

FLOOD RISK ASSESSMENT

234 RANGIURU ROAD, OTAKI

TO	Classic Developments	DATE	05 December 2025
PROJECT NAME	234 Rangiuru Road, Otaki	ENVELOPE REF	1678-02
ATTENTION	Will Dorset	FROM	Louis Freeland

1.0 INTRODUCTION

Envelope Engineering have been engaged to provide a Flood Risk Assessment for the proposed development at 234 Rangiuru Road, Otaki. This memo provides an assessment of flood risk at the proposed development site, as well as assessing the effects of flooding pre and post development on the site and surrounding areas. This memo should be read in conjunction with the Envelope Engineering Infrastructure Report.

2.0 EXISTING FLOOD RISK

Kapiti Coast District Council (KCDC) GIS Maps show the site is subject to ponding and residual ponding with a stream corridor directly north of the site. There is a residual overflow path at the southwest corner of the site. Figure 1 shows the existing mapped KCDC Flood Hazards.

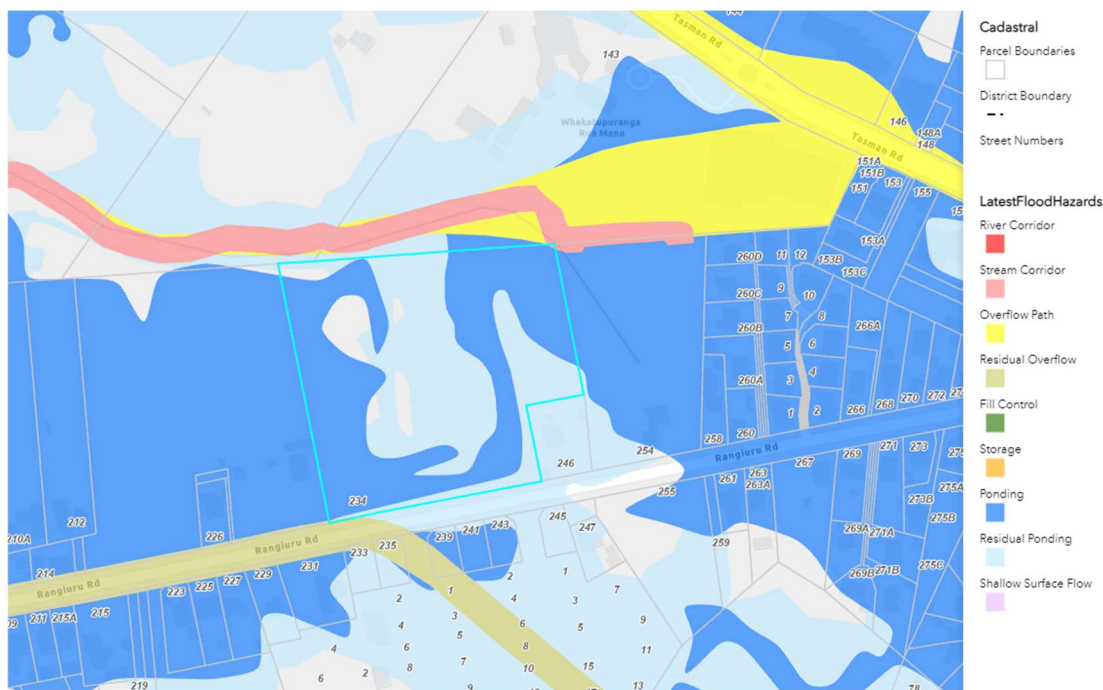


Figure 1. KCDC Flood Hazard Mapping.

KCDC are in the process of updating flood hazard mapping in the Otaki area, which encompasses the site. The new modelling (Appendix 1) takes into account a range of factors, including increased climate change and the effects of groundwater levels. The new KCDC model (Figure 2) results show that the risk of flooding to the site is significantly reduced from what the previous modelling predicted (Figure 1). The flooding is confined to isolated areas of the site and is of relatively shallow depth (typically <100 mm). There is approximately 70 m³ of storage volume on site. There are also



minor overland flow paths along the western boundary and in the northeast corner of the site that will need to be maintained.



Figure 2. Updated pre-development flood model results from KCDC Model.

Greater Wellington Regional Council were contacted to ascertain if the site was impacted by flooding from the Otaki River. GWRC have advised that the site is not within the flood hazard zoning for breach scenarios (Appendix 2).

3.0 POST DEVELOPMENT FLOOD RISK

KCDC have advised that due to the minor nature of flooding at the site shown in the revised KCDC Flood Model, post-development flood modelling is not required. However, the effects of the development as they relate to flooding are required to be assessed.

The development consists of earthworks, which have the potential to displace flood waters. To mitigate the effects of this, offset volume is provided within the proposed wetland and attenuation pond area. These areas have been over-sized (from an attenuation perspective) and have sufficient volume to provide the required 70 m³ of flood offsetting. Overland flow paths have been provided and/or maintained to ensure that flood waters are conveyed to this area.



The existing flow paths along the western boundary and northeast corner of the site are being maintained.

KCDC have recommended a Recommended Building Level of 300 mm for this area. The areas of the site adjacent to the overland flow paths along the west boundary and east boundary of the site have been raised above the existing ground level to allow for this.

Provided that the recommendations in this report are followed, the effects of flooding at the site can be mitigated and the off-site effects are less than minor.

4.0 CONCLUSION

Envelope Engineering have been engaged to provide a Flood Risk Assessment for the proposed development at 234 Rangiuru Road, Otaki. KCDC are in the process of completing revised flood modelling for Otaki, which has resulted in a reduction in the flood hazard at the site. The effects of flooding on the site and on adjacent areas can be mitigated by way of maintaining overland flow paths, providing offset storage volume and adequate freeboard. Provided the recommendations of this memo are followed, the effects of flooding at the site can be mitigated and the on and off-site effects are less than minor.



Louis Freeland

Senior Civil Engineer









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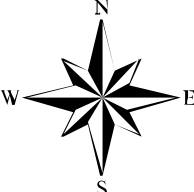
PROJECT: 234 RANGIURU ROAD		TITLE: PRE DEVELOPMENT FLOODING (100YR + CC)	
DESIGNED: LB	CHECK: KD	DRAWN: LB	DATE: 6/03/2024
STATUS: RESOURCE CONSENT		REVISION: R1	
PROJECT No: 1678-02		DRAWING No: 01	
NZGD 2000 New Zealand Transverse Mercator			

Legend

 Site Boundary

Depth (m)

-  <0.010
-  0.010 - 0.050
-  0.05 - 0.100
-  0.100 - 0.120
-  > 0.120



SCALE 1: 1,000



0 0.02 0.04 Km



From: Kyle Dirse
Sent: Friday, 1 December 2023 2:02 pm
To: Louis Freeland
Subject: FW: Request for GWRC Flood Model results
Attachments: [Ōtaki Hydraulic Modelling Report - Final \[1312795\].PDF](#)

KYLE DIRSE

DIRECTOR / SENIOR CIVIL ENGINEER

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 **ENVELOPE**



Happy Holidays

We're off on summer vacay from 1
22 December, returning on Monday 8

From: Kirsty Duff <Kirsty.Duff@gw.govt.nz>
Sent: Friday, December 1, 2023 12:16 PM
To: Kyle Dirse <kyle.dirse@envelope-eng.co.nz>
Subject: FW: Request for GWRC Flood Model results

Kia ora Kyle

Please find attached the flood hazard modelling for the Ōtaki River. I have checked the 2D results for the breach scenarios and this location is not within the flood hazard for the breaches. The flooding in this area is likely from surface water/stormwater flooding and its interaction with Rangiuru Stream. I recommend contacting Kāpiti Coast District Council to understand the stormwater flood hazard in this location.

Ngā mihi
Kirsty



Kirsty Duff

Kaipūkaha | Senior Engineer – Water Knowledge

Greater Wellington Te Pane Matua Taiao

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100 Cuba St, Te Aro, Wellington 6011

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From: Kyle Dirse <kyle.dirse@envelope-eng.co.nz>

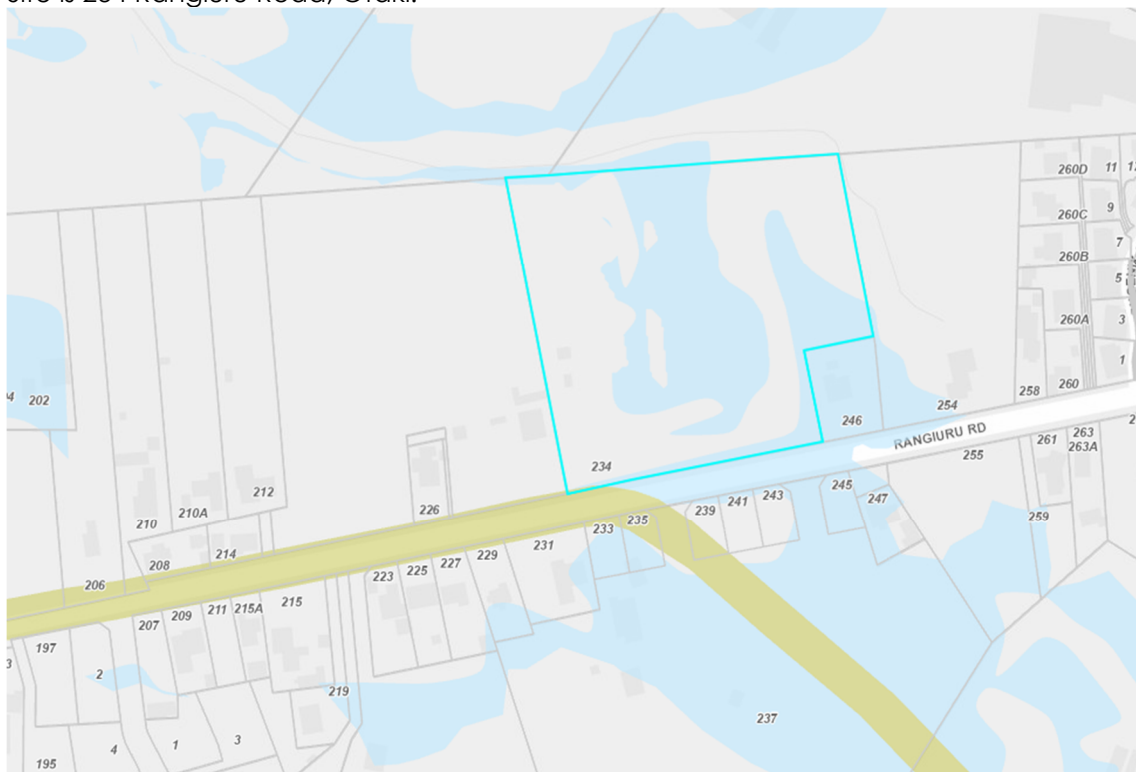
Sent: Tuesday, November 28, 2023 12:19 PM

To: Kirsty Duff <Kirsty.Duff@gw.govt.nz>

Subject: RE: Request for GWRC Flood Model results

Hi Kristy,

Just need the report which details those scenarios as well as the updated flood hazard mapping post-construction of the stop bank.\nSite is 234 Rangioru Road, Otaki.



I don't think we need the model at this stage.

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From: Kirsty Duff <Kirsty.Duff@gw.govt.nz>

Sent: Tuesday, November 28, 2023 10:12 AM

To: Kyle Dirse <kyle.dirse@envelope-eng.co.nz>

Subject: RE: Request for GWRC Flood Model results

Kia ora Kyle

Your request has been passed on to me.

Would you be able to provide a bit more context to your request. What format you are looking for these breach runs? Is there a specific location you are looking for? Or do you want the MIKE modelling files?

Ngā mihi

Kirsty



Kirsty Duff

Kaipūkaha | Senior Engineer – Water Knowledge

Greater Wellington Te Pane Matua Taiao

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From: Christina Schierlitz <Christina.Schierlitz@gw.govt.nz>

Sent: Friday, November 24, 2023 3:00:58 PM

To: James Flanagan <James.Flanagan@gw.govt.nz>

Subject: FW: Request for GWRC Flood Model results

Kia ora James

Would you be able to help with the query below or else point Kyle in the right direction?

Ngā mihi
Christina



Christina Schierlitz

Kaitohutohu Matua | Senior Resource Advisor, Consents and Compliance

Greater Wellington Te Pane Matua Taiao

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100 Cuba St, Te Aro, Wellington 6011

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Please note that on Tuesdays and Thursdays I only work from 9am to 1pm

From: Kyle Dirse <kyle.dirse@envelope-eng.co.nz>

Sent: Friday, November 24, 2023 2:59 PM

To: Christina Schierlitz <Christina.Schierlitz@gw.govt.nz>

Subject: FW: GWRC Flood Model

Hi Cristina,

Can you please provide the Greater Wellington Regional Council's (GWRC's) 2012 Ōtaki River Model results for the Chrystall's Bend and T-breach scenarios.

Regards,

KYLE DIRSE

DIRECTOR / SENIOR CIVIL ENGINEER

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