

**BEFORE THE CHRISTCHURCH REPLACEMENT
DISTRICT PLAN INDEPENDENT HEARINGS PANEL**

IN THE MATTER of the Resource
Management Act 1991
and the Canterbury
Earthquake (Christchurch
Replacement District
Plan) Order 2014

AND

IN THE MATTER of the Natural Hazards
Proposal

**THIRD SUPPLEMENTARY STATEMENT OF EVIDENCE OF IRIS BROOKLAND
ON BEHALF OF CHRISTCHURCH CITY COUNCIL**

PLANNING ENGINEER

18 MARCH 2015

1. INTRODUCTION

- 1.1** My full name is Iris Brookland. I have the qualifications and experience set out in my Evidence in Chief.
- 1.2** This evidence is supplementary to my evidence in chief (dated 13 February 2015) and my rebuttal evidence (dated 27 February 2015).
- 1.3** I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014 and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise, except where I state that I am relying on the evidence of another person.

2. SCOPE

- 2.1** This supplementary evidence has been requested by the Hearings Panel regarding whether there are site specific factors concerning the property occupied by Mr Riach, submitter #1050, at Rugby Street that warrant moving the Floor Level and Fill Management Areas (**FLFMA**) line from that property.

3. REVIEW OF FLFMA Mapping

- 3.1** The delineation of the FLFMA for 22 Rugby Street is based on predicted 1/200 year flooding generated by the Dudley Creek model as shown in Figure 1 below. The predicted flood level is 18.14 m RL in Christchurch Drainage Datum. The rain on grid model shows also flooding in this location. The Council has received flood complaints for several events for the corner of Rugby Street and Naseby Street.

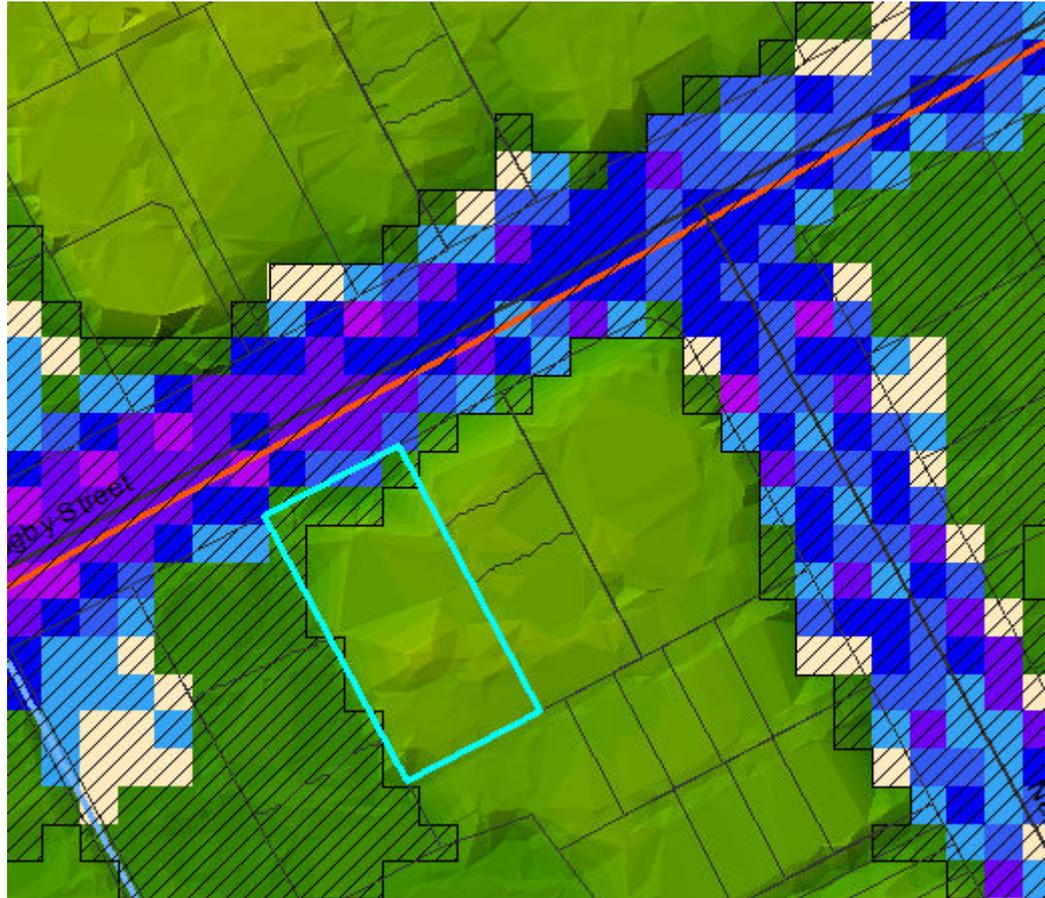


Figure 1: Modelled Flood 1/200 Year Extent (blue and purple) and FLFMA (hashed black)

- 3.2** Based on the modelling all land with a level of 18.39 m RL should be included in the FLFMA.
- 3.3** I visited the site on 17 February 2015. I have observed that the LiDAR elevation data do not represent accurately the landscaping features in the front part of the property. This includes the raised land behind retaining walls and steps, but also the large driveway in front of the garage.
- 3.4** From my site visit I have estimated the floor level of the garage and the level of the driveway to be 200-300 mm above the level of the footpath. The footpath has roughly a level of 17.85 m RL. Therefore it could be assumed that the driveway level would vary between 17.85

m RL and 18.15 m RL. It is likely that the driveway would be inundated at a water level of 18.14 m RL.

- 3.5** Photographs that I took on that visit are attached to my evidence.
- 3.6** Based on my observations and estimates the FLFMA should not be entirely removed from this property as parts of this property are likely to be inundated in 1/200 year event. Those parts are the driveway and parts of the access path along the boundary to 20 Rugby Street. I would also expect the garage to be included in the FLFMA. In my opinion the current location of the FLFMA is not entirely accurate on this property, but I would expect a similar extent of the property to be affected.

I. Brookland

Ms Iris Brookland

18 March 2015

Appendix A – Photographs

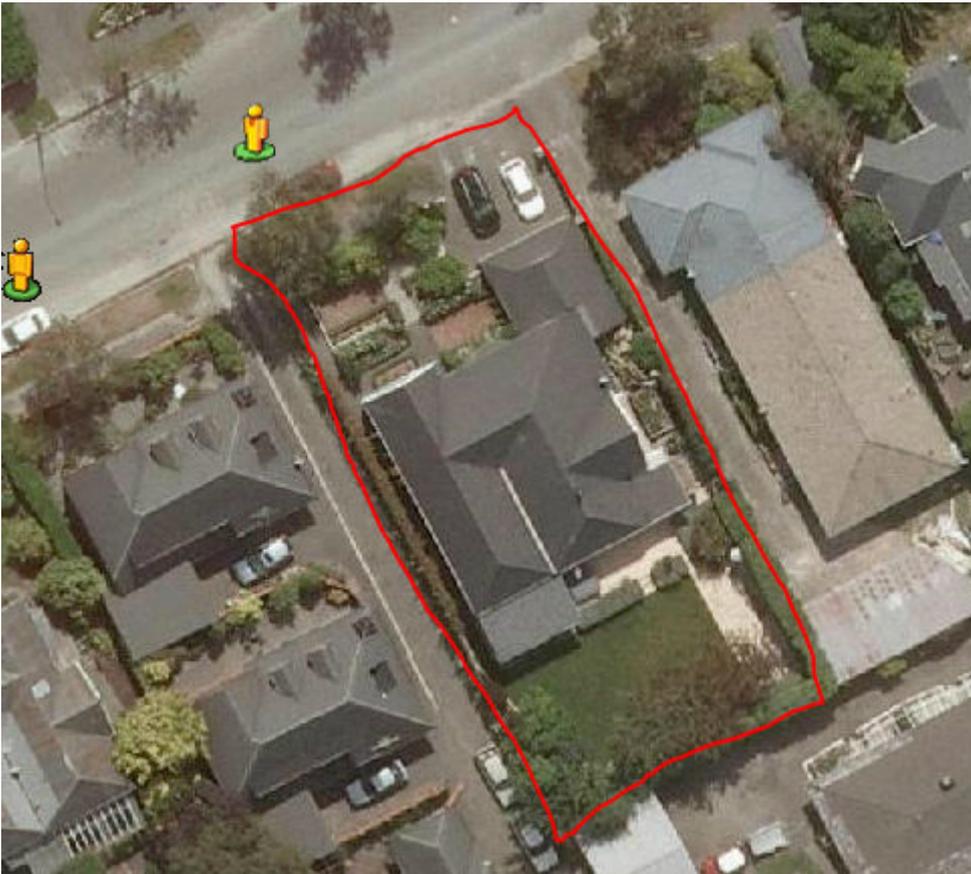


Figure 2: Aerial View of 22 Rugby Street



Figure 3: Footpath and Driveway (note the flat slope compared to the retaining wall in background)



Figure 4: Driveways of 26 Rugby Street (left) and 22 Rugby Street (right)



Figure 5: Access Path (also low lying) along Boundary Fence to 20 Rugby Street



Figure 6: Front View 1 (Source: Google Street View August 2012)



Figure 7: Front View 2 (Source: Google Street View August 2012)