



11 February 2025

Dugan Weitz  
Hawke's Bay Regional Council

Dear Dugan,

## Proposal for Peer Review of TUFLOW Hydraulic Model

Thank you for the opportunity to present our proposal to undertake a Peer Review of the Okawa Stream TUFLOW hydraulic model which has been prepared by others, in relation to flood protection works in the area.

### Introduction

WSP understands that due to recent flood events and subsequent reviews of stopbank schemes, Hawke's Bay Regional Council (HBRC) is considering flood protection works in the Hastings District area. As part of this work, a TUFLOW hydraulic model for Okawa Stream has been developed by another consultant, Tonkin + Taylor. HBRC would like WSP to carry out a Peer Review of this model.

### Scope of Work and Methodology

#### Peer Review of TUFLOW Hydraulic Model

WSP will undertake a Peer Review of the Tonkin + Taylor TUFLOW Hydraulic Model. The review will include:

- Review 2D schematisation:
  - Roughness
  - Structures (1 bridge)
  - Terrain and modifications
  - Boundary conditions
  - Incorporation of options into model
  - Results and mass balance sense check
  - Hydrology review

We have allowed for 1 round of peer review comments and 1 round of comment closeout following response from Tonkin + Taylor.

Following comment close out, WSP will provide a short letter report of the review findings.



### Key Dates and Deliverables

The peer review comments will be issued to Tonkin + Taylor within three weeks following acceptance of fee offer and receipt of all required information outlined below.

The delivery of the letter report will be reliant upon a timely response from Tonkin + Taylor however will be issued within one week of receipt of response to comments.

### Fees and Personnel

Our proposed team is set out in the table below. Anna Kempt will be the Project Manager and will be your main point of contact. Nicky Smith will be overseeing the work as Project Director.

Bryce Warner is our Senior Water Resources Engineer and is responsible for conducting the peer review. Bryce will be supported by Mark Groves as the technical reviewer for the work.

Resource	Position	Location	Role Summary
Mark Groves	Technical Principal - Stormwater & Flood Risk Management	Christchurch	Technical Reviewer
Bryce Warner	Senior Water Resources Engineer	Christchurch	Project Engineer
Anna Kempt	Senior Project Manager	Nelson	Project Manager
Nicky Smith	Major Projects Director	Napier	Project Director

We propose to carry this work out as a fixed fee proposal. The fee for this work is presented below. All fees in this proposal exclude GST.

Fee Estimate	Estimated Fees (excluding GST)
Peer Review of TUFLOW Hydraulic Model	\$13,860.00
<b>Total Fees</b>	<b>\$13,860.00</b>

### Conditions of Engagement

WSP's proposal is subject to the terms and conditions of the ACENZ Short Form Agreement, December 2017 (SFA) with WSP's standard amendments. The services will commence once both parties have signed the contract. A copy of the proposed contract is appended to this proposal.



## Assumptions and Clarifications

In preparing this Proposal and calculating the Fees, WSP has relied on the following assumptions and qualifications:

- HBRC will provide the model and all associated files required to run the model for the Peer Review.
- WSP will not make any changes to the model.
- No PS2 will be provided as part of the Peer Review as the review is limited to the model and does not include review of any design.
- No allowance for client meetings or formal progress reporting due to the short deliverable timeframes. Any meetings will be virtual.
- Our peer review is desktop only, no site visit will be carried out as part of this work.
- This proposal is limited to Peer Review only and excludes any work related to the scour assessment of Broughton Bridge HDC 234, or other flood protection works.
- Allowance has been made to review hydrology as part of the peer review process.
- Allowance has been made to comment on whether the cost/benefits of 2E versus 2C have been adequately assessed in relation to bridge integrity, and if the magnitude and timing of over-design events been quantified accurately for 2C and 2E. No allowance has been made to comment on the cost effectiveness of 2E vs 2C or carry out any design or analysis as these fall outside the scope of a Peer Review.

The Proposal set out in this letter is valid for 30 days from the date of its issue. Any changes to the assumptions and clarifications above, commercial terms or any other matter set out in this Proposal, including any amendments to the terms and conditions of contract proposed, may result in an adjustment to the Fees and/or Programme.

Yours sincerely

A handwritten signature in black ink that reads 'A Kempt'.

Anna Kempt  
Senior Project Manager