

Natural Hazards at Makarora

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the alluvial fan surface may no longer be occupied by the fan-forming stream, the whole alluvial fan should be considered as subject to alluvial fan hazards. This work has not been undertaken for any of the alluvial fans in the Makarora area.

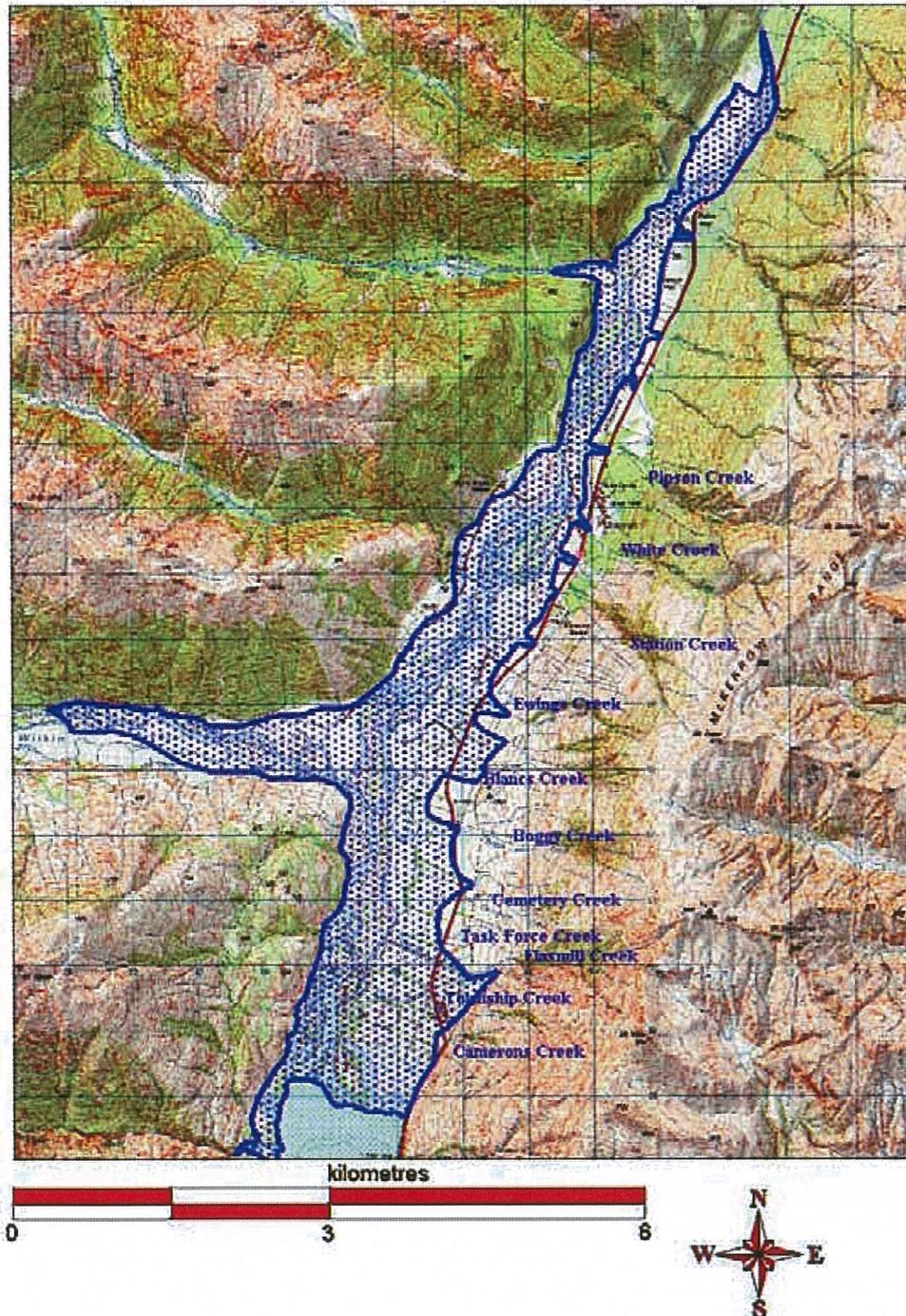


Figure 2: Area of Makarora valley potentially subject to flood hazards (ORC, 1999).

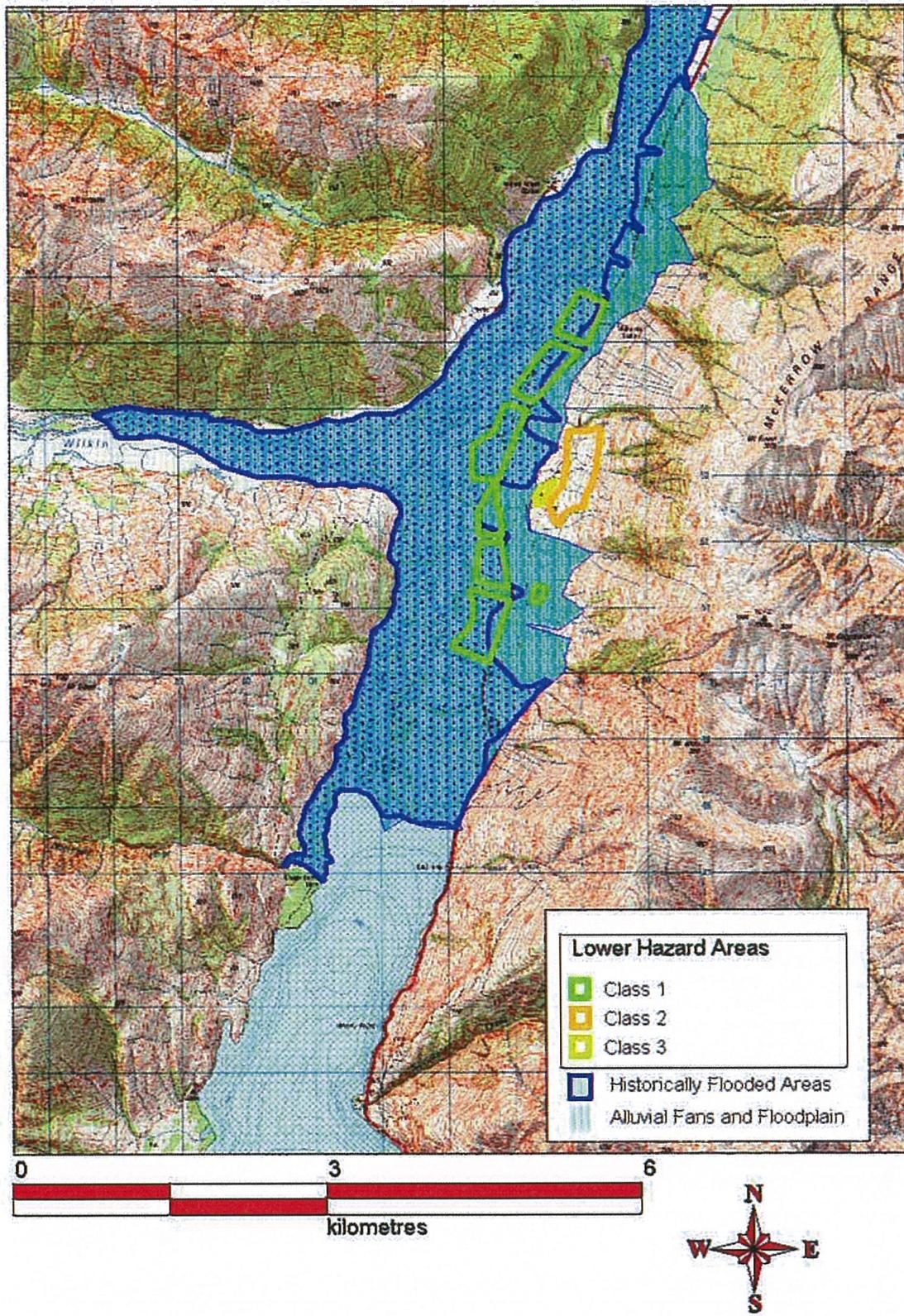


Figure 6: Combined flood and alluvial fan hazards, with lower hazard areas, Makarora valley.



Figure 8: Land possibly susceptible to liquefaction induced by seismic shaking.



Figure 19: Cemetery Creek, 1994.



Figure 20: Cemetery Creek looking north, 1994.

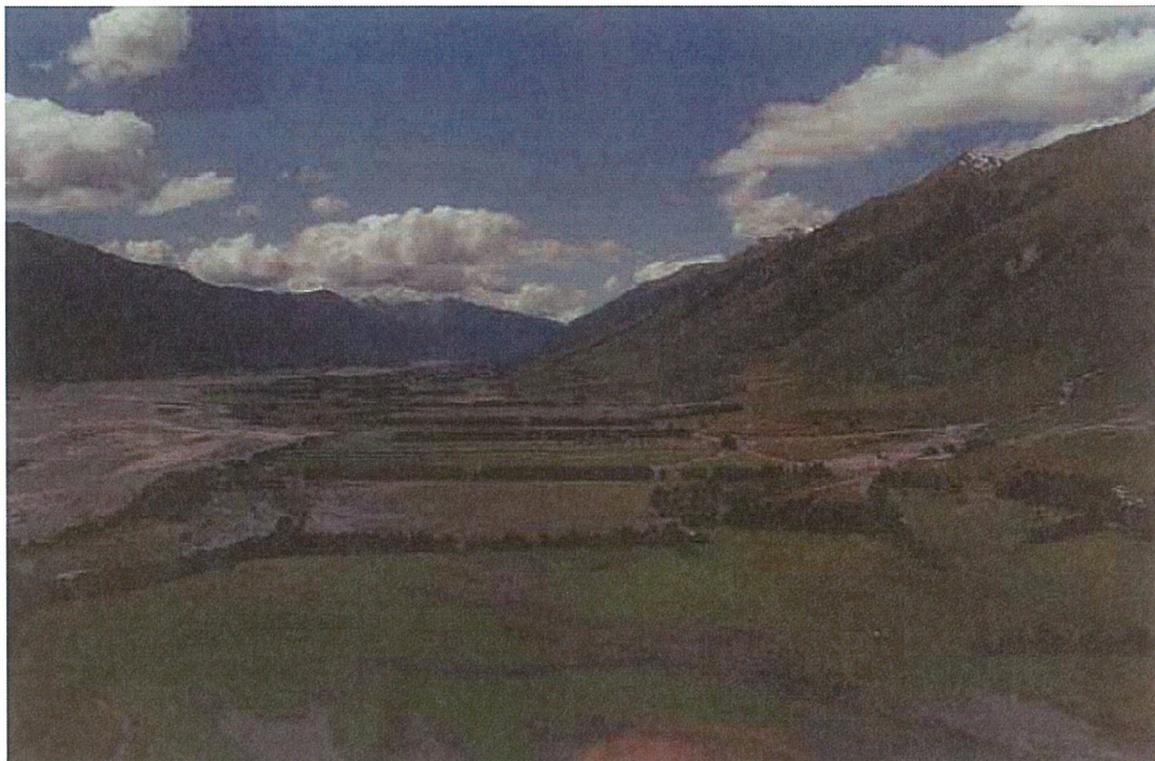


Figure 12: Looking up Makarora valley from the south, 1994.



Figure 22: Super-phosphate bin from SH6, Boggy Creek, 1994.



Figure 23: Ewings Creek from SH6, 20th January, 1994.

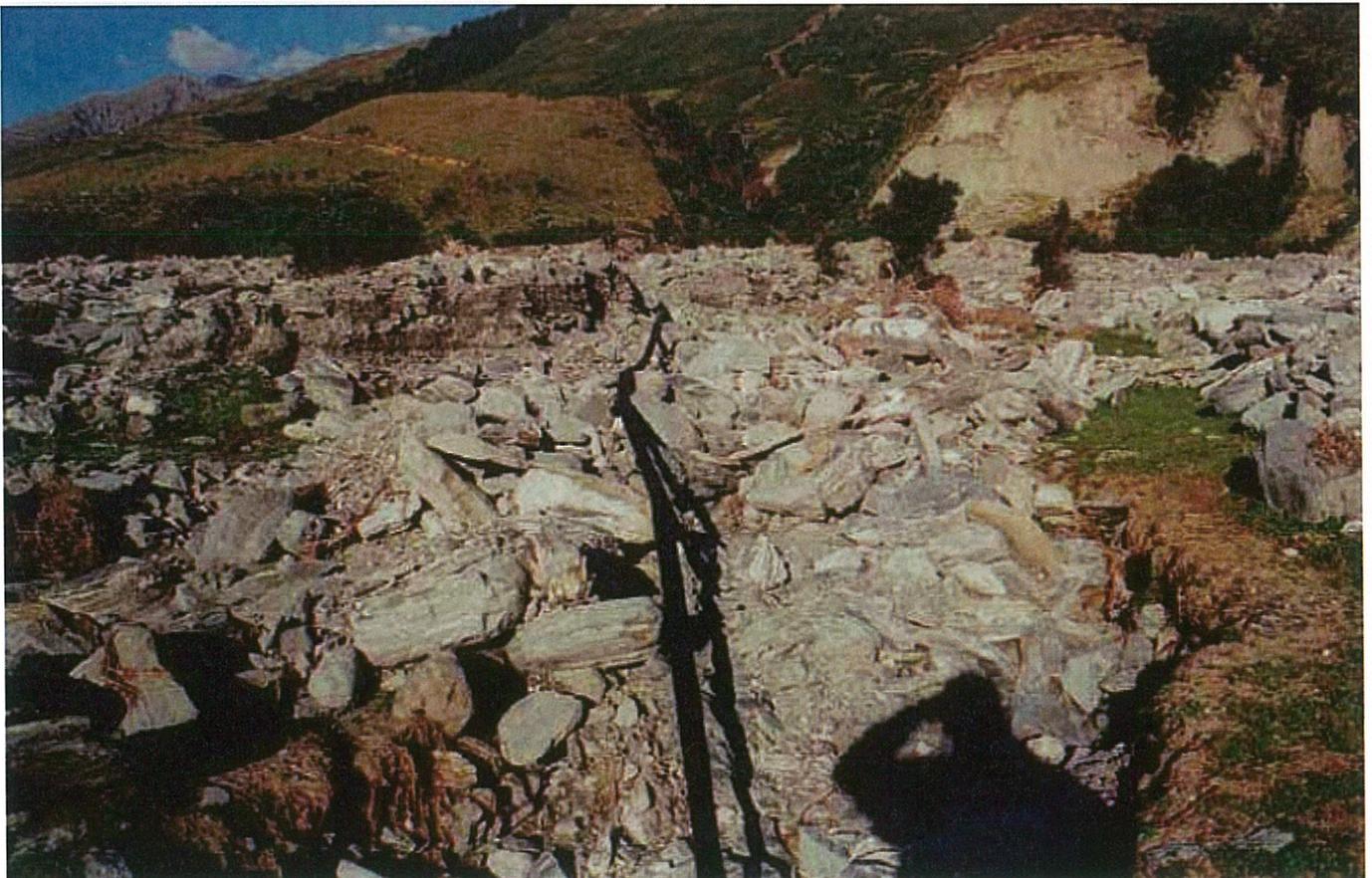


Figure 24: Water pipeline to intake, Ewings Creek (1994).



Figure 27: Debris on true right of Pipson Creek at SH6, showing depth of flows during 2006 event.



Figure 28: Pipson Creek flow depths following 2006 event. Figure's hand is at maximum depth of debris flow. Rock in foreground was deposited during flow. Approximately 150 m upstream of SH6 on true right.

be rezoned to Rural, and as considered by Dr Read, should be classified as ONL.

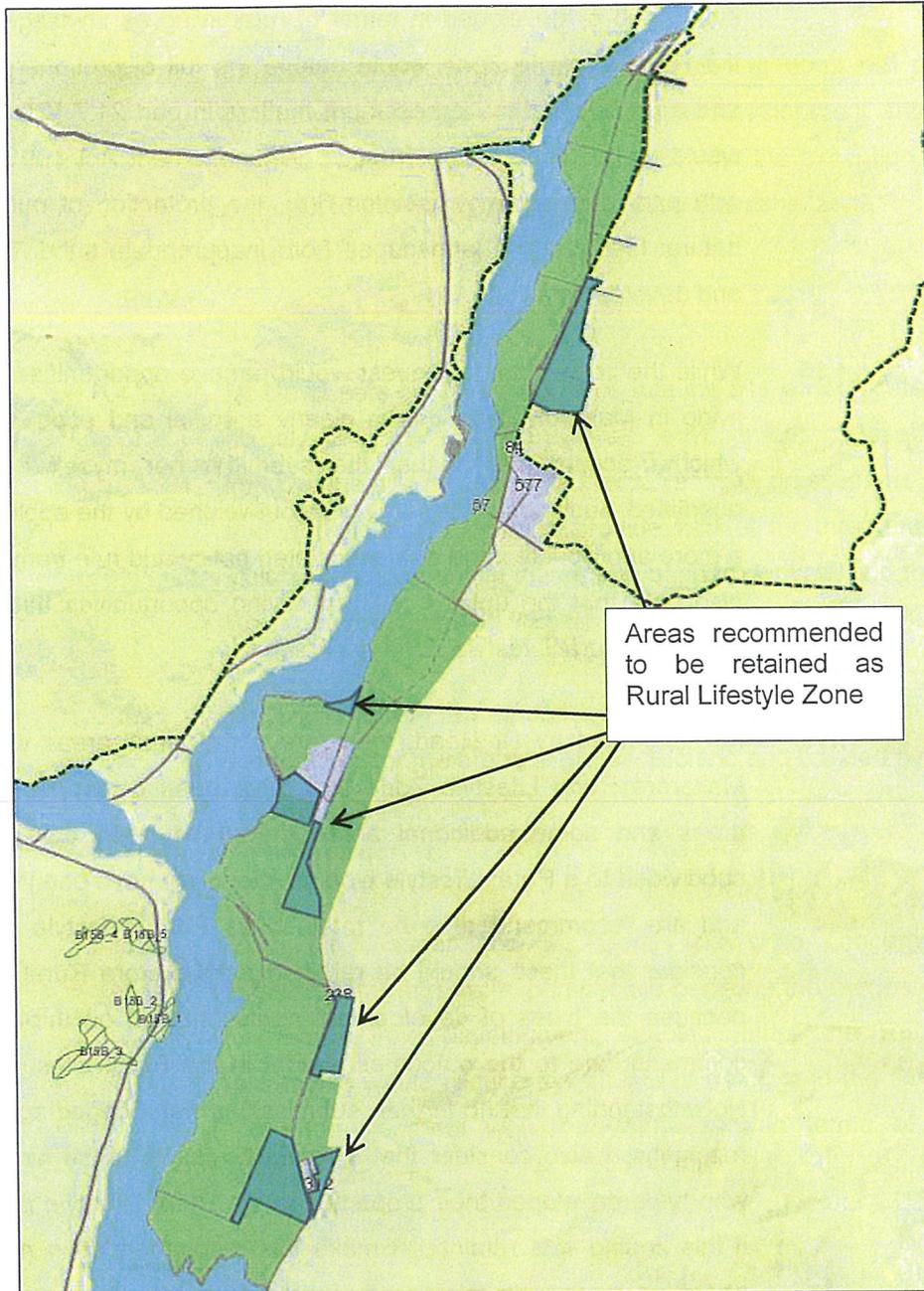


Figure 1. Areas outlined by dark green shading that are recommended to be retained Rural Lifestyle Zone. The remaining light green areas illustrate the notified PDP Rural Lifestyle Zone, all of which are recommended to be rezoned to Rural.

4.18 I consider that the request substantially improves the management of this land in terms of giving effect to the Otago Regional Policy Statement 1998 and the Otago Proposed Regional Policy Statement







Old School Road area.



Orange area is flooded area shown in New's photo - after just 4" of rain (a fairly common event in Makarora where annual rainfall is approx. 120"/year).

Orange area is
area shown in
photo Nov 15
which is flooded
after only
4 inches of rain
falling (a fairly
common event in
Makarov with
120 inches of
rain/year).



