

Before Hawkes Bay Regional Council and Hastings District Council

In the matter of the Resource Management Act 1991

And

In the matter of Applications by Hastings District Council and Napier City Council
(**Applicants**) for approvals relating to Area B at Ōmarunui Landfill
(**Landfill**)

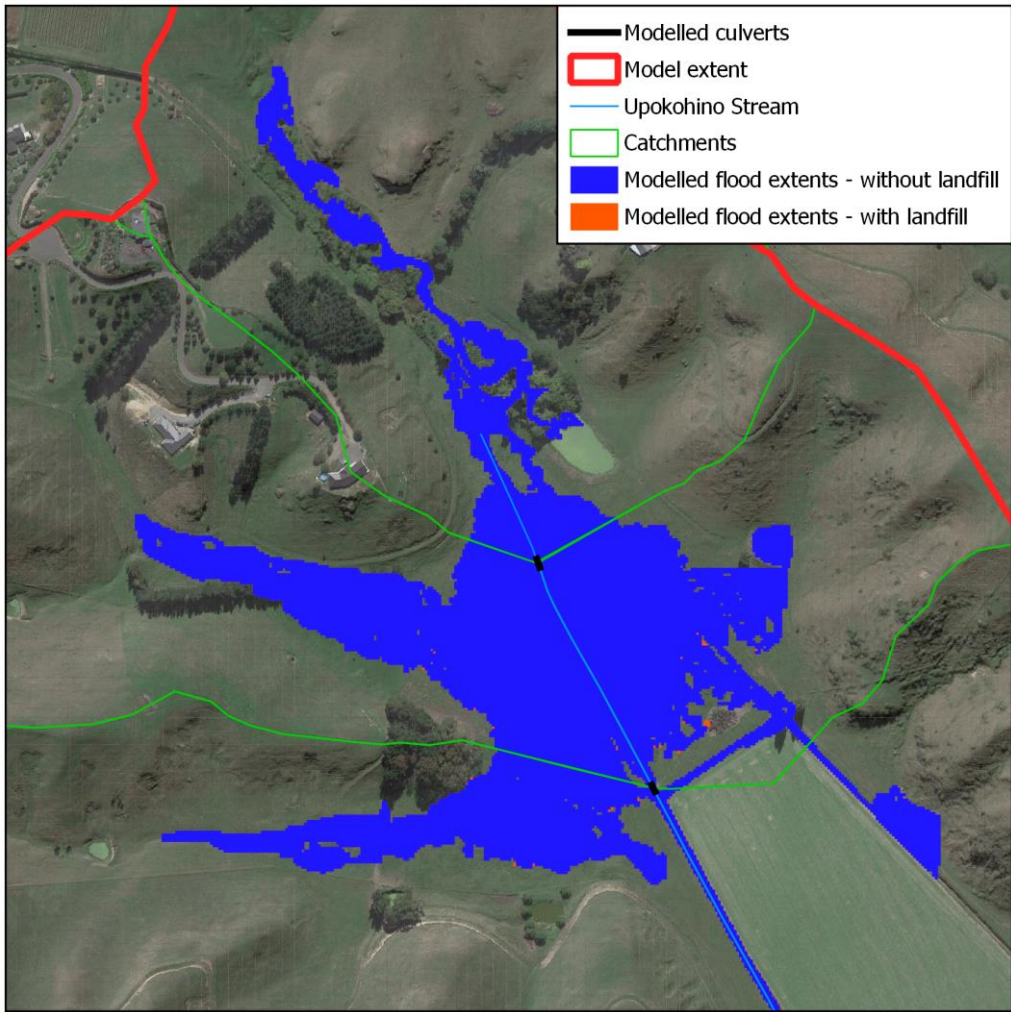
**Summary of evidence by John Hansford
(Impact of the Omarunui Landfill operations on flooding
on property owned by Mr Bearsley)**

Dated 28 October 2021

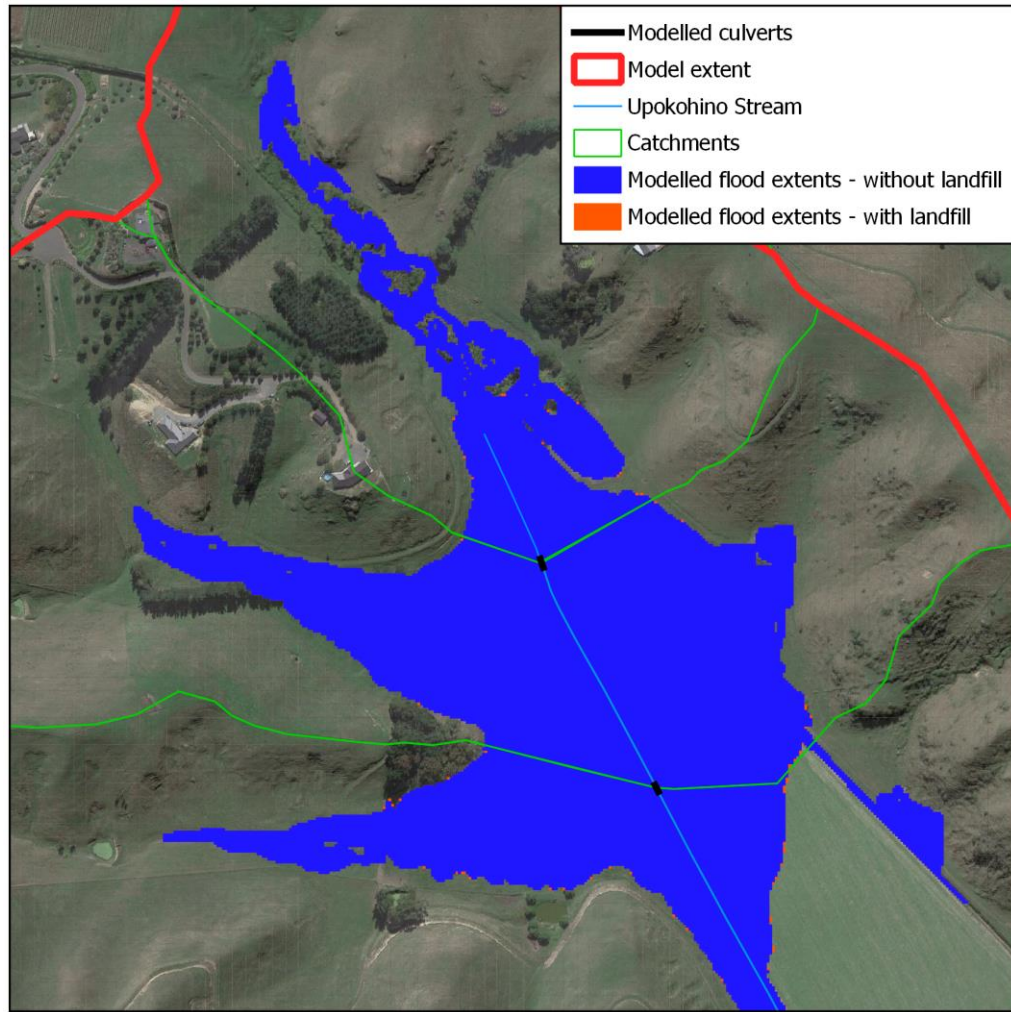
1. I prepared evidence dated 2 September 2021 and reply evidence dated 19 October 2021 on the topic of increased flooding in the Upokohino Stream due to operations at Omarunui Landfill.
2. Flooding occurred on Mr Bearsley's farm during the events of October 2019 and November 2020. Mr Bearsley claims that operation of the Omarunui Landfill caused an increase in flooding on his farm.
3. The records from the rainfall station at the landfill, provided by Hastings District Council, show that 86.5 mm of rainfall was recorded during the October 2019 event. Based on the HIRDS data for the rainfall station location the probability of this amount of rainfall occurring in 48 hours is on average once in 1.3 years. During the November 2020 event 99.5 mm of rainfall was recorded in 6 hours and the average recurrence interval of this amount of rainfall in 6 hours exceed 40 years.
4. I carried out hydrological and hydraulic analyses to simulate flood extents and depths during these two events with and without landfill operations.
5. Plots showing the simulated flood extents for the October 2019 and November 2020 events, assuming no landfill operations (blue areas) with the additional areas flooded due to maximum landfill operations (orange areas) are attached.

6. The plots show extensive flooding during both events and also that the difference in inundation areas without landfill operations and with landfill operations is negligible.
7. The simulated increase in flood depth in Mr Bearsley's paddocks during the November 2020 infrequent event was between 5 and 10 mm and during the October 2019, more frequent event, this reduced to 2 mm.
8. Based on the simulated flood extents and depths my conclusion is that the impact of the Omarunui Landfill operations on flooding in the Upokohino Stream will be negligible.

John Hansford
28 October 2021



October 2019 event



November 2020 event