; and

	i. protecting boundary treatments and landscape areas associated with scheduled Heritage Resources.
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PROPOSED FAR NORTH DISTRICT PLAN – COASTAL ENVIRONMENT OBJECTIVES AND POLICIES

OBJECTIVES	
CE-O1	The natural character of the coastal environment is preserved and protected from inappropriate land use and subdivision .
CE-O2	Land use and subdivision in the coastal environment: a. is undertaken in an integrated and coordinated manner; b. is compatible with the surrounding land use; c. does not result in urban sprawl occurring outside of existing urban areas; d. promotes restoration and enhancement of the natural character of the coastal environment; and e. recognises and provides for the relationship of tangata whenua with their ancestral lands in the coastal environment.
CE-O3	Land use and subdivision in the coastal environment within urban areas is consolidated and provides for the social, economic and cultural wellbeing of people and communities without compromising other coastal environment values.
POLICIES	
CE-P1	Identify the extent of the coastal environment as well as areas of high and outstanding natural character using the assessment criteria in APP1- Mapping methods and criteria .
CE-P2	Avoid adverse effects of land use and subdivision on the characteristics, qualities and values that make an area an outstanding natural character area in the coastal environment .
CE-P3	Avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of land use and subdivision on the characteristics, qualities

	and values of natural character areas and natural features and landscapes in the coastal environment not identified as an: a. outstanding natural character area; b. ONL; or c. ONF.
CE-P4	Preserve the visual qualities, character and integrity of the coastal environment by: a. consolidating land use and subdivision around existing urban centres and rural settlements; and b. avoiding sprawl or sporadic patterns of development in the rural environment.
CE-P5	Enable land use and subdivision in urban areas within the coastal environment by recognising that a change in character may be acceptable in some existing urban areas to provide for the social, economic and cultural wellbeing of people and communities.
CE-P6	Provide for farming activities within the coastal environment by: a. recognising that existing farming activities form part of the coastal environment and allowing for these activities to continue without undue restriction; and b. only allowing new farming activities outside outstanding and high natural character areas where appropriate
CE-P7	Enable the use and development of Māori Purpose zoned land and Treaty Settlement land in the coastal environment by recognising that adverse effects on natural character may be acceptable to support the social, economic and cultural wellbeing of tangata whenua
CE-P8	Encourage the restoration and enhancement of the natural character of the coastal environment.
CE-P9	Consider the following matters where relevant when assessing and managing the effects of land use and subdivision on the coastal environment: a. the presence or absence of buildings, structures or infrastructure;

	b. the temporary or permanent nature of any adverse effects, including any cumulative effects; c. the location, scale and design of any proposed development; d. any means of integrating the building, structure or activity into the wider landscape; e. the ability of the environment to absorb change; f. the need for and location of earthworks or indigenous vegetation clearance and proposed mitigation measures; g. the operational or functional need of any infrastructure to be sited in the particular location; h. any viable alternative locations or methods for the activity or development where significant adverse effects may arise; i. any historical, spiritual or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6; j. the likelihood of the activity exacerbating natural hazards; k. the opportunity to enhance public access and recreation; l. potential effects of land use and subdivision on the coastal marine area and the overall quality of coastal waters; m. any positive contribution the development has on the characteristics and qualities, including restoration and enhancement; n. the effects on the characteristics, qualities and values of the coastal environment, including natural character and natural landscape values and the quality and extent of indigenous biodiversity; o. the extent to which the land use and subdivision complements activities in the coastal marine area; and p. whether the activity is on a previously approved building platform
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PROPOSED FAR NORTH DISTRICT PLAN – EARTHWORKS OBJECTIVES AND POLICIES

OBJECTIVES	
EW-O1	The natural character of the coastal environment is preserved and protected from inappropriate land use and subdivision .
EW-O2	Land use and subdivision in the coastal environment :

	f. is undertaken in an integrated and coordinated manner; g. is compatible with the surrounding land use; h. does not result in urban sprawl occurring outside of existing urban areas; i. promotes restoration and enhancement of the natural character of the coastal environment; and j. recognises and provides for the relationship of tangata whenua with their ancestral lands in the coastal environment.
EW-O3	Land use and subdivision in the coastal environment within urban areas is consolidated and provides for the social, economic and cultural wellbeing of people and communities without compromising other coastal environment values.
POLICIES	
EW-P1	Enable earthworks necessary to provide for the district's social, economic and cultural wellbeing, and their health and safety where they provide for: a. urban land uses and development within urban areas; b. rural land uses and development including, farm tracks, land drainage, and other farming activities within rural areas; c. restoration, conservation and recreation activities; d. land drainage and flood control works; and e. installation, upgrade and maintenance of infrastructure.
EW-P2	Ensure earthworks are managed, when it has the potential to: a. create new or exacerbate existing natural hazards, including but not limited to flooding, instability, and coastal hazards; and b. result in adverse effects on amenity value, historic heritage, cultural values and indigenous biodiversity
EW-P3	Ensure earthworks are located and designed appropriately to manage the effects of the activity by: a. controlling maximum depth and height and maximum area or volume of earthworks;

	b. requiring appropriate setbacks to be maintained from adjoining property boundaries; c. managing the location and design of infrastructure; d. managing impacts on natural drainage patterns and overland flow paths; and e. controlling the movement of dust and sediment beyond the area of development to avoid: i. nuisance effects and/or amenity effects on surrounding; and ii. silt and sediment entering stormwater systems.
EW-P4	Require earthworks to be of a type, scale and form that is appropriate for the location having regards to the effects of the activity, and: a. existing site constraints, opportunities and specific engineering requirements; b. the impact on existing natural landforms, features, historic heritage and indigenous biodiversity; c. compatibility with the visual amenity and character values of the area; d. changes in the natural landform that will lead to instability, erosion and scarring; e. impacts on natural drainage patterns and overland flow paths; f. using materials for retaining structures that are compatible with the visual amenity and the characteristics and qualities of the surrounding area; g. minimising adverse visual effects associated with any exposed cut faces or retaining structures, including with the use of screening, landscaping and/or planting; and h. loss of flood storage within flood hazard areas.
EW-P5	Manage effects on historic heritage and cultural values that may be discovered when undertaking earthworks by: a. requiring a protocol for the accidental discovery of archaeology, kōiwi and artefacts of Māori origin; and

	<i>b. undertaking appropriate actions in accordance with mātauranga and tikanga Māori when managing effects on cultural values.</i>
EW-P6	Require that all earthworks are designed and undertaken in a manner that ensures: <i>a. the stability and safety of surrounding land, buildings or structures; and</i> <i>b. the safe, effective and efficient operation of infrastructure.</i>
EW-P7	Ensure all earthworks associated with land development are designed and assessed in a coordinated and integrated manner at the time of subdivision, by: <i>a. controlling earthworks associated with subdivision, including for the purpose of site preparation, creating roads or access to/within the subdivision, and for the provision of infrastructure; and</i> <i>b. considering the appropriateness of earthworks in conjunction with site design and layout of future subdivision and/or development of land, particularly for future infill or greenfield subdivision.</i>
EW-P8	Consider the following matters where relevant when assessing and managing the effects of earthworks: <i>a. the location, scale and volume;</i> <i>b. depth and height of cut and fill;</i> <i>c. the nature of filling material and whether it is compacted;</i> <i>d. the extent of exposed surfaces or stockpiling of fill;</i> <i>e. erosion, dust and sediment controls;</i> <i>f. the risks of natural hazards, particularly flood events;</i> <i>g. stormwater controls;</i> <i>h. flood storage, overland flow paths and drainage patterns;</i> <i>i. the stability of land, buildings and infrastructure;</i> <i>j. visual amenity, natural character, natural features and landscape values,</i> <i>k. historic heritage values, and whether any assessment or advice from a suitably qualified and experienced heritage expert is required;</i>

	<i>l. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6;</i> <i>m. the life-supporting capacity of soils;</i> <i>n. the extent of indigenous biodiversity clearance and its effect on biodiversity values;</i> <i>o. the location, operational and functional need and use of infrastructure;</i> <i>p. temporary or permanent nature of any adverse effect; and</i> <i>q. traffic and noise effects.</i>
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