

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER A hearing of application APP-1994001032.01 for resource consent in relation to the discharge of treated meat works effluent to the Oroua River, Discharge of treated wastewater onto and into land that may enter groundwater, Discharge of odour and aerosols into air, Land Use Consent for a discharge structure in the bank of the Oroua River and a bed level control structure in the Otoku Stream from the AFFCO Plant, Feilding.

**Section 42A Report of Jonathon (Jon) David Bell, Senior Design Engineer for
Manawatu Wanganui Regional Council**

5 October 2016

INTRODUCTION

- [1] My full name is **Jonathon (Jon) David Bell**. I am a Senior Design Engineer at Manawatu-Wanganui Regional Council (**MWRC**).

Qualifications and Experience

- [2] I hold a Masters in Civil Engineering from Cardiff University and I am a Graduate Member of the Institution of Professional Engineers of New Zealand (**IPENZ**).
- [3] I have practiced as a civil engineer with a particular interest in river works since 2007. I have nine years of engineering experience, including two years with the Environment Agency in the United Kingdom and more than five with MWRC.
- [4] I have been in my current position at MWRC since 2014. My role consists of the hydraulic modelling of waterways, as well as the design of flood control and erosion protection works. I am also involved in the design of drainage networks and various hydraulic structures throughout the region.

Code of Conduct

- [5] I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2011. I agree to comply with this Code of Conduct. Other than where I state that I am relying on the advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

BACKGROUND

- [6] AFFCO has applied for a number of consents related to the proposed upgrading of the Meat Processing Plant Discharge. As part of this upgrade it is proposed to install a new High Rate Overland Flow System in the bank of the Oroua River, both to replace the current discharge into the Otoku Stream (a tributary to the river), and to incorporate a component of land passage into the river discharge.
- [7] Incorporated with this, it is proposed to install a new bed level control structure over a steep reach of the bed of the un-named tributary for the purpose of securing that reach against scour and improving the ecological connectivity with the Oroua River.
- [8] The applicant also proposes to construct a fish ladder stream pipe to re-connect the stream channel, from the effluent ponds, with the Oroua River.

ASSESSMENT

- [9] Since the proposed works are located in a reach of the Oroua River that forms part of the Lower Manawatu Scheme I conducted a technical assessment of the application in April 2015. A copy of this assessment has been included as an Appendix to this report.
- [10] As part of my assessment I spoke to the applicant's Consulting Engineer, Mr. John Philpott and agreed a small refinement of his design of the High Rate Overland Flow System. This refinement is discussed in my technical assessment. I found that the proposal meets the relevant design standard and hence recommended technical approval of the application.

RECOMMENDED CONDITIONS

- [11] As part of my technical assessment I recommended seven conditions that should be applied as conditions of consent. The application of these conditions should ensure that the works can be completed without being adversely impacted by a flood event. Furthermore they should ensure that the completed works will be stable and not likely to increase the upstream or downstream, erosion risk.
- [12] It is my understanding that these recommended conditions have been accepted by the applicant.

Jonathon Bell

5 October 2016