

APPENDIX G

Ecan Flood Hazard Report and Correspondence Email

31 July 2024

Josh Mitchell
[REDACTED]

Dear Josh

LOT 1 DP 564058 – 172 SEABRIDGE ROAD, MOTUKARARA

Flood Hazard

The property may be susceptible to flooding from local rainfall runoff.

Enclosed is a photograph of the property taken after a rainfall event in 2013 that shows flooding in the area, though none on the property itself (an approximate outline of the property boundary is highlighted in red). Note that the photograph may not show flooding at its peak. In larger rainfall events it is likely that more extensive areas will be affected by flooding.

Also enclosed is a map showing ground levels across the property derived from LiDAR data obtained in 2017. LiDAR is an airborne laser system that surveys ground topography. The ground levels are presented in metres – Lyttelton Vertical Datum 1937 (LVD1937). When compared to known survey points, the data typically has a vertical accuracy of ± 150 mm or better. Ground levels at the property range from around 1.4 – 3.0 m LVD1937.

Selwyn District Council has completed rain-on-grid flood modelling for the majority of the district. This modelling includes 200 and 500 year average recurrence interval (ARI) events. In both ARI events, the modelling shows flooding covering the western half of the property, with the eastern half (towards Seabridge Road) clear of flooding. The flooding on the property reaches a level of 1.9 m LVD1937 in a 200 year ARI flood event. Mapped results of this modelling are available here:

https://apps.canterburymaps.govt.nz/FloodModelResults/?extent=1566285.6842%2C5156557.0647%2C1566858.9619%2C5156817.1298%2C2193&showLayers=Region_Base_3597%3BAccepted_Scenarios_Elevation_7528

The property is located within the Partially Operative Selwyn District Plan (SDP) 'Plains Flood Management Overlay'. Constructing new dwellings within this overlay is a permitted activity under the district plan if they are not located in a high hazard area and have a finished floor level that is at least 300 mm above the 200 year ARI flood level. High hazard areas are defined as areas where the water depth (m) x velocity (m/s) is greater than 1, or the water depth is greater than 1 m, in a 500 year ARI flood event.

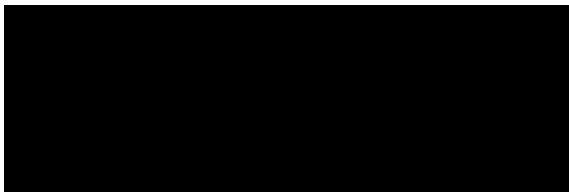
Based on the information above, there are no high hazard areas on the property. A dwelling built at the property with **a floor level of at least 2.2 m LVD1937** would meet the district plan requirement to be 300 mm above the 200 year ARI flood level.

When using the information provided in this letter, it is important that the following points are understood:

- The information is limited to what Environment Canterbury currently has available. The District Council or local residents may have further information about flooding at the property.
- Environment Canterbury's understanding of flooding at the property may change in the future as further investigations are carried out and new information becomes available.
- It is assumed that flood protection works will be maintained to at least their current standard in the future.
- Stopbank failure can occur at flows less than the design standard, and the location of bank failure/overtopping may affect flood depths/levels at the property.
- Flood flow paths and depths/levels can be affected by changes on the floodplain such as:
 - Earthworks, road alterations, and irrigation structures
 - Property development including buildings, fencing, and hedges
 - Blockages in culverts, drains, and bridges
 - Seasonal vegetation growth
 - Antecedent soil conditions

The prediction of flood depths/levels requires many assumptions and is not an exact science.

Yours sincerely,



Michael Thwaites

Science Analyst (Natural Hazards)

Encl. 2017 LiDAR Map
 Photo no. 0153 (23/06/2013)

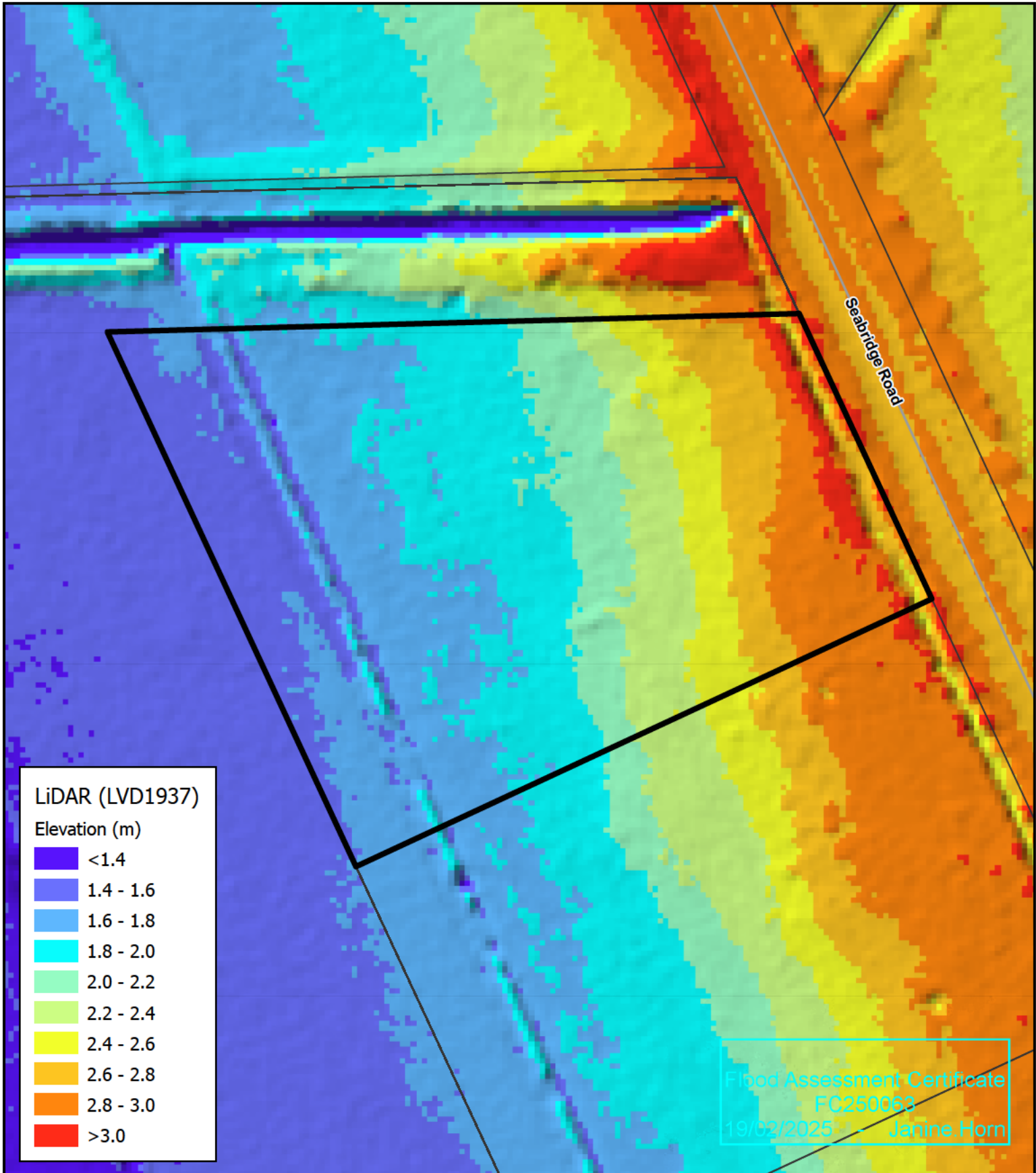
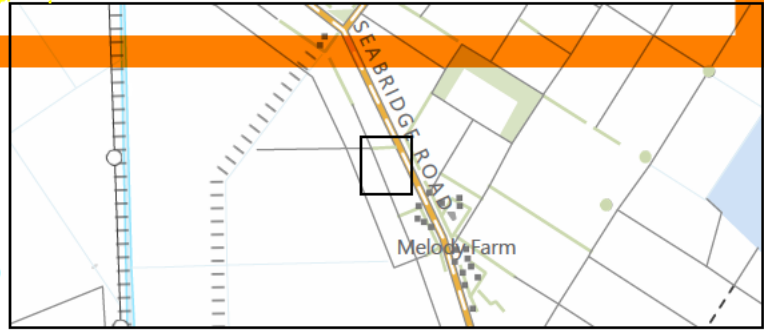
172 Seabridge Road, Motukarara - LiDAR Map

Indicative site plan only. The finished floor level must comply with the attached Flood Assessment

Legend

- Property
- Roads
- Rating Units

0 12.5 25 50
Metres



LiDAR (LVD1937)

Elevation (m)

- <1.4
- 1.4 - 1.6
- 1.6 - 1.8
- 1.8 - 2.0
- 2.0 - 2.2
- 2.2 - 2.4
- 2.4 - 2.6
- 2.6 - 2.8
- 2.8 - 3.0
- >3.0

Flood Assessment Certificate
FC250063
19/02/2025 Janine Horn

RE: Flood Hazard Assessment for 172 Seabridge Road, Motukarara - Ref. 24606

From Michael Thwaites <Michael.Thwaites@ecan.govt.nz>

Date Tue 18/02/2025 2:59 PM

To Ryan Brent [REDACTED]

Hi Ryan,

Appreciate our phone call earlier. **I can confirm that the report issued on the 31st of July 2024 (Ref. 24606) is still up to date and relevant.**

After re-reading the email you sent previously, the requirement to be at least 3.0 m above the LVD1937 mean sea level is a requirement issued by SDC as part of the consent notice for the initial subdivision and not something written into the district plan as a blanket rule, so hence my missing it when this flood hazard assessment was initially issued.

This pertains to the [Resource Management Act 1991 - Section 221](#) that outlines any conditions issued by the territorial authority as part of the subdivision consent must be followed by the current and subsequent owners of the properties it pertains to. It is unlikely you will be able to build at the level recommended in the flood hazard assessment if one of these conditions is for the floor level to be at least 3.0 m LVD1937, however I believe you can apply to SDC to have this condition removed.

[If Lake Ellesmere/Te Waihora is opened to the sea during high lake levels](#), I have no reason to believe the floor level recommendation in the report is underpredicting 300 mm of freeboard in a 200 year ARI event. The land on Lot 1 DP 564058 above 2.2 m is on a ridge that extends parallel to Seabridge Road. Water is likely to surround the entire area and leave this stretch of land clear in a 200 year ARI flood event, as shown in the modelling.

Ultimately it is up to SDC to make the final call on this, however.

Hope this helps!

Cheers,
Michael

From: Ryan Brent [REDACTED]

Sent: Tuesday, 18 February 2025 1:05 pm

To: Michael Thwaites <Michael.Thwaites@ecan.govt.nz>

Subject: Re: Flood Hazard Assessment for 172 Seabridge Road, Motukarara - Ref. 24606

You don't often get email from [REDACTED]

Caution: This is an email from an external party. Please take care when clicking links or opening attachments.

Hi Michael,

Thanks for the chat earlier. I am going to lodge the flood assessment certificate and get the Selwyn council to assist with our next step. Can you please provide a confirmation email confirming the report attached from 31 July 2024, is still acceptable. Or however you would like to achieve the 6 month or less report requirement.