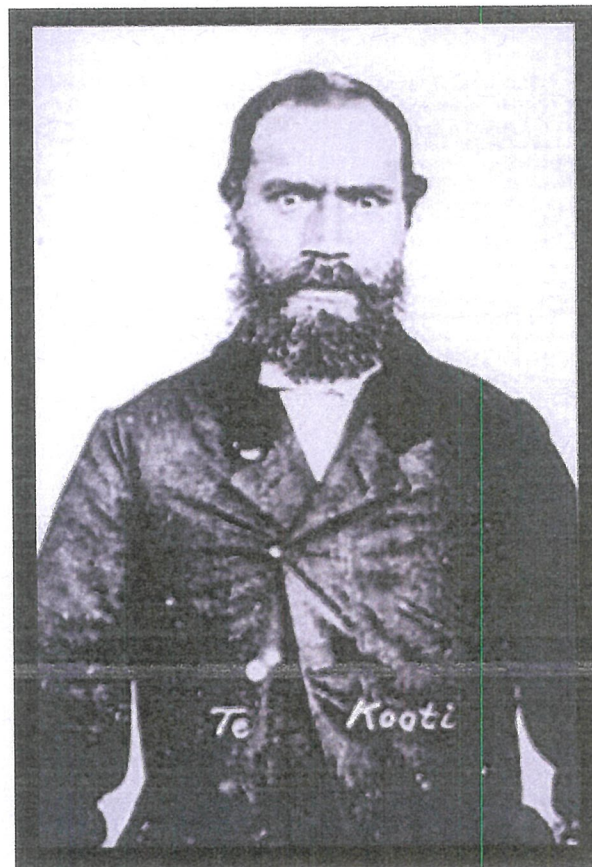


Mr Mark St Clair & Mr Rauru Kirikiri
Kathryn Hunt
Mission Development

The flawed Turirau Stream drainage system

Phil & Louise Alexander

Te Kooti had a spell in Napier spending a couple of weeks digging the Turirau Stream before he caught a boat to the Chathams!



Consultation

'Discussions have been held with downstream neighbours to inform them of the proposed storm water solutions and obtain their views'.

- Springfield Culvert out of grade by 1.3m
- A new 1 km drain built for \$10k nine years ago to push the Mission storm water straight down the lane.
- The Jardine Family have had no information about the Mission Development recently. Are the drains fit for purpose to carry the Mission Storm water

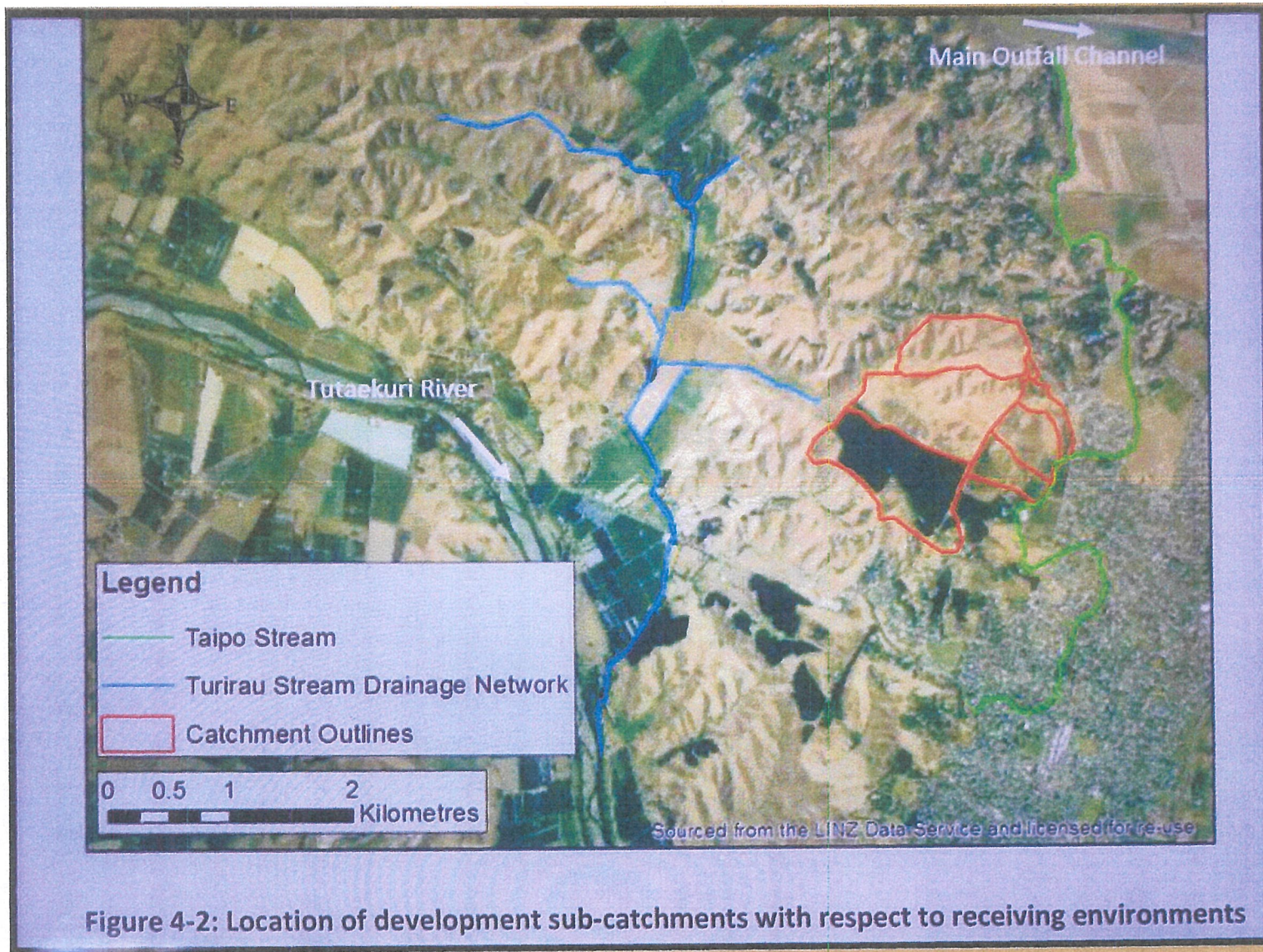
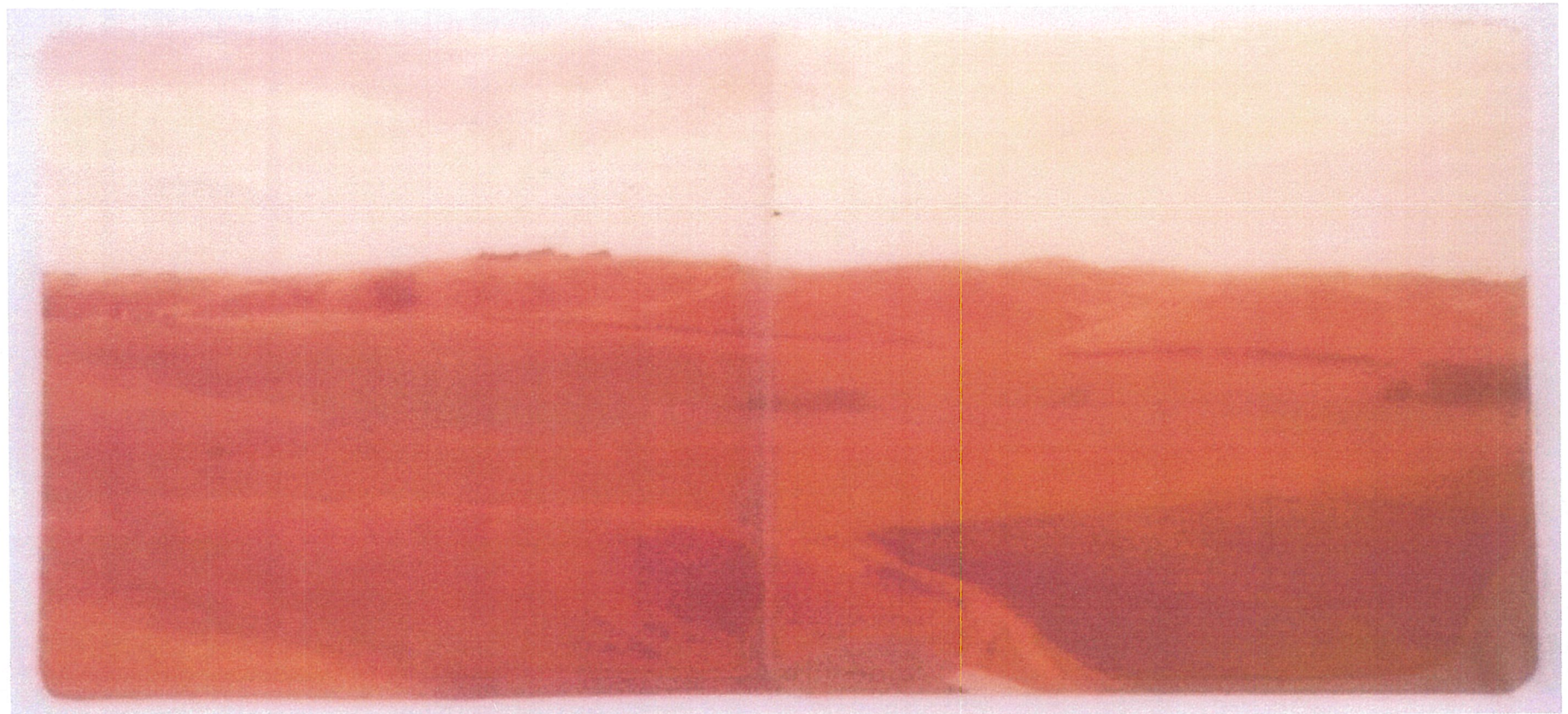


Figure 4-2: Location of development sub-catchments with respect to receiving environments

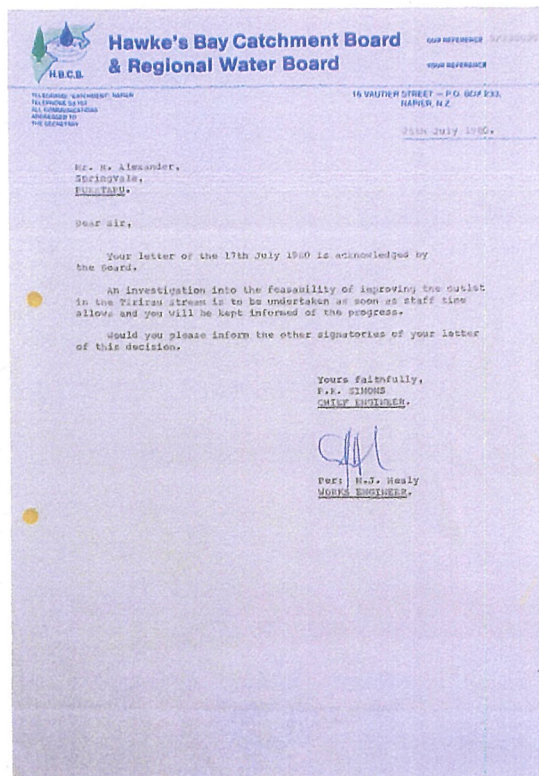
Before development 1978



Willow trees removed, stop banks and
pumping station built in 1979



Roger Alexander wrote to the Catchment Board in 1980 to enlighten the manager about the invert of the Puketapu Road and Springfield road culverts - he believed they were about 1m too high.



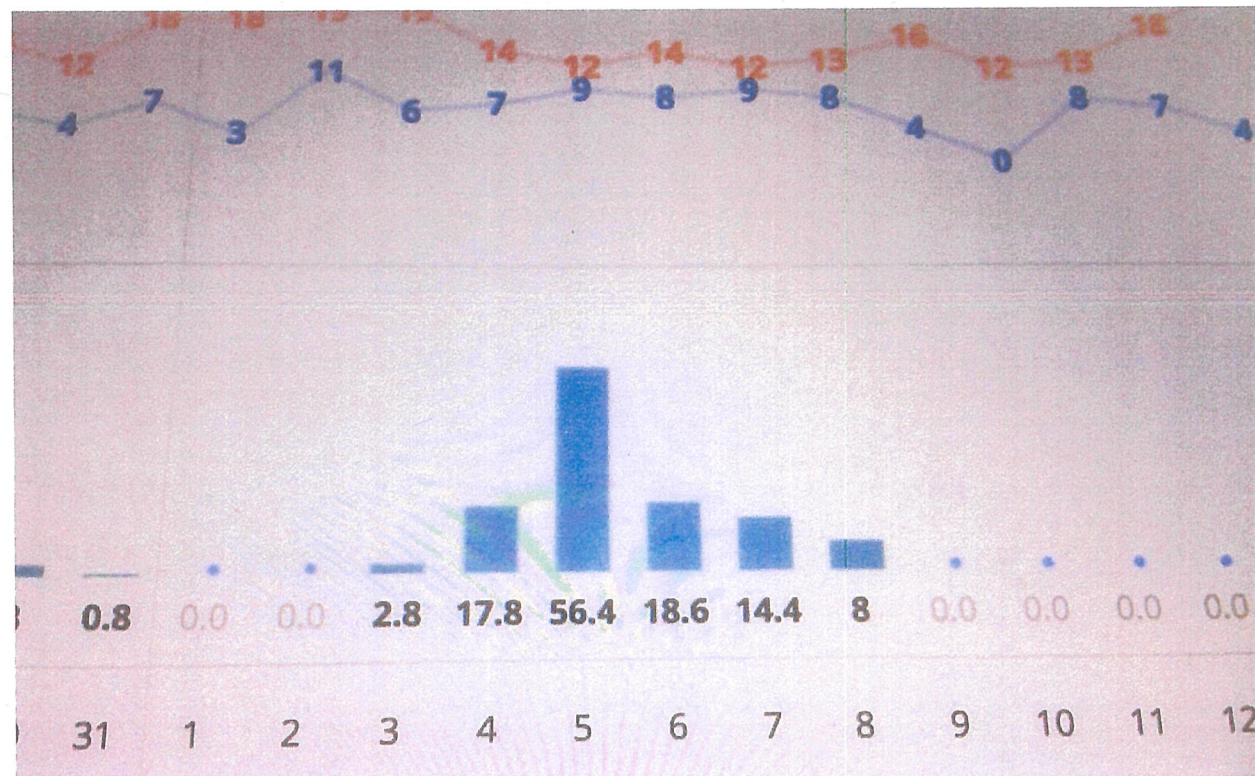
2011 The Back Flats fully flooded



2011 Flood with 250mm of rain over 3 days



2018 Flood, September 3rd to 8th
Napier 118mm, Puketapu 156mm



6 September, 75% Flooded Scott Thomsen Flats
12:17 pm



6 September, 75% Flooded Springvale Back Flats
12:23 pm



7 September, 5:51 pm



8 September Fully Flooded
11.12 am



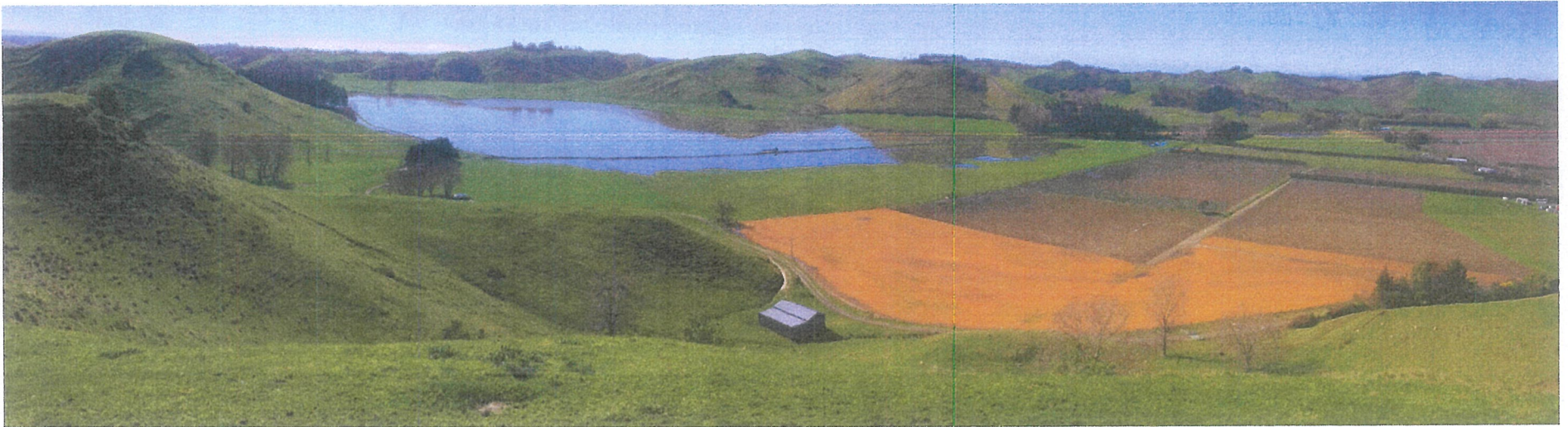
8 September,
11.08 am



10 September, 9.45am



10 September, 10:01am





10 Sept Springfield



8 Sept Springfield

10 Sept Springfield



16 Sept Springfield





10 Sept

8 Sept Puketapu Culvert

11 Sept Puketapu

16 Sept



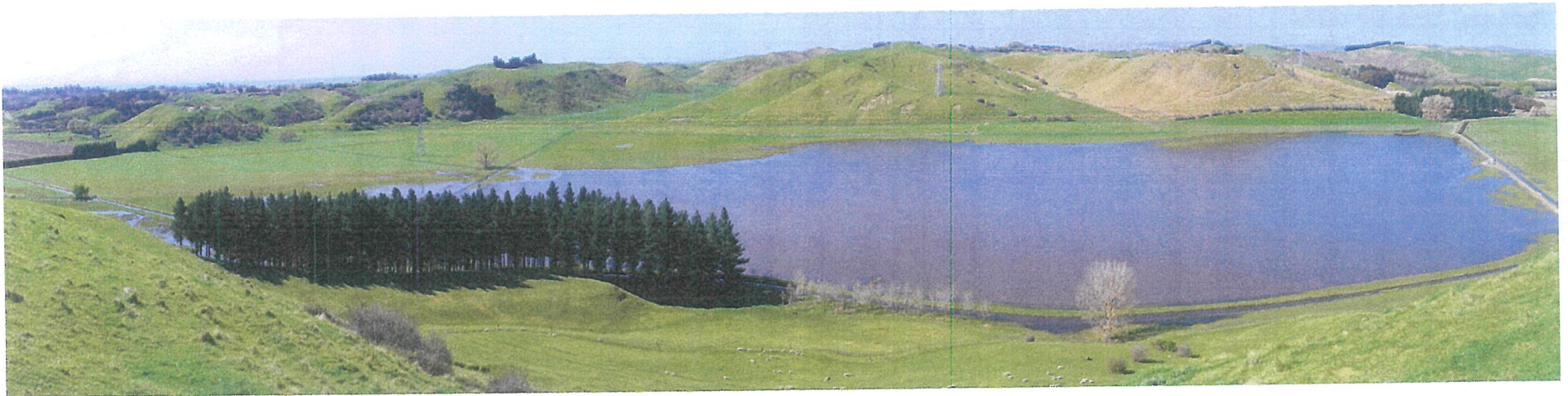
12 September, 10% drained
4:40pm



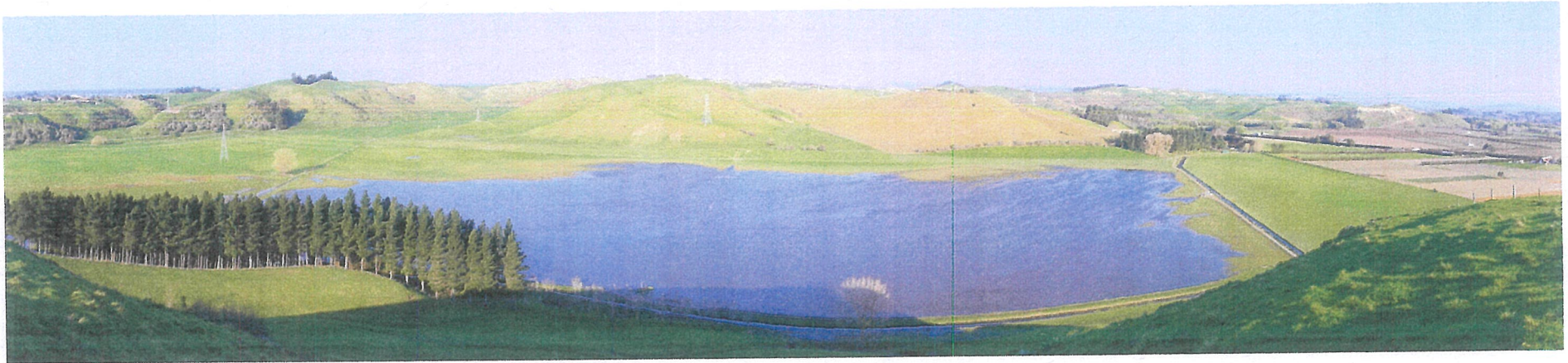


12 September, still out of channel
4.41pm

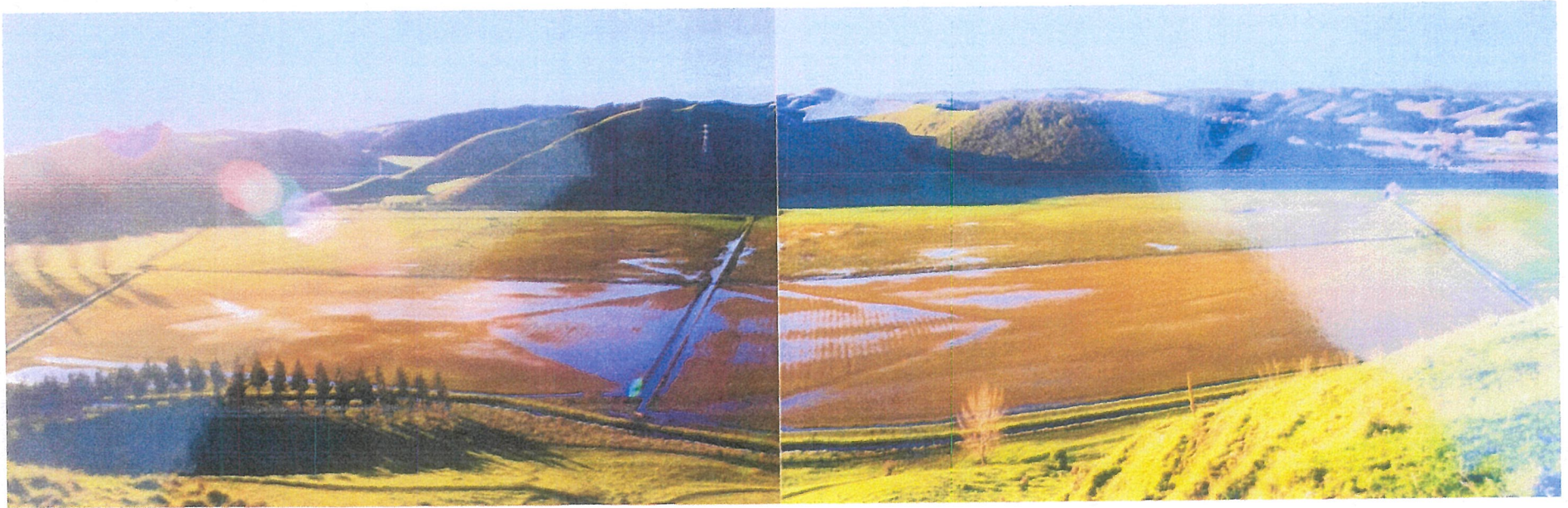
14 September, 20% drained
11:47am



16 September, 30% drained



After a flood, 80% of grass is dead



Hawke's Bay Flood Detention Dams

- A detention dam is a dam built to catch surface runoff and stream water flow in order to regulate the water flow in areas below the dam.
- Detention dams are used to reduce the damage caused by flooding and to manage the flow rate through the downstream channels.
- [Detention dam - Wikipedia](#)
- A **detention dam** is a **dam** built to catch surface runoff and stream water flow in order to regulate the water flow in areas below the **dam**.
- **Detention dams** are commonly used to reduce the damage caused by flooding or to manage the flow rate through a channel.

Profile at peak flow comparing existing invert with proposed invert

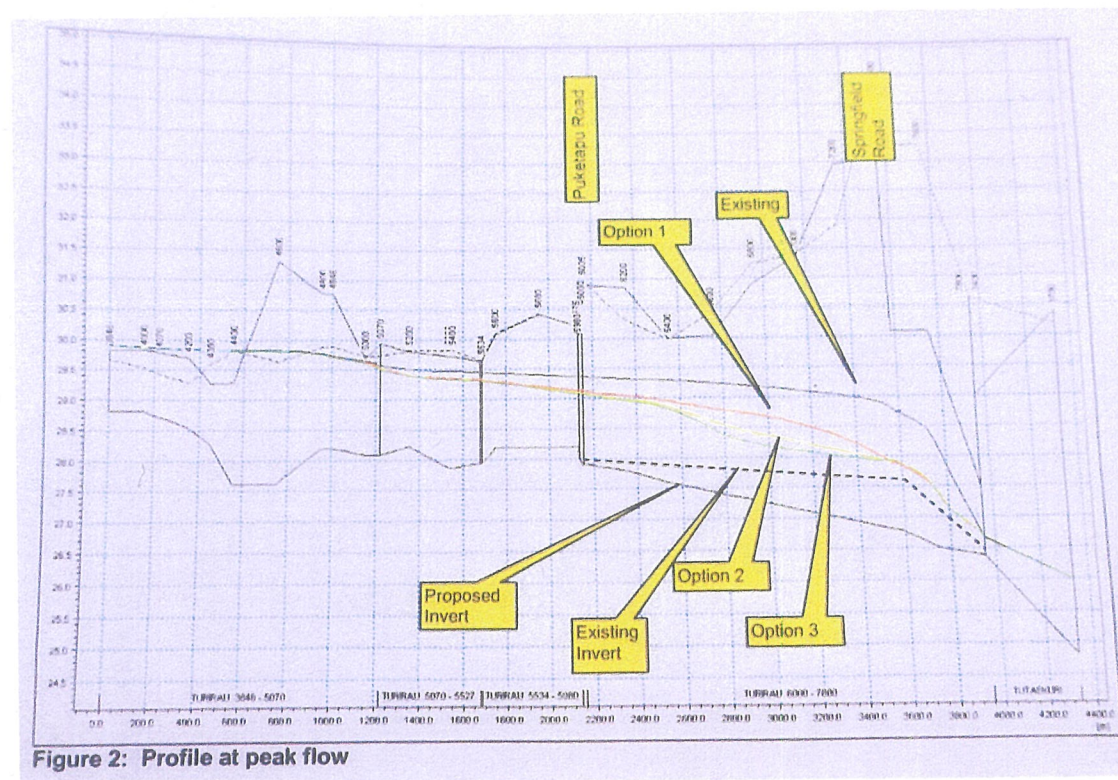


Figure 2: Profile at peak flow

Profile at approx. 3 weeks after peak flow

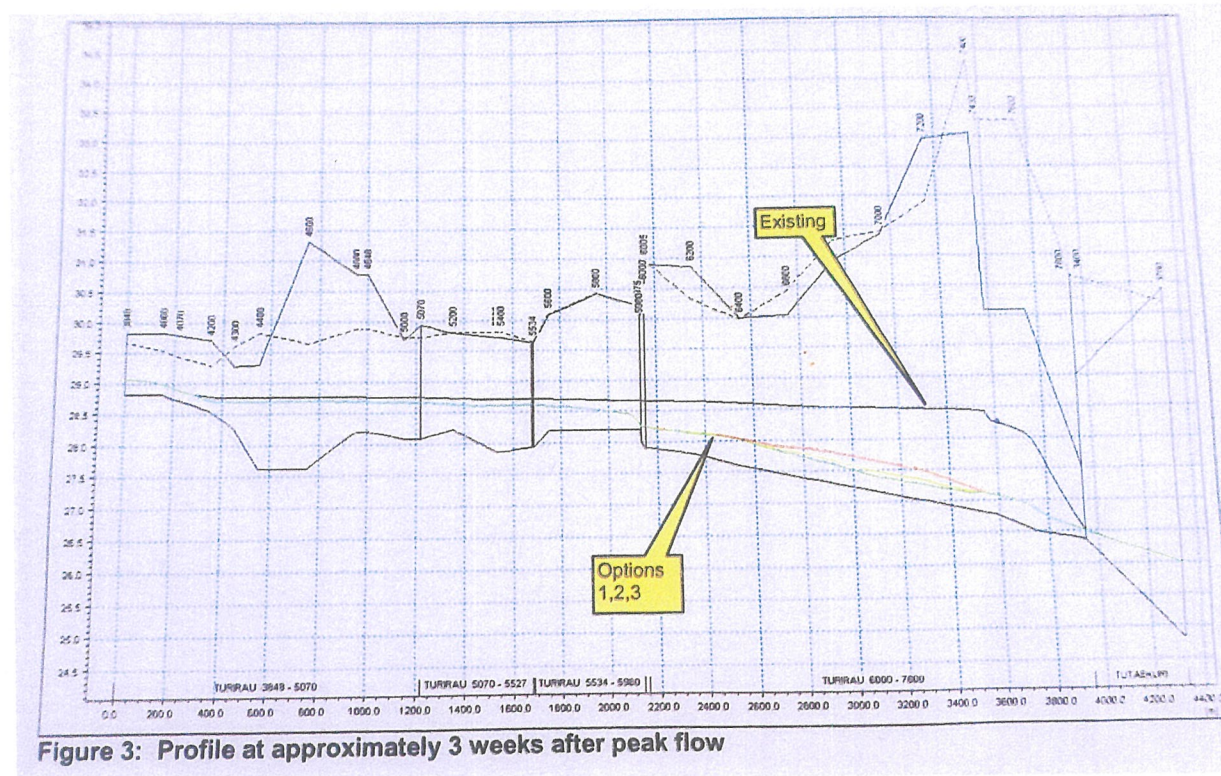


Figure 3: Profile at approximately 3 weeks after peak flow

Mike Adye, Group Manager Asset Management,
letter to P Alexander dated 18 January 2012.

‘Peter Holley has indicated to the council that Marist Holdings Ltd will contribute to an appropriate upgrade of the Turirau to ensure that their proposed subdivision does not have an adverse impact on your land.

In that instance it may also be appropriate for the Council to include the “eastern” drain from the Turirau to the Jardine boundary into the maintenance programme to ensure its efficiency long term.’

Summary

- The water retained in the detention dams will be flowing into flooded drains/channels.
- There is an opportunity to get a collaborative group including the Mission, HBRC and the Alexanders to work through a process.
- That the Mission re-work their proposed solution and put any cost savings in constructing their scheme towards the cost of improving the Springfield Culvert downstream.
- The adjustment in the efficiency of the Turirau drainage system indicative of flow calculations show that the regraded drain would increase the flow 50% or more and correlates with the Regional Council's estimate.