

**BEFORE AN INDEPENDENT HEARINGS PANEL  
APPOINTED BY WAIMAKARIRI DISTRICT COUNCIL**

**UNDER** the Resource Management Act 1991

**IN THE MATTER** of submissions on the Proposed Waimakariri District Plan and Variation 1 by Woodwater Limited (Submitter ID 215/48)

**AND** Hearing Stream 12E – Rangiora, Kaiapoi, Woodend, Variation 1

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**STATEMENT OF EVIDENCE OF ANDREW HALL ON BEHALF OF WOODWATER  
LIMITED**

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Date: 02 August 2024

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## **1 INTRODUCTION**

- 1.1 My full name is Andrew James Emil Hall. I am a Chartered Professional Engineer and a director of Davie Lovell-Smith Ltd, an engineering firm based in Christchurch.
- 1.2 I hold a Bachelor of Surveying from Otago University and a Bachelor of Engineering (Honours 1<sup>st</sup> Class) from Coventry University (UK). I am also a member of New Zealand Institute of Surveyors (NZIS) and the Institute of Professional Engineers (IPENZ). I am a Chartered Engineer.
- 1.3 My area of expertise is consulting in civil engineering related to the development of land. I have over 30 years' experience in this field including 20 years' experience in the greater Christchurch area.
- 1.4 I am currently involved as a consultant in the development of over 6000 residential sites in Canterbury and over 200ha of industrial land.
- 1.5 I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2014. I confirm that I have considered all material facts that I am aware of that might alter or detract from the opinions I express, and that this evidence is within my area of expertise, except where I state that I am relying on evidence of another person.
- 1.6 In this matter, I have prepared an infrastructure report dated March 2024. This report was prepared on behalf of Urban Estates Ltd, who are intending to develop the land at South Woodend in conjunction with the Submitter, Woodwater Limited.
- 1.7 I am also very familiar with the site having visited it on a number of occasions.

## **2 SCOPE OF EVIDENCE**

- 2.1 The purpose of this evidence is to respond to matters arising out of Mr. Jolly's memorandum which forms part of the s 42A Report prepared on behalf of the Council.
- 2.2 Specifically, I consider the following matters identified within Mr. Jolly's *Figure 2: Alternative Layout with central open space and additional stormwater aligned with water course and wetlands*:
- (a) Roding Configuration; and
  - (b) The stormwater basins shown on the eastern boundaries.

### ***Roding Configuration***

- 2.3 The roding layout proposed by Mr Jolly does not appear to be much removed from what has been originally proposed in the ODP as attached to Mr. Thomson's evidence of 04 March 2024.

The issues with Mr Jolly's layout only come to light however once the development is progressed to a stage where the actual lot layout is included.

- 2.4 The desired depth on new lots has a direct effect on the location of streets. For example, a good dimension of a 500m<sup>2</sup> site is roughly say 31.25m x 16m, therefore a road would be best located 31.25m off the existing site side boundary. In this case, the distance between McIntosh Drain and the existing urban edge, close to the end of Parkinson Place, is approximately 340m. This width can be made up of, for instance, a 20m wide collector road, three 16m local roads, a margin to McIntosh Drain, a rear lot and 8 front lots. It is only once the overall urban form is designed in detail that the road locations become clear. The road locations on the March ODP have taken this form into account and are considered logical and preferable for that reason.
- 2.5 Beyond that, I am unclear as to the basis of Mr Jolly's identified road locations. That said, I agree that a second access point may be required to Petries Road and Woodend Beach Road and these have been added to the ODP, noting these locations should not be fixed elements of the ODP.
- 2.6 It is also noted that Mr Jolly has included an increased reserve area , not attached to the McIntosh Drain pedestrian/cycle routes and closer to the existing reserve on Judsons Road.
- 2.7 While this is addressed by Mr. Compton-Moen in more detail, I would like to address the need for the reserve to be fully surrounded by roading. A 1.5ha reserve under these circumstances would have a road frontage distance of approximately 500m. This seems excessive and overly expensive.
- 2.8 The construction of a road along with its underlying land, lighting, drainage, services, landscaping.... is the main cost to any development. The roading cost per lot doubles where access to the lots can be obtained only off one side. 500m of roading, in this instance, will inevitably add to the development cost thereby affecting housing affordability.

### ***Stormwater Basins***

- 2.9 Mr Jolly has also proposed alternative locations for stormwater basins. Mr Jolly shows two basins. The northern basin is on the eastern side of McIntosh Drain. The catchment size on the eastern side of the drain is only about 2ha, so stormwater discharges from this catchment can easily be dealt with by minor adjustments to the existing Council basin to the north.
- 2.10 In addition to this, the site is dominated by a significant hillock, as shown in this photograph below looking west from Copper Beech Road. A new stormwater facility or extension of the existing Council facility in this location does not seem feasible from an engineering perspective.



2.11 Mr Jolly has a second stormwater basin shown further south and on the western side of McIntosh Drain. This is a better location but may not be feasible.

- (a) The land to the southeast (Lot 71 DP503969) rises steeply to a level approximately 3m above the site. The undermining of this slope for a stormwater basin may require significant additional land stabilisation costs.
- (b) The land proposed for the stormwater facility, as shown in the March ODP and the updated version in Mr. Thomson's supplementary evidence is owned by one of the proposed developers, but in the LLRZ directly to the south of the land to be rezoned. The proposed land value in the LLRZ is less than MRZ and as a result, the overall development cost is reduced and an increase in housing supply is achievable.
- (c) The stormwater facility will require three elements. A first flush basin, an attenuation storage basin and a secondary treatment wetland. The site needs to drain to the first flush basin and then drain to the wetland before draining to McIntosh Drain. The overall height difference across the facility from the site to the Drain is approximately 2m. By shifting the facility further downstream, the discharge level is lower and the facility can be installed without significant filling of the site. I am not sure that the site proposed by Mr Jolly will allow for this gravitational drainage.

Andrew Hall

02 August 2024