From: <u>James Beban</u>

To: <u>Helen Anderson</u>; <u>McIndoe, Nicky</u>

Cc: <u>Josie Burrows</u>; <u>Kirsty van Reenen</u>; <u>Michael Law</u>

Subject: Flood Modelling Report

Date: Wednesday, 15 April 2020 9:32:14 AM

Attachments: Outlook-uivbyb4u.png

Hi Helen and Nicky

Thank you for yesterdays meeting. As agreed, the email below represents the further information and clarification we are seeking regarding the flood maps and the associated flood hazard assessment:

- 1) The model to be rerun, and to includes the changes that have been made to the engineering design and model parameters, including:
 - a) The effects of local access bridges that are to removed/altered in the affected reaches;
 - b) Changes in culvert roughness and;
 - c) Increased rainfall from climate change, and;
 - d) Bank works at 54 and 56 Whitemans Road
- 2) An updated flood hazard assessment which addresses the effects of the changes to the flood model (including maps showing flood levels and extents and assessment of the level of effects on all properties where there is an increase or decrease in flood level/extent) for the 1:25 year and 1:100 year ARI events. Where there is an increase in flood water depths, clarification on where on the properties this flooding occurs. If the increased in flood depths occurs around any respective dwelling, then property floor levels relative to flood depths should be provided to allow for the impacts on these dwellings to be determined.

Provision of the information described in 1 and 2 above, will provide the basis for you to be able to provide clarification to the following enquiries, and for us to be able to confirm your responses.

- 3) Confirmation on where the increased flood depths on 9 Birch Grove and 7 Pinehaven Road are occurring (for example, in the river channel or on the property) in the 1:100 year event and whether these increased depths affect the dwellings on these properties. If so, what are the resulting effects on the dwellings?
- 4) Clarification on where the increased flood depths on 54 and 56 WhitemansRoad are occurring in the 1:100 year event and whether these increased depths affect the dwellings on these properties. It would also be good to clarify what works at the top of these banks is occurring to protect these properties as reference in the flood hazard assessment. Will these have downstream effects? Do these require resource consent? Should they be included in the flood model?
- 5) It would be helpful if the 1:100 year flood information was presented in the same table format as is the case for the 1:25 year event, namely flood levels. This allows for comparison between the events to be made. it would also allow for some

explanation on what the increased flood depths occurring in the 1:100 year flood event are acceptable.

6) Confirmation whether any discussions have occurred with the owners of 9 Birch Grove or 7 Pinehaven Road regarding their increased flood depths and what their comments were.

If you have any questions regarding this email please let me know.

Kind Regards

James Beban

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