Before the Joint Hearings Panel of Greater Wellington Regional Council and Porirua City Council

IN THE MATTER of the Resource Management Act 1991	
AND	
IN THE MATTER	Land use and subdivision consent application (RC6922-SL0046/15) and Discharge, land use and water permit consent application (WGN160028)
BETWEEN	Wellington Regional Council (Local Authority)
AND	Porirua City Council (Local Authority)
AND	Jagger NZ Limited (Applicant)

Brief of evidence of Dr Megan Dianne Oliver

Date: 06 April 2016

Introduction

1 My full name is Dr Megan Dianne Oliver. I am a Senior Environmental Scientist at Greater Wellington Regional Council.

Qualifications and experience

1 I hold a Bachelor of Science and Master of Science (First Class) from the University of Canterbury, and a Doctor of Philosophy in Marine Science from the University of Tasmania.

2 I am employed at GWRC as a Senior Environmental Scientist overseeing monitoring and research programmes in the coastal marine area of the Wellington region. I also provide advice and review comments on marine monitoring plans and reports submitted by consent applicants/holders. Prior to my employment at GWRC, I worked as a marine ecologist at NIWA in Wellington for 14 years.

3 I have approximately 20 years' experience working in the marine environment. In my current role, I manage the Coastal Monitoring Programme at GWRC. This includes regular water and sediment quality monitoring in the Porirua Harbour and catchment as well as undertaking science and monitoring in fulfilment of the Porirua Harbour and Catchment Strategy and Action Plan.

4 I am a member of the New Zealand Marine Sciences Society and the New Zealand Coastal Society.

Code of conduct

5 I have read the code of conduct for expert witnesses in the Environment Court practice note. I agree to comply with this code. The evidence in my statement is within my area of expertise, except where I state that I am relying on the evidence of another person. I have not omitted to consider material facts known to me that might detract from the opinions I express.

Involvement with the proposal

6 I have been asked to provide evidence in relation to my review of the Draft Environmental Monitoring and Adaptive Management Plan (EM&AMP) (June 2015), the Additional Ecology Information memo (3 March 2016) and statement of evidence (18 March 2016) prepared by Dean Miller (Tonkin & Taylor), and the conclusions therein on the assessment of effects on the **marine environment** of the proposed Brookside subdivision project. I have not made a formal visit to the site.

Assessment

7 Following my assessment of the above documents prepared by Dean Miller from Tonkin and Taylor my comments are:

7.1 The Draft Environmental Monitoring and Adaptive Management Plan (EM&AMP) (dated June 2015) did not adequately characterise the marine receiving environment and did not draw on any of the numerous environmental surveys undertaken in the Duck Creek catchment and adjacent harbour areas when proposing monitoring conditions or triggers.

7.2 The subsequent memo prepared by Dean Miller in response to my request for additional ecological information summarised the results of habitat mapping (GWRC), sediment plate monitoring (GWRC), and sediment quality and invertebrate community monitoring (carried out by BML as part of Transmission Gully Motorway (TGM) consent monitoring). The memo overlooked other useful information that may have been informative, such as the continuous turbidity monitoring undertaken in the upper Duck Creek catchment for TGM which commenced in October 2013 and is ongoing.

7.3 For the narrow period over which monitoring data was reviewed (2013–2014), Mr Miller provided an adequate summary of information within the memo.

7.4 In section 3.1 of the memo Mr Miller acknowledges my recommendation to review the marine sediment monitoring data that exists rather than undertake project specific sediment monitoring on the Duck Creek intertidal flats. I encourage the project specific monitoring to include *ongoing* review of these data, not just a one-off review for the purposes of a baseline assessment.

7.5 Further, I recommended that project-specific monitoring, in lieu of the marine sediment monitoring, include sites DCN-06 and DCN-07 in the twice-yearly construction water quality monitoring (the EM&AMP implies that these sites will be sampled during event triggered monitoring). Mr Miller has agreed to this additional monitoring and I would promote the idea of standardising the tide on which the water samples are collected (mid-ebb tide, for example). Further I recommend that Suspended Sediment Concentration (SSC) is a more meaningful parameter to measure than TSS in both the freshwater and marine environments.

7.6 The statement of evidence prepared by Dean Miller (18 March 2016) which assesses the ecological effects of the proposed subdivision on the coastal marine ecology in the vicinity of Duck Creek. Mr Miller's approach to assessing the potential effects of contaminants (sediment, metals and nutrients) on the marine environment appears reasonable. I note, however, that I have not seen or reviewed the data underlying his assessment and I am, therefore, reliant on his accurate presentation of the sediment yield and urban contaminant data, and the subsequent calculations on which he bases his assessment.

7.7 Based on the assessment of effects presented by Mr Miller and assuming his estimates of contaminant concentrations are correct, I broadly agree with his conclusion that, ***if*** construction and operational-phase sediment and stormwater controls are robust, and riparian planting along the Duck

Creek channel is sufficient, the adverse effects on the marine environment of the proposed Brookside subdivision should be less than minor.

Conclusion

8 Overall, I conclude that the effects of the proposed Brookside development will have a less than minor impact on the marine environment provided all care is taken to treat the discharge to a high standard and to minimise the volume of discharge to Duck Creek and ultimately, Pauatahanui Inlet.

Date: 06 April 2016

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Dr Megan Dianne Oliver