Response to s92 for CRC212078, CRC212079 and CRC212384 – Rutherford – 10 February 2021

This is a response to the s92 request for further information in relation to the above consent applications. I will respond to each numbered point. You should find answers to most of the questions in the original AEE. Please let me know of you require any additional information.

1. **A description of the site at which the activity is to occur**

   A description of the site was provided in the AEE together with photographs and a map showing where the works are to occur. The diversion works are within the flowing channel of the river and in the existing diversion channel shown in those photographs. I attach the photographs again (numbered Appendix 3 in the AEE).

   The proposed consent conditions provided a map reference for the head of the diversion channel, and the scope of the works is also set out in the proposed conditions. The maximum length of works to deepen the diversion channel is 50 metres from the head of the channel. As can be seen in the photographs, there is no vegetation in the channel or on the bare gravel bed. The bed is often inundated with flood water which scours any vegetation.

   The access to the works area is along the riverbed. There is an existing four-wheel-drive track along the bed, not used much of course and not very defined, but is used by the farmers to access the current consented diversion works area. Mr Rutherford will use the same track to access the area. The track runs from further downstream beside the current diversion channel (this is shown in the sketch map and coloured orange – see attached Appendix 2 which was provided with the AEE).

2. **Objectives, policies and rules of PC7**

   The AEE provided an assessment against the PC7 matters. There does not appear to be any relevant matters apart from those identified in the AEE. Please inform me of any that you consider are relevant that have not been assessed.

3. **Description of the activity**

   There will be no increase in the diversion of water into Mr Rutherford's irrigation scheme channels. The additional diversion being sought with this application is simply to increase reliability along the quite natural long diversion channel to Mr Rutherford's intake point that is fully consented (CRC040830 and the other consents listed in the previous s42A Report that I provided as Appendix 1 in the AEE identifies all these consents). The

reliability along the long diversion channel becomes quite low when his upstream neighbour is taking his full allocation during low river flow levels (his upstream neighbour has a diversion consent for only one cumec). Hence, Mr Rutherford needs to provide additional water to his scheme intake.

Mr Rutherford's scheme is shown on the sketch map in Appendix 2 which was provided with the AEE. At the far downstream end of that map, the orange line identifies Mr Rutherford's intake diversion at the point labelled "Appendix 3 Photo". This is the consented CRC040830. The pond and diversion channel to the irrigation intakes continue to the east, and the bywash from the pond flows back to the main river. Therefore, at this location, there are two opportunities for excess water to flow back to the main river - the bywash channel and the natural channel back to the river (both are marked on the map). There is also another return of water to the main river much further downstream from the irrigation channels. This is into Pass Stream under consent CRC040831.

4. Potential adverse effects on instream values and natural character including cumulative effects

The description above may satisfy many of the queries in this point. There is no additional diversion into Mr Rutherford's irrigation pond and channels, and there is no additional take of water. All excess water arising from the new diversion of up to 2 cumecs will simply return to the main river without entering the irrigation channel shown on the sketch map in Appendix 2. There will be no additional water flowing through the irrigation channel to the diversion back to the main river at Pass Stream.

There is no extraction of gravel at the diversion point (it is excavation). The gravel from deepening the diversion channel is simply pushed up on the bed. It will resemble natural material within the main channel. It is envisaged that this will need to be done only a few times each season. A major flood will likely move gravel within the main riverbed and could reduce the diversion again. There will be no effects on fish along the short section of the channel which is to be deepened (maximum 50 metres length from the head). Likewise, there will be no effects on fish within the diversion channel, and in fact it may be beneficial due to more reliable maintenance of flow along the whole length of the channel before returning to the main river braid.

Diverting up to 2 cumecs from the braid into the diversion channel will not materially affect the hydrological characteristics of the braid. A reduction in depth of the braid will only be of a few centimetres, even at low flows in the river.

Natural character is not being materially affected. The braids and existing channel remain in place. Diversion of up to 2 cumecs will not affect braid depths or pattern.

5. Potentially adversely affected parties

LH Dairy Ltd will not be adversely affected. The additional 2 cumecs will be beneficial to LH Dairy. There will be no flood risk of LH Dairy property. The LH Dairy intake operates in a similar way to Mr Rutherford's, with controlled diversion from the channel into their scheme channel. Please let me know if you consider LH Dairy to be adversely affected.

The area where the diversion works are to occur is within Mr Rutherford's freehold title. This is set out in the AEE and CON499 Form. It is not LINZ land.

The main river flow remains within the natural braids and any seepage out of the riverbed to feed shallow groundwater bores on the south side of the river in the vicinity will not be materially affected. Recharge of the bores is from further upstream rather than from directly across from the diversion channel. Shifting braids under natural pattern changes will affect shallow bores much more significantly. A scientist will quickly dismiss this as an issue.

canterbury maps

Rutherford Diversion Works

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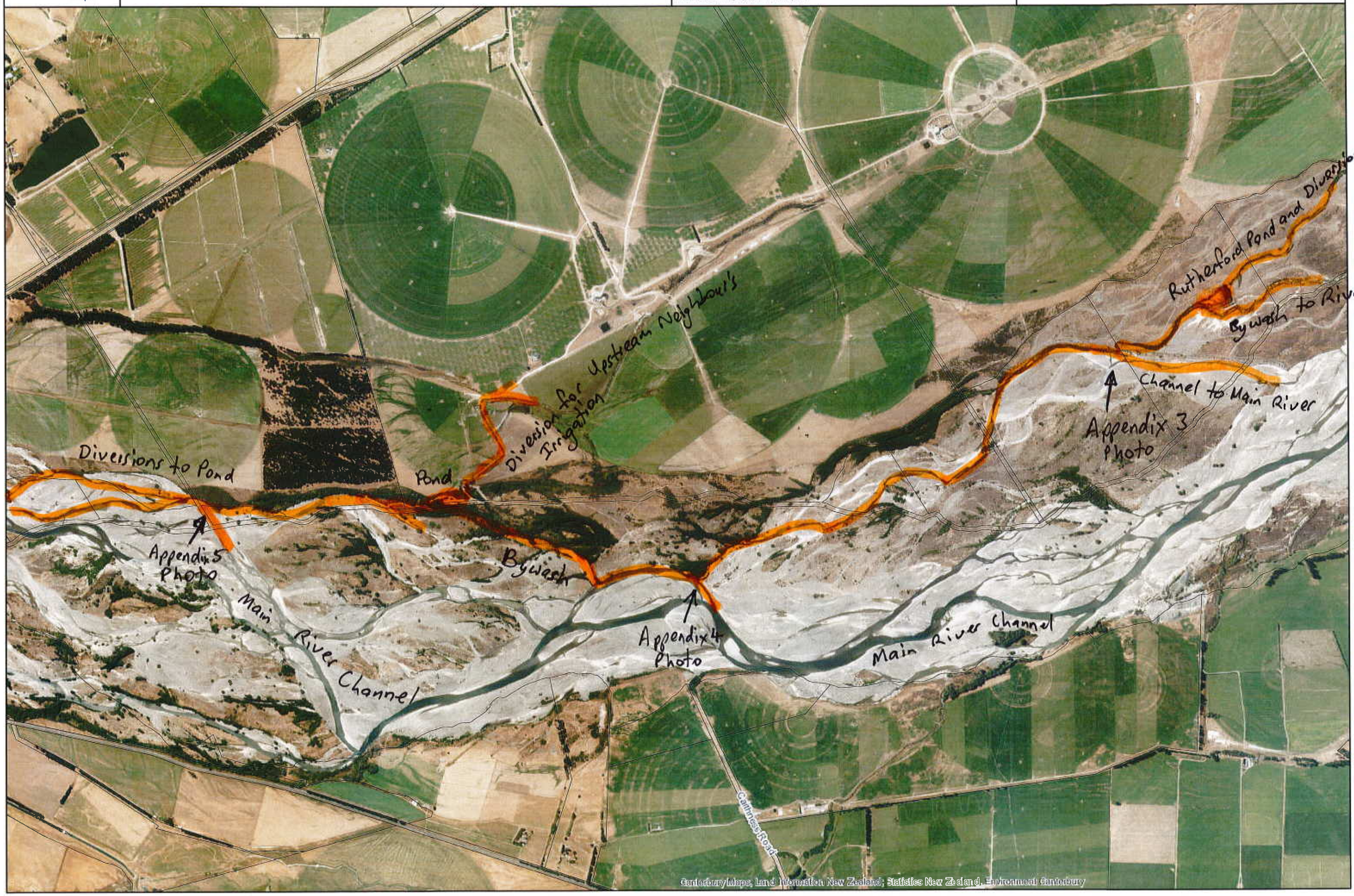
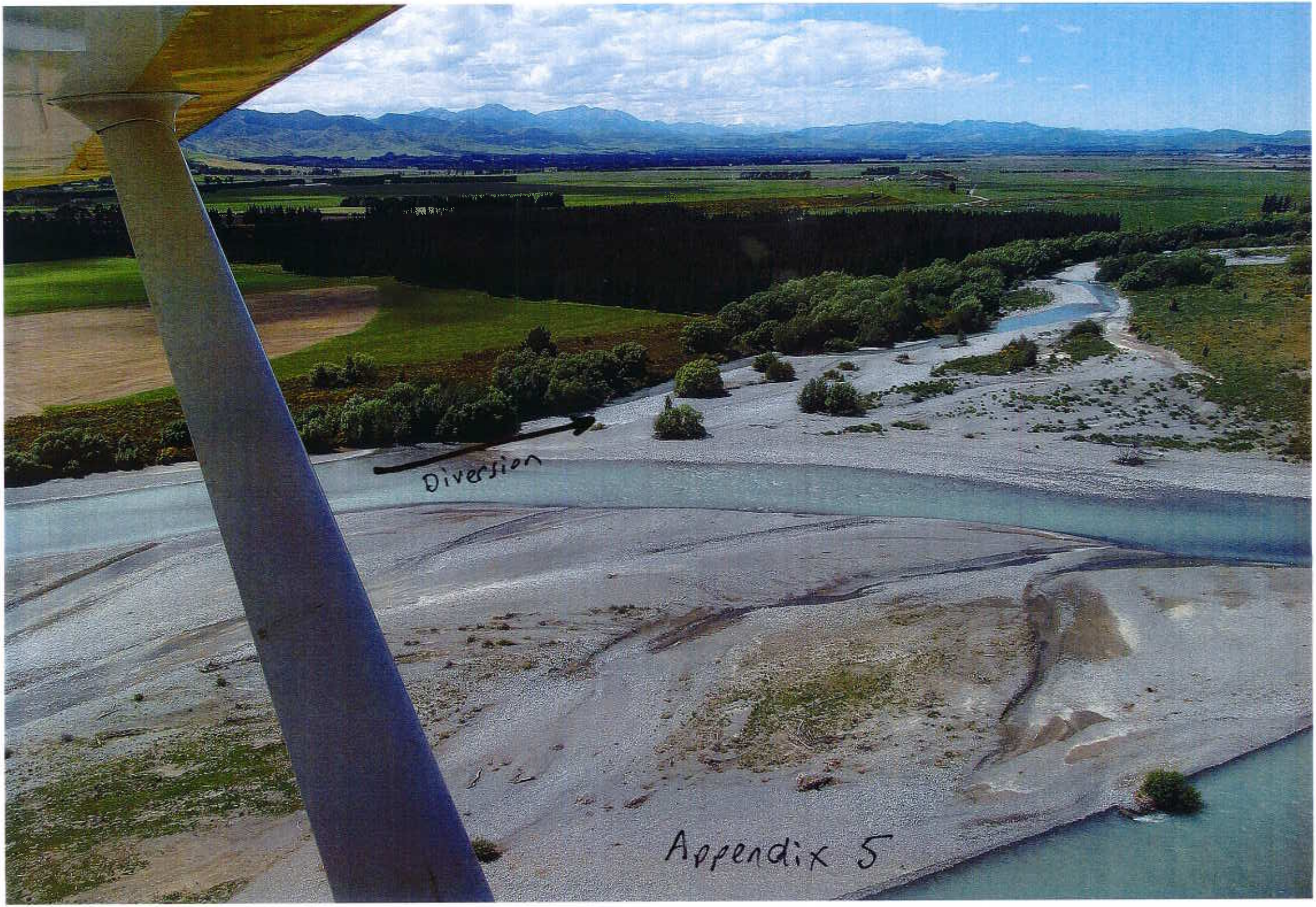
0 0.2 0.4 0.6 0.8 Kilometres

Scale: 1:15,000 @A3

Map Created by Canterbury Maps on 11:28:34 a.m.




Diversion
Appendix 5

Looking upstream at principal diversion point from Waiau River. One cumec authorised to be diverted into old natural channel. Minor works necessary to maintain the open diversion. Fall is steep with rapidly flowing water which keeps the channel open. Channel is not deep, around 0.5 metres. It is a simple operation with a digger to keep the channel open to the main Waiau River channel.

Looking downstream at diversion channel. Very stable channel. Photographs taken 18/8/20.