Jacob Paget

From: Michael Campbell s 9(2)(a)
Sent: Monday, 13 March 2023 3:39 pm
To: Samantha Maxwell; Jess Hollis; Fast Track Consenting
Cc: Bill Ritchie; Marcus; s 9(2)(a) z
Subject: 31 Ngongotahā Road - Flooding and Activity Information
Attachments: 31 Ngongotaha Flooding Memo.pdf

Hi Sam and Jess,

We refer to our discussions on Friday regarding the above proposal.

1. **Stormwater –** Please refer to the **attached** memo and the Link to the additional flood modelling work. This information has been shared with Rotorua Lakes Council and The Bay of Plenty Regional Council. Ngongotahā Flooding Information

2. **Activity Status.** - We note that resource consent is required as a **non-complying activity**. This is due to the proposed lots sizes for the Stage 1 consent area being smaller than the complying allowances of the underlying zone. In addition, because not all lots meet the particular zone standard, being that all sites within the subdivision shall have an area with a foundation suitable for the intended future use, which will be free from inundation, erosion, subsidence and slippage, the proposal is also considered to be a **non-complying activity**.

3. **Discharge Permit** - It is anticipated that the proposal will trigger the requirement for a discharge permitted under rules Discharges to Water and Land - DW Discharges to Water and Land This relates to DW R25 (Rule 35) Restricted Discretionary - Remediation or Disturbance of Contaminated Land The: 1 Discharge of contaminants to water, or to land, or to land in circumstances which may result in the contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water, resulting from the remediation or other disturbance of a contaminated site; Or 2 Disturbance of a contaminated site; that is not permitted by DW R24 is a **restricted discretionary activity**.

   In terms of Stormwater, there are rules that seek to allow point source discharges of clean stormwater to surface water, and to land where the discharge flows over land to surface water. The rule applies to discharges of stormwater from roofs, roads outside urban areas, and point source discharges of rural stormwater. Such discharges present a low risk to the environment and would generally not be covered by a Comprehensive Catchment Discharge Consent. Any discharge of stormwater that does not comply with all conditions of DW R9 requires a resource consent. Where the discharge of stormwater to surface water does not comply with DW R20 and is not a **restricted discretionary activity** under DW R21, it is a **discretionary activity** under DW R8. The final details of the stormwater discharge will be confirmed at Stage 2, but it is considered prudent to flag the stormwater discharge as a consenting requirement for the time being pending detailed design.

I trust this addresses your queries.

Kind regards | Ngā mihi nui

Michael Campbell | Director | BREP (Hons) | MNZPI

Campbell Brown Planning Limited

Level 2, 46 Brown Street, Ponsonby | PO Box 147001, Ponsonby, Auckland 1144

s 9(2)(a) | DDI - Ph 09 394 1696| Ph 09 378 4936 | s 9(2)(a)

www.campbellbrown.co.nz

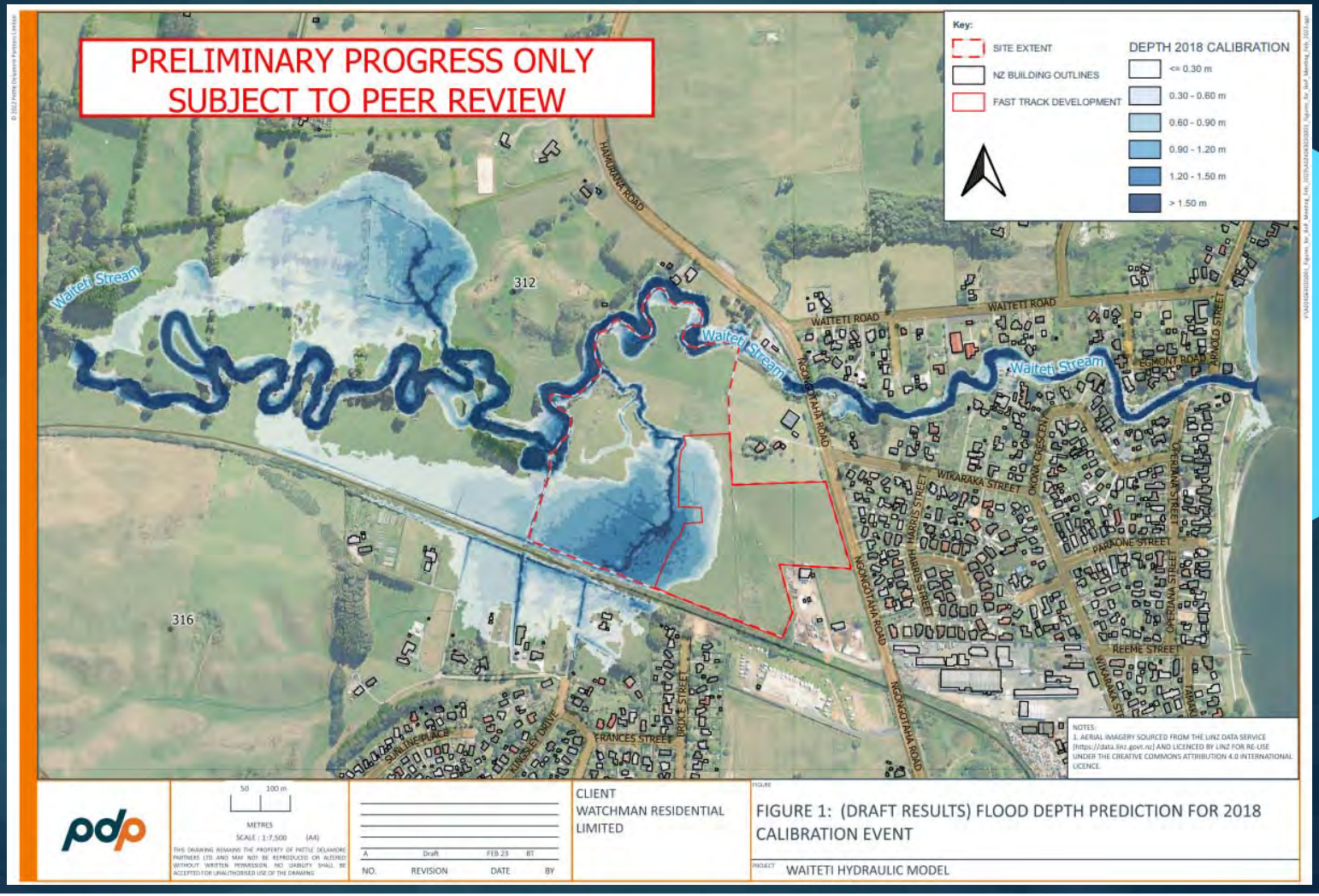
31 Ngongotahā Road Fast Track Application – Flood Modelling Progress for BOPRC

WATCHMAN RESIDENTIAL LTD

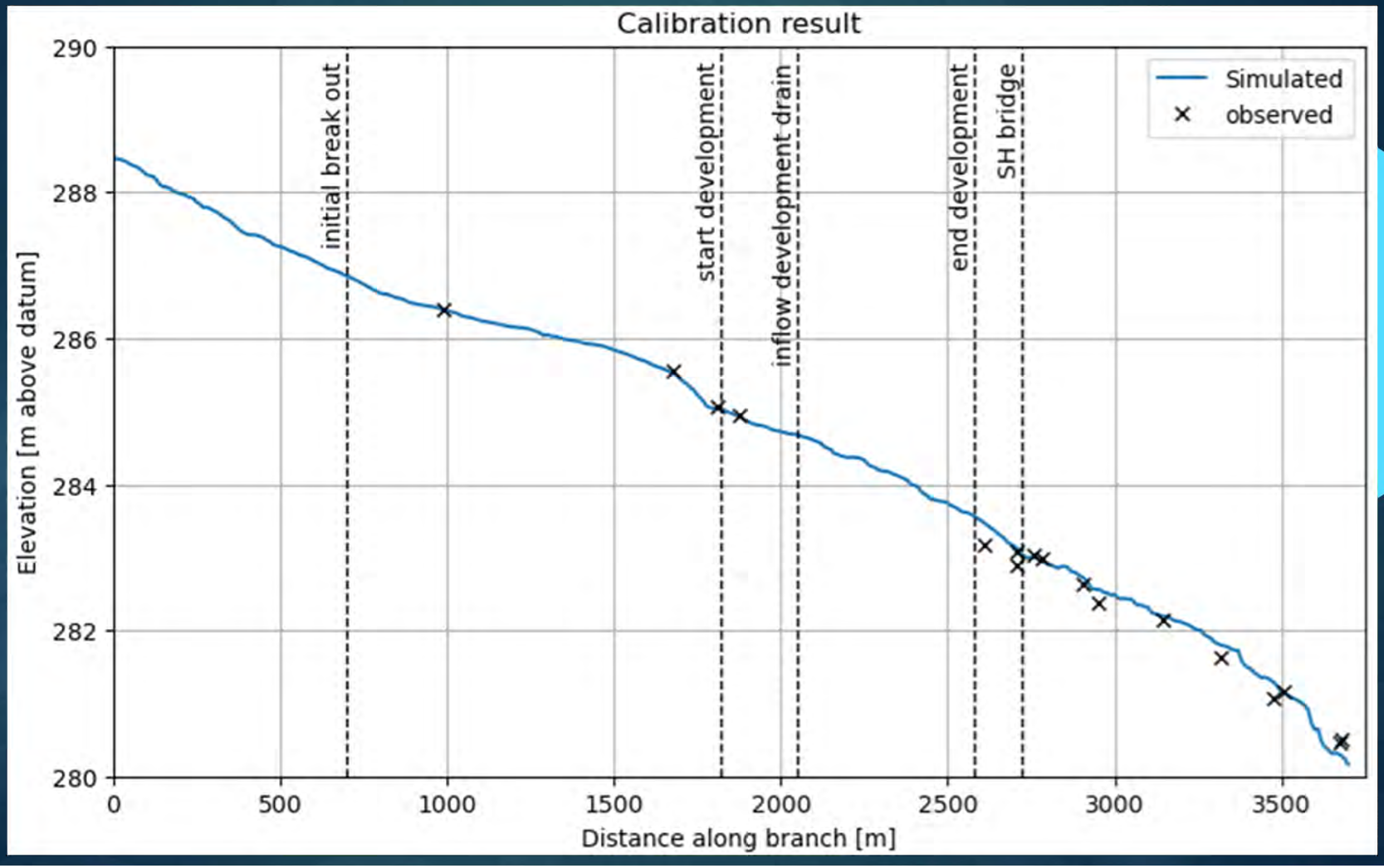
CONFIDENTIAL - COMMERCIALLY SENSITIVE

solutions for your environment

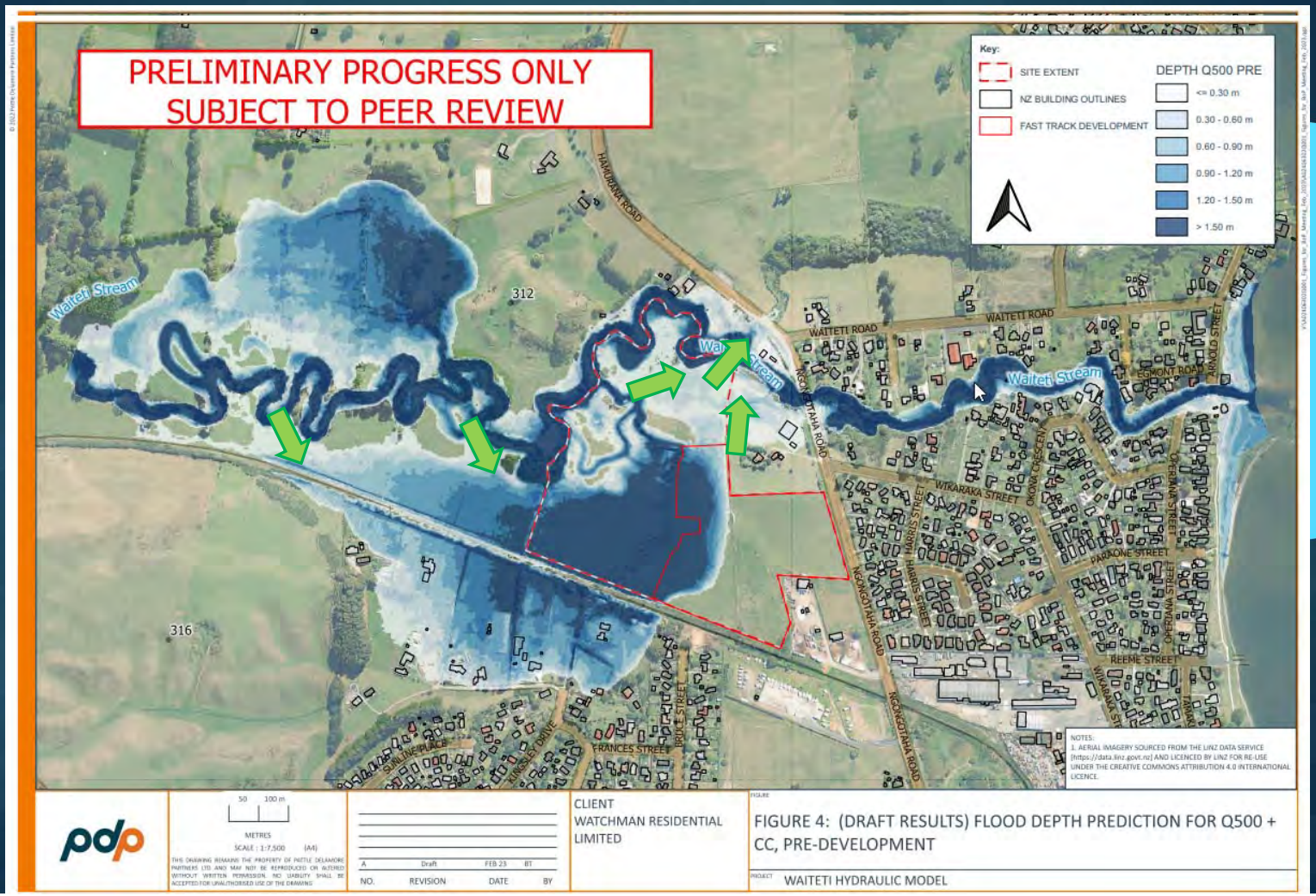
2018 Flood Event



Calibration to 2018 event



Pre development: Effects of climate change



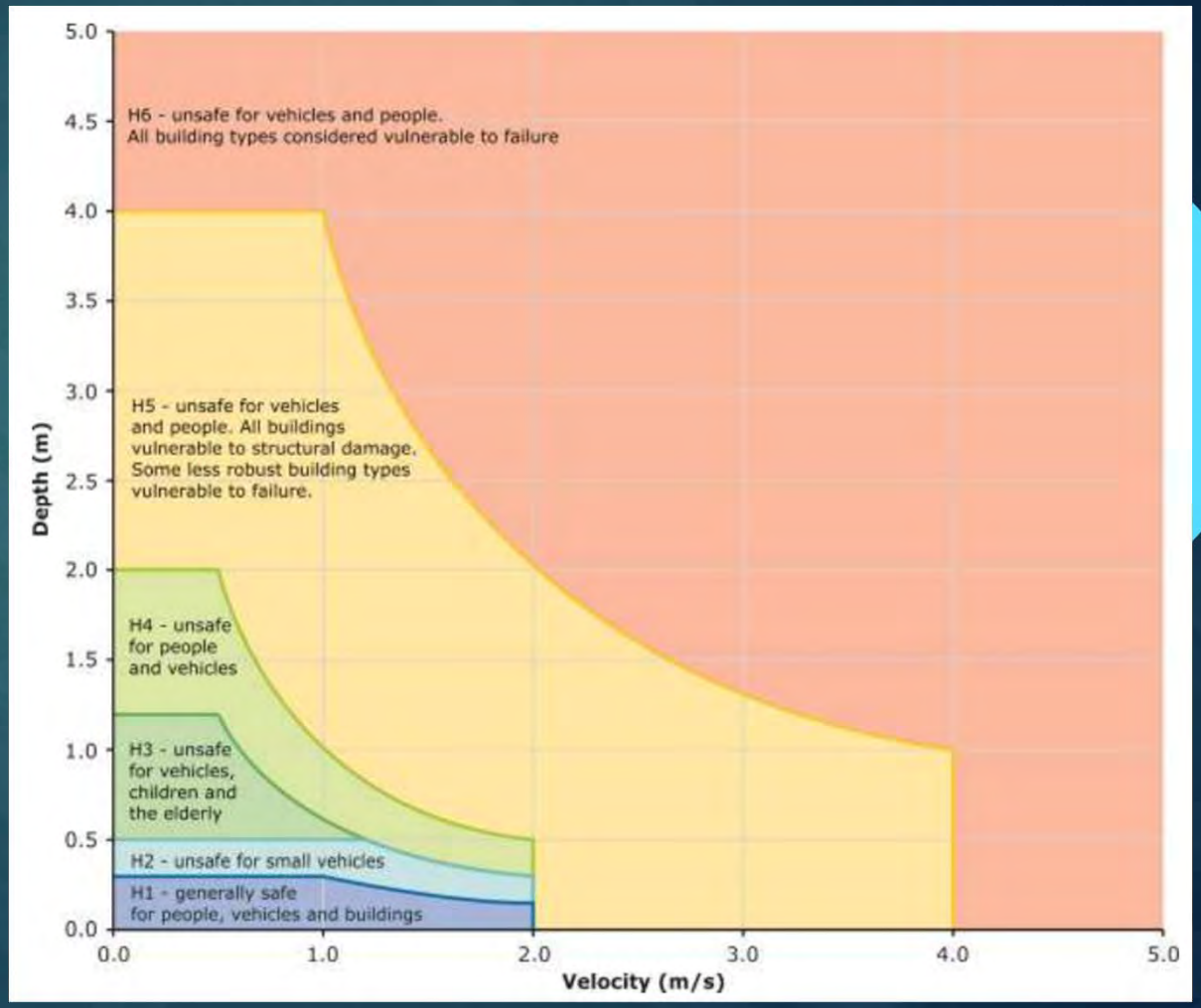
Risk Assessment: RPS Policy NH 9b

Risk Screening Matrix

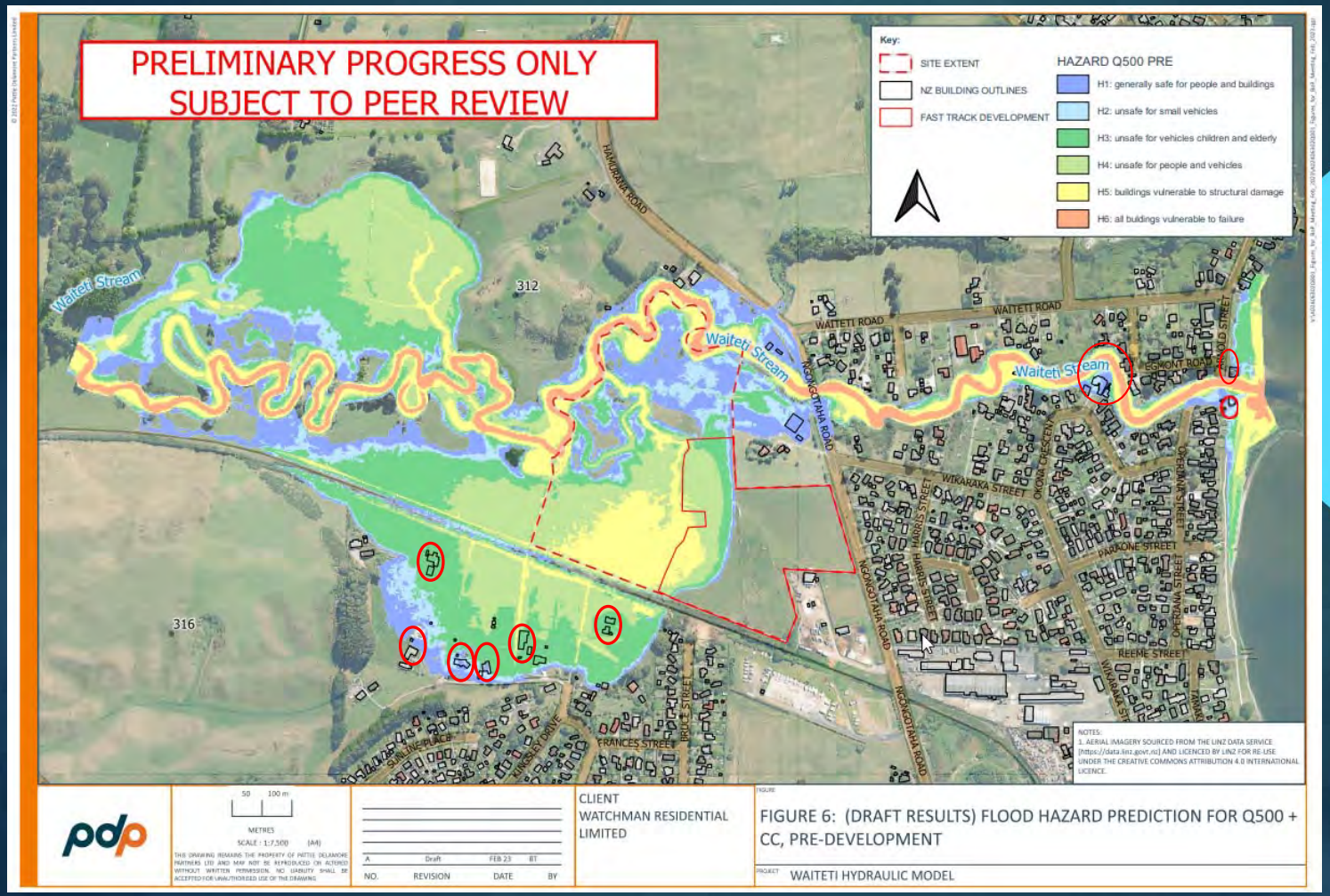
Likelihood[12] (AEP %)	Insignificant	Minor	Moderate	Major	Catastrophic
	Consequences				
≥2	Low	Medium	Medium	High	High
<2–1	Low	Low	Medium	Medium	High
<1–0.1	Low	Low	Medium	Medium	High
<0.1–0.04	Low	Low	Low	Low	Medium
<0.04	Low	Low	Low	Low	Medium

Key

- High risk
- Medium risk
- Low risk



Pre development: Flood Hazard

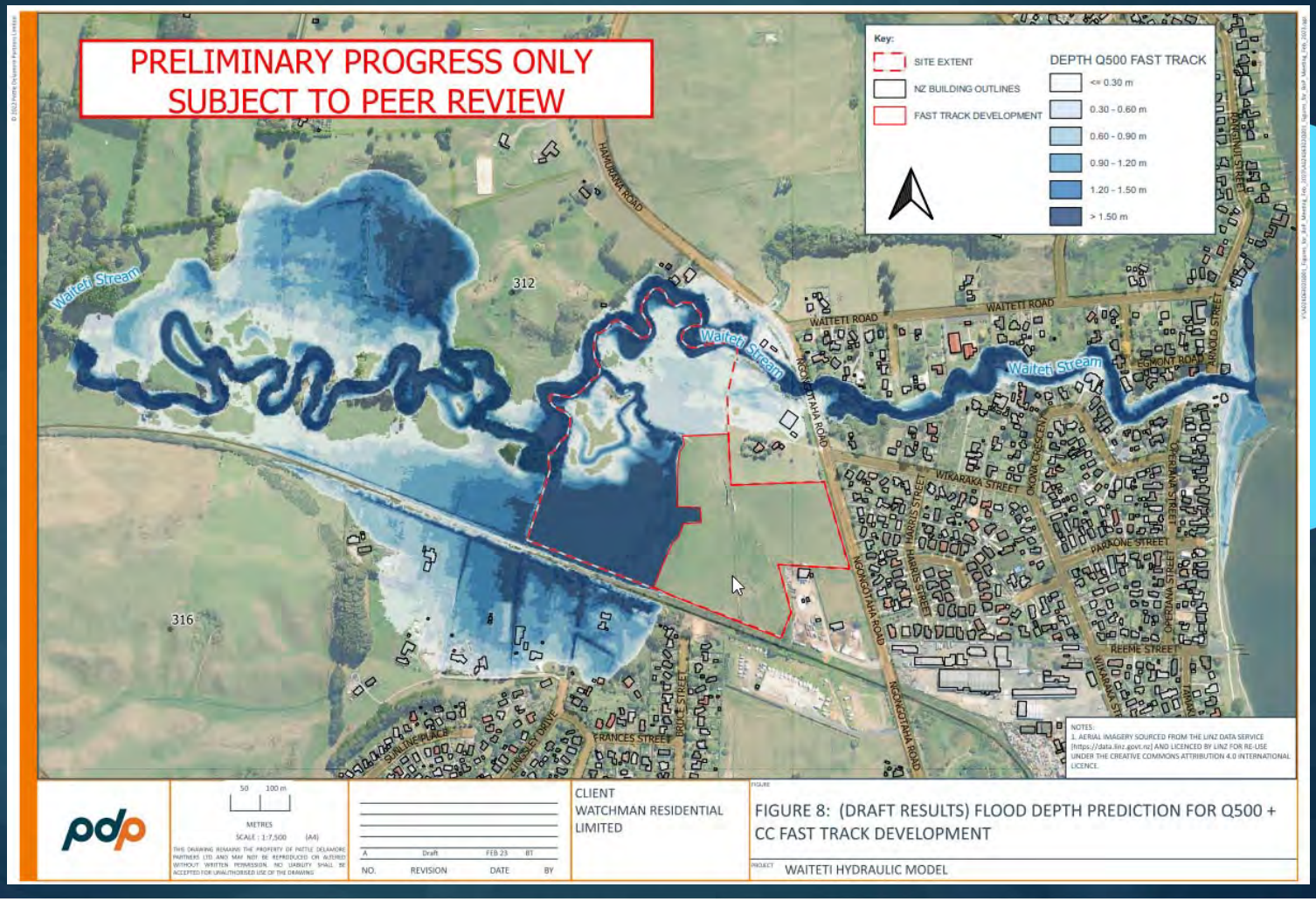


HAZARD CLASSIFICATION	Q100 PRE DEVELOPMENT
H1: generally safe for people and buildings	4 dwellings
H2: unsafe for small vehicles	1
H3: unsafe for vehicles children and elderly	6
H4: unsafe for people and vehicles	0
H5: buildings vulnerable to structural damage	0
H6: all buildings vulnerable to failure	0

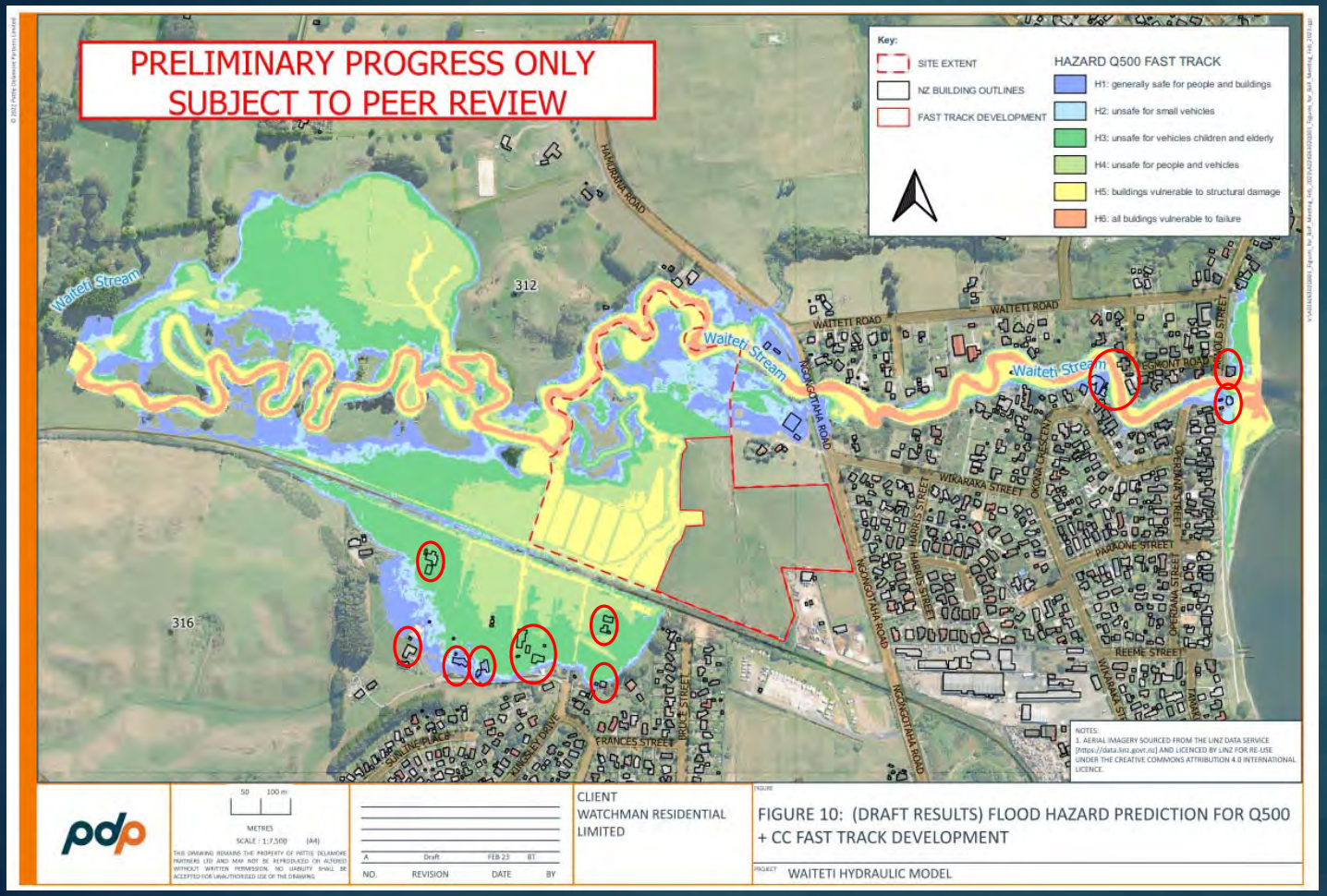
HAZARD CLASSIFICATION	Q500 PRE DEVELOPMENT
H1: generally safe for people and buildings	1 dwelling
H2: unsafe for small vehicles	4
H3: unsafe for vehicles children and elderly	6
H4: unsafe for people and vehicles	1
H5: buildings vulnerable to structural damage	0
H6: all buildings vulnerable to failure	0

Proposed Fast Track Development Layout

Fast Track: Floodplain depths



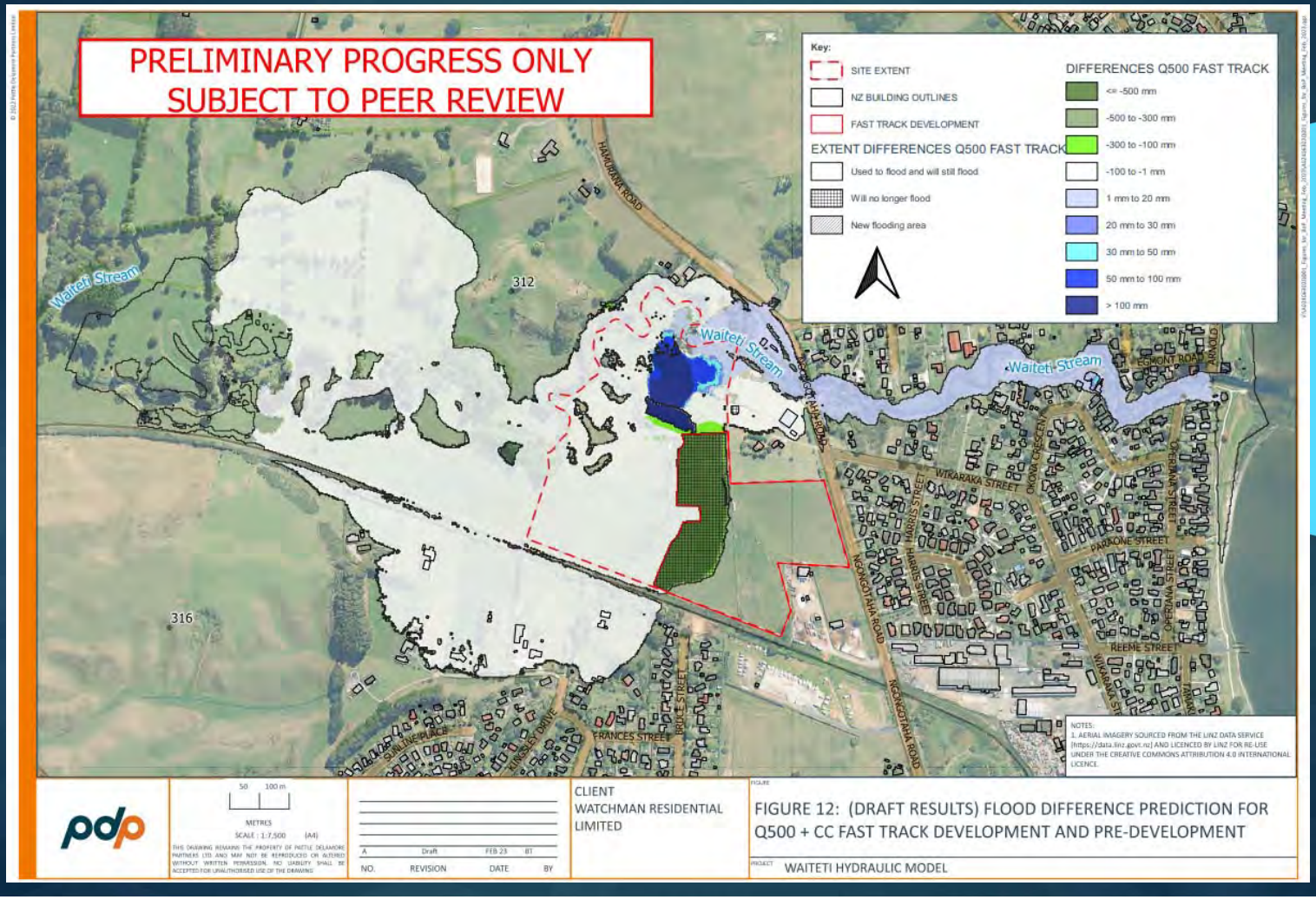
Fast track: Hazard effects



HAZARD CLASSIFICATION	Q100 PRE DEVELOPMENT	Q100 FAST TRACK
H1: generally safe for people and buildings	4 dwellings	3
H2: unsafe for small vehicles	1	1
H3: unsafe for vehicles children and elderly	6	6
H4: unsafe for people and vehicles	0	0
H5: buildings vulnerable to structural damage	0	0
H6: all buldings vulnerable to failure	0	0

HAZARD CLASSIFICATION	Q500 PRE DEVELOPMENT	Q500 FAST TRACK
H1: generally safe for people and buildings	1 dwelling	2
H2: unsafe for small vehicles	4	3
H3: unsafe for vehicles children and elderly	6	6
H4: unsafe for people and vehicles	1	1
H5: buildings vulnerable to structural damage	0	0
H6: all buldings vulnerable to failure	0	0

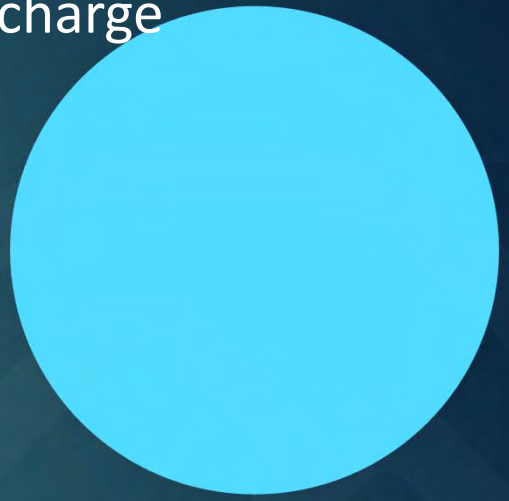
Fast track: Flood levels differences



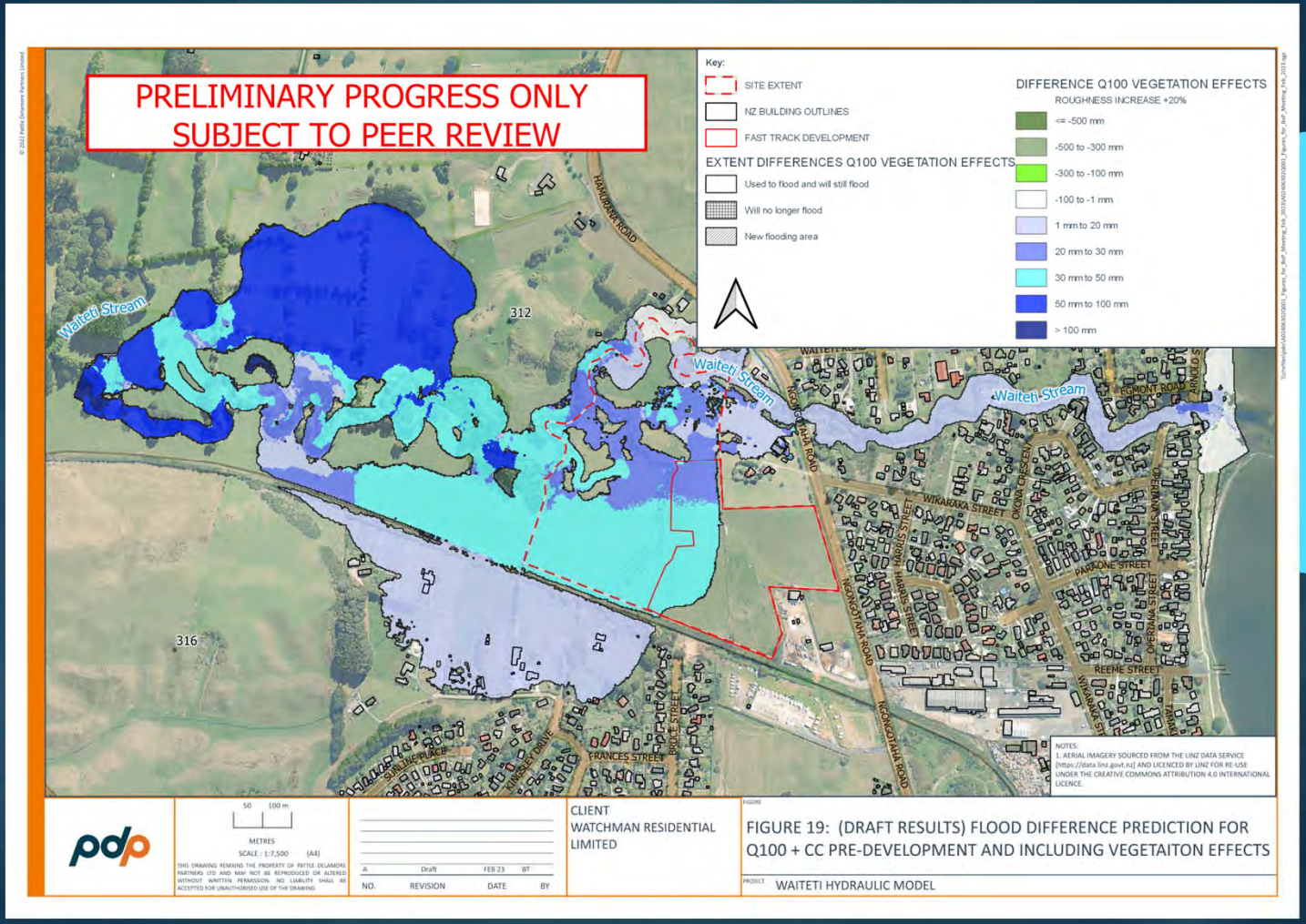
Previous Assessment (submitted to BoP 2021)

Sensitivities

- Effect of Floodplain earthworks vs increase in discharge
- Effect of flood timing – steady state flood flows
- Free board Requirements
- Extreme Event Consequences



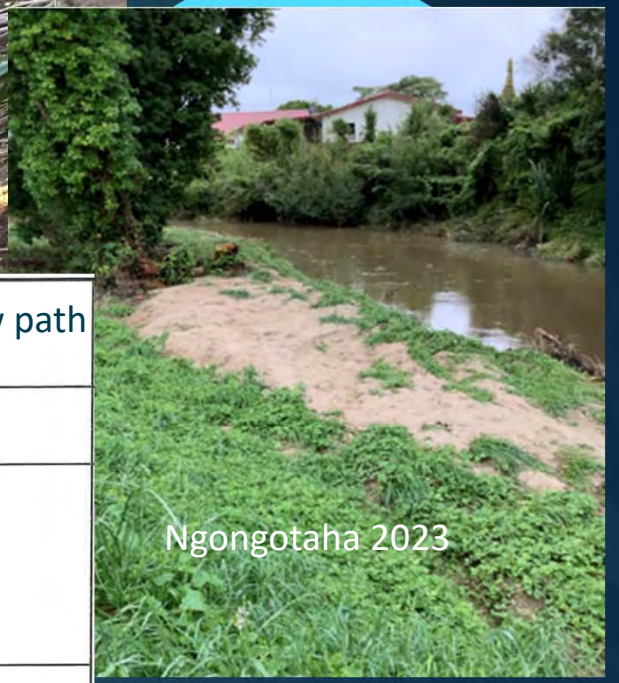
Vegetation Effects



Summary

- Hazard fully mitigated on development site
- No increase in flooding off site
- No increase in Hazard clarification off site
- Decreases / less than minor increase in flood levels
- Consistent with policy NH 9B?

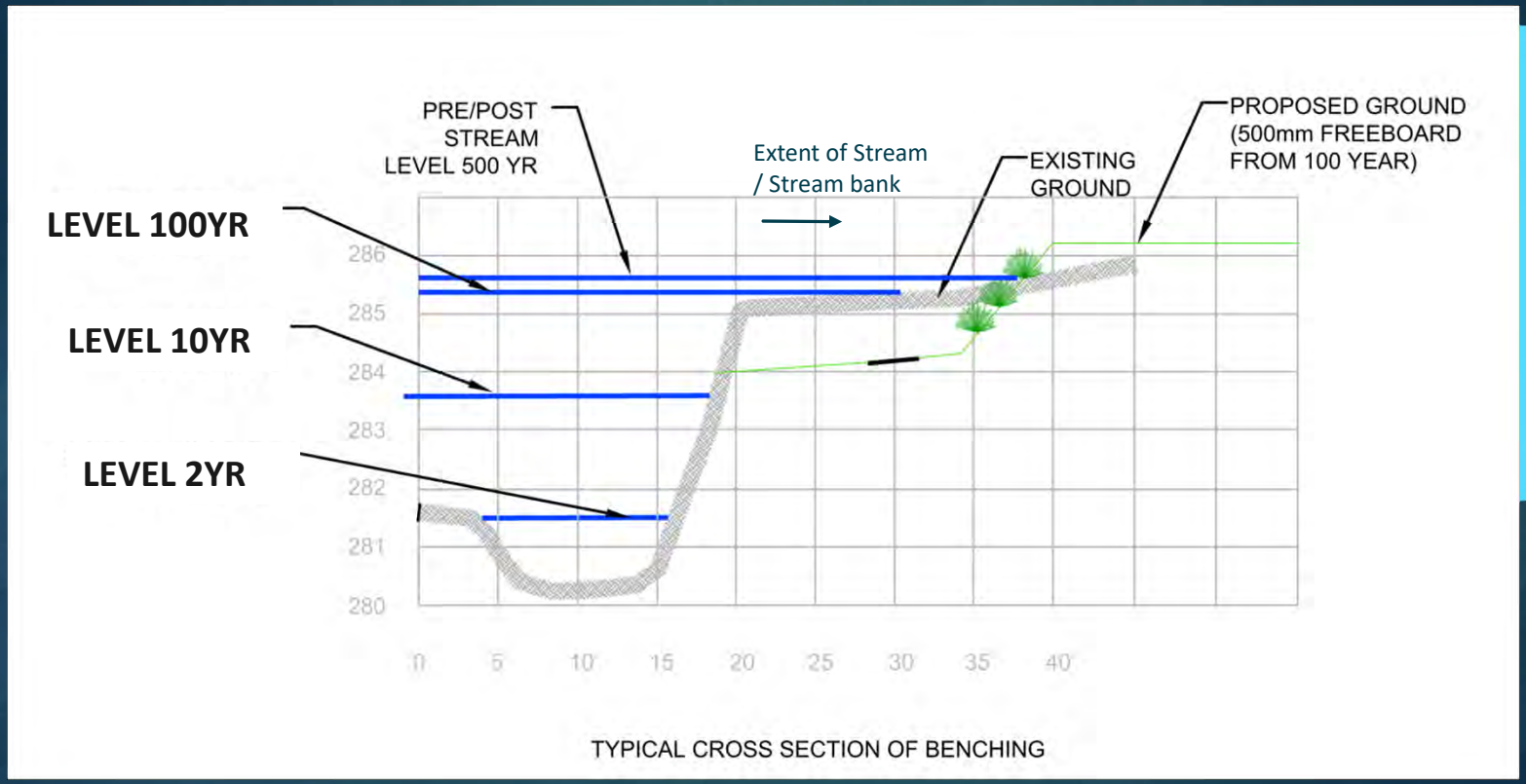
Sedimentation



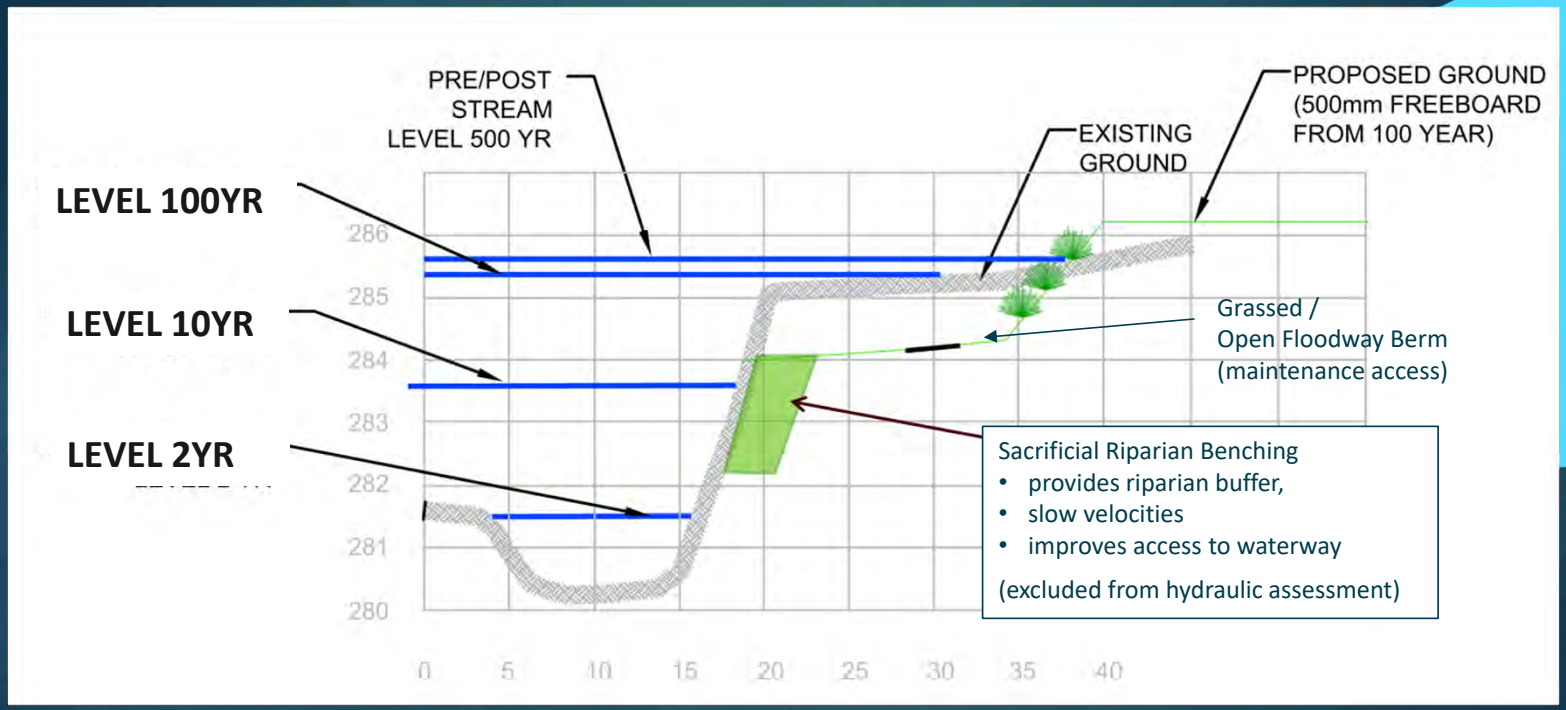
Wetand soils in overflow path

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS
0.0m			TOPSOIL.
0.5m	▼		CLAY, creamy light brown, medium plastic, very moist.
1.0m			Organic material
1.5m			CLAY, medium plastic, green, wet.
			CLAY, grey light brown, medium plastic, saturated.

Floodway Provisions / Mitigation Stage 2

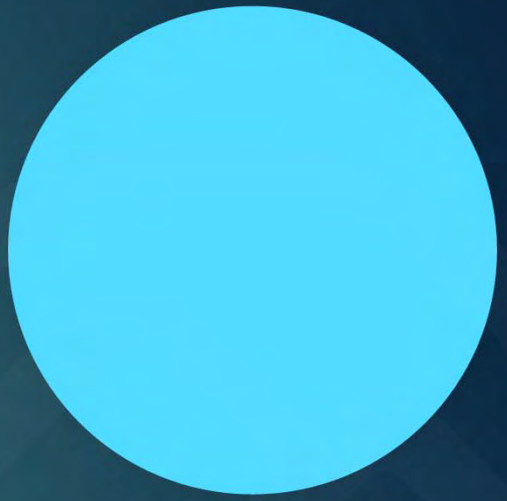


Floodway provisions

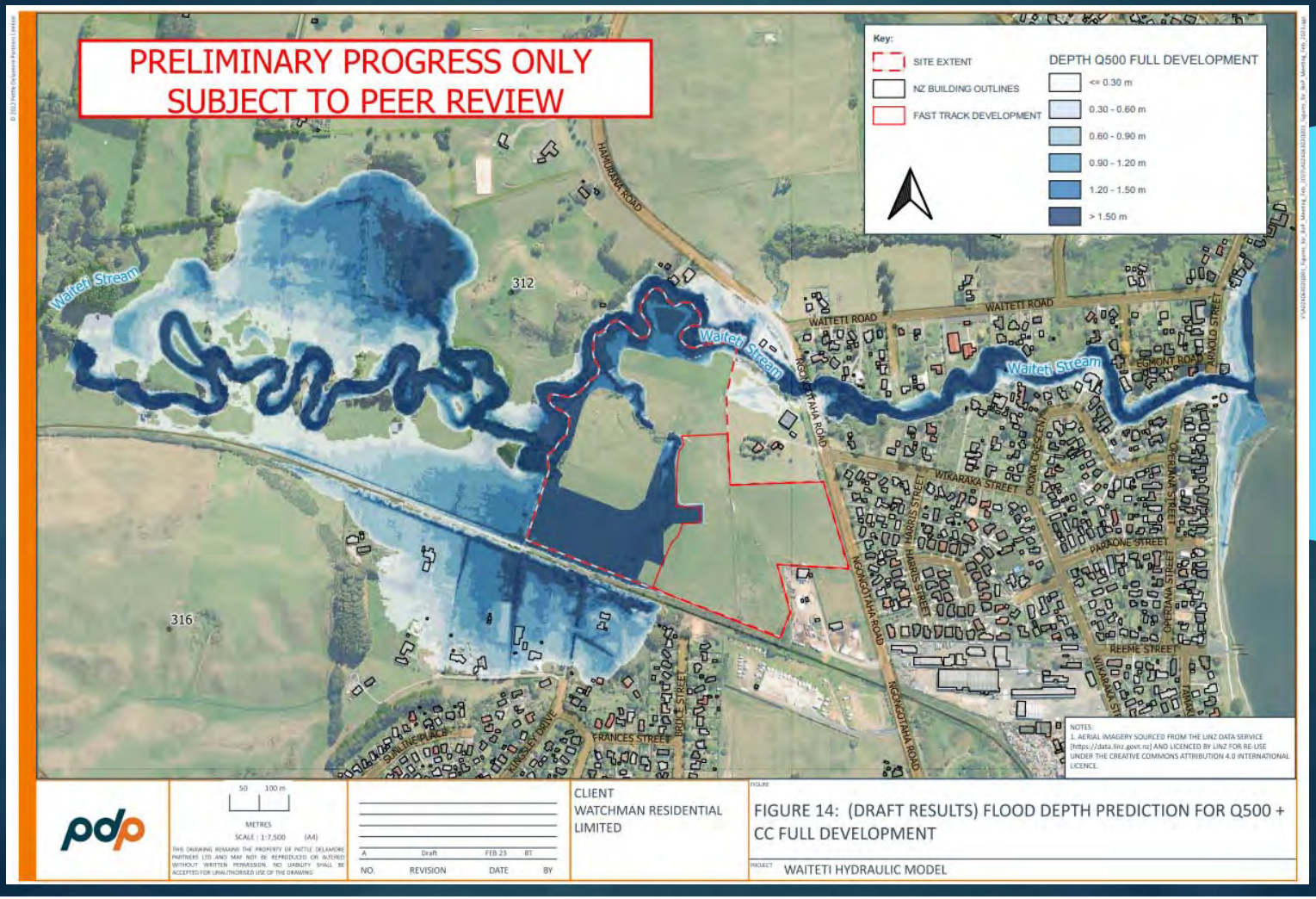


Next steps

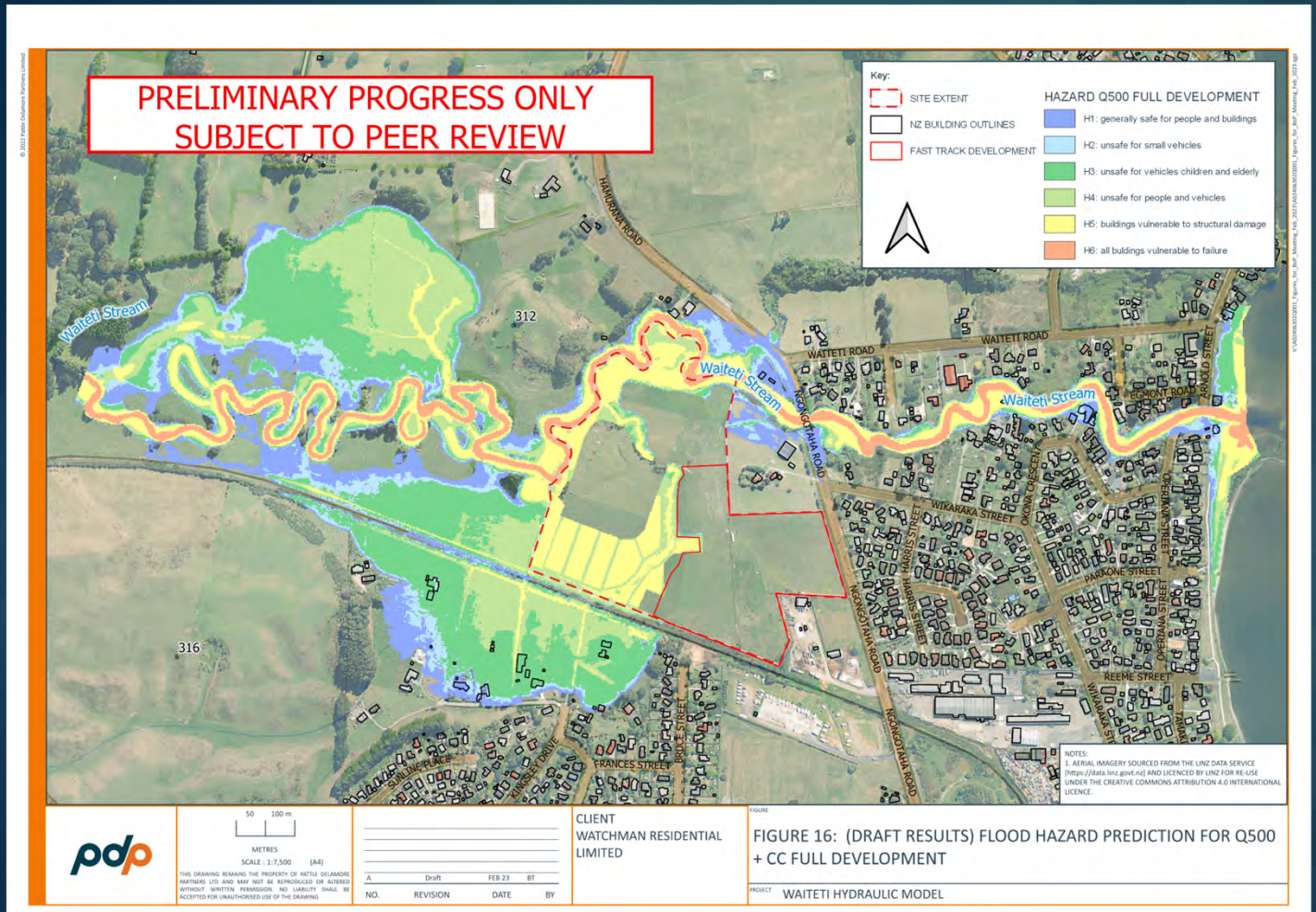
- Any additional comments / suggestions from BOPRC
- Consideration of wetland sedimentation
- Inclusion of Lifelines effects in Risk assessment
- Sensitivity analyses
- Cumulative effects (upstream development)
- Quantify impact change in flood levels have on freeboard
- Peer review (Laddie Kuta E2 or otherwise agreed)
- Formal submission of assessment to BoPRC



Full development: Floodplain depths



Full development: Flood hazard effects



HAZARD CLASSIFICATION	Q100 PRE DEVELOPMENT	Q100 FULL DEVELOPMENT
H1: generally safe for people and buildings	4	3
H2: unsafe for small vehicles	1	2
H3: unsafe for vehicles children and elderly	6	5
H4: unsafe for people and vehicles	0	0
H5: buildings vulnerable to structural damage	0	0
H6: all buildings vulnerable to failure	0	0

HAZARD CLASSIFICATION	Q500 PRE DEVELOPMENT	Q500 FULL DEVELOPMENT
H1: generally safe for people and buildings	1	3
H2: unsafe for small vehicles	4	2
H3: unsafe for vehicles children and elderly	6	6
H4: unsafe for people and vehicles	1	1
H5: buildings vulnerable to structural damage	0	0
H6: all buildings vulnerable to failure	0	0

Full development: Flood differences