From:	Sven Exeter
To:	Jo Michalakis
Cc:	Dean Foote
Subject:	RE: For your Approval- Te Karaka Stopbank Upgrade Project
Date:	Tuesday, 30 June 2026 3:44:00 pm
Attachments:	image001.png image002.png image003.png ATT00001.png ATT00002.png

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Hi Jo

Thanks for this.

The part in bold has now been closed out as per the email this morning.

Cheers

SVEN EXETER

SENIOR ASSOCIATE - PLANNING AND SUSTAINABILITY

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Urban, Environmental & Strategic Planning

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From: Jo Michalakis <jmichalakis@align.net.nz>
Sent: Tuesday, 30 June 2026 3:05 pm
To: Sven Exeter <Sven@stradegy.co.nz>
Subject: FW: For your Approval- Te Karaka Stopbank Upgrade Project

Hi Sven

I now have the comments – just as I sent my last email.

Item 1, you have provided me with some information this morning which I have passed on but not heard back. Is there anything you want to add? I'll call you now.

So items 2 and 3 do not appear to need anything more.

Ngā mihi

Jo Michalakis

National Manager – Planning

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Align

From: Grinter, Jessica <Jessica.Grinter@stantec.com>
Sent: Tuesday, 30 June 2026 11:05 am
To: Jo Michalakis <jmichalakis@align.net.nz>
Cc: Hadad, Cristian <Cristian.Hadad@stantec.com>; Resource Consents Admin Team <rcadmin@gdc.govt.nz>
Subject: RE: For your Approval- Te Karaka Stopbank Upgrade Project

Hi Jo

Below are Cristian's comments on the three issues discussed in the meeting with T&T on Friday 26 June.

1. Rationality behind design flow definition (Issue 1 from the response letter): T&T indicated they have received this input from GDC and were not involved in the definition and decision behind the design flood event. It is still confusing on how the design flow was selected as even in the response letter they present the first bullet point as "1 in 100 event + climate change allowance" which T&T has confirmed was not the criteria. The criteria informed in the meeting was "Cyclone Bola + 25% which was approximately equivalent to 1 in 100 + climate change by 2017" and not the opposite. In the response they have mentioned this is now a 1 in 100 present day scenario (as per 2026) when adding the Cyclone Gabrielle event to the frequency curve without any supporting document/calculation. I insisted in being clear on how the design flow was selected (i.e. Cyclone Bola + 25%) and to clearly indicate and document what's the AEP of the design flood based on the most updated data. **My final comment would be to clearly indicate the design flow was "Cyclone Bola + 25%" and show the equivalent to present day AEP so we can clearly understand what's the AEP of the design event including climate change allowance for the project. Not sure if this can be included as a request for the detail design stage.**

The design event, return periods, hydrology basis, hydrological inputs, freeboard and residual risk were outlined in the resource consent application (Section 4.2.1) and Consequential Flood Risk Assessment as summarized below:

- 1% AEP (100-year ARI) analysis undertaken in 2017 including climate change assumptions
- The design event was the equivalent of Cyclone Bola + 25% which is 5,625 cumecs (m^3/s)
- Freeboard of 600mm
- Residual risk – see section 6.9 of the resource consent application

The adopted design event of 5,625 cumecs was derived in 2017 using Intergovernmental Panel on Climate Change guidance available at the time, incorporating projected climate change effects to 2090 (approximately 2.1°C warming). This flow was applied as the design standard for the Waipaoa Stopbank Flood Control Scheme (WRFCS) located several kilometres downstream of Te Karaka. The 5,625 cumec event is equivalent to a current 1% AEP event based on current flood frequency analysis with Cyclone Gabrielle as a data point.

Significant recent historic events (e.g Bola, 1988 & Gabrielle, 2023) have had their peak flow estimated at 4,500 and 4,200 cumec respectively. These significant event assist designers with informing and validating the design flow of 5,625 cumec which is 25% larger than any flood event received in the Waipaoa catchment in the last 100yrs. The reference to historical events was only included as they were used for the flood frequency analysis.

2. Bridge Scour: T&T indicated they are currently undertaking detailed design and these aspects will be covered as part of the design. Initially, one bridge is in contact with rock and the other may have piers longer than 20 m.
3. Consequence assessment on opposite bank: T&T have confirmed landowners located at the opposite bank of the river are included in the consequence assessment estimation and as indicated in the response letter, the applicant has consulted all parties (Issue 5 from response letter)

Ngā mihi

Jessica Grinter, CEnvP-IA, MIWM, BSc
Senior Principal Environmental Scientist

Stantec

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