

IN THE MATTER: of the Resource Management Act 1991
(RMA)

AND

IN THE MATTER: of Proposed Plan Change 94 (Washer Road) to the Western Bay of Plenty District Plan under Schedule 1 of the RMA.

STATEMENT OF EVIDENCE OF KEITH HAMILL – ECOLOGY

1 July 2022

INTRODUCTION

Qualifications and experience

1. My full name is Keith David Hamill. I am an Environmental Scientist and Director at River Lake Limited. River Lake Limited is a consultancy that provides research, and environmental science and policy advice for understanding and managing rivers, lakes and estuaries. My technical speciality is in water quality and aquatic ecology.
2. I hold a Bachelor of Science degree (Geography) from the University of Auckland (1992) and a Master of Science (1st Class Hons) in Ecology and Resource & Environmental Planning from the University of Waikato (1995).
3. I have 26 years' experience in the area of resource management and environmental science. I have previously worked as a Principal Environmental Scientist at Opus International Consultants Limited, in the United Kingdom as a Senior Environmental Scientist for a consultancy called WRc, and as an Environmental Scientist at Southland Regional Council.

4. My previous experience relevant to this assessment includes:
 - a. Member of Rotorua Lakes Technical Advisor Group (TAG) for Bay of Plenty Regional Council (2017-present).
 - b. Assessing water quality effects of the Te Ah Turanga Manawatū Tararua Highway project to replace the Manawatū Gorge section of road (2019-2021)
 - c. Providing water quality and lake design advice for the Te Awa Lakes Structure Plan, Hamilton (2019).
 - d. Assessing freshwater ecological and water quality effects of the Mt Messenger SH3 Road Alignment (2018).
 - e. Kaituna River re-diversion and wetland creation project. Led ecological and water quality monitoring of the river and estuary to assess effects before, during and after project implementation (2014 – present).
 - f. Member of expert science panel for developing attributes relevant to lakes for the National Objectives Framework as part of the National Policy Statement for Freshwater (NPS-FM).
5. I have been engaged by the Bay of Plenty Regional Council (BOPRC) to provide expert ecological advice on Proposed Plan Change 93. I have been involved in technical feedback to inform submission, undertook a filed visit of the site on 3 June 2022 and participated in a teleconference meeting to with the Applicant to discuss technical issues on 22 June 2022.

Code of Conduct

6. I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014 and to the extent that I am giving expert evidence, have complied with it in preparing this evidence. I confirm that the issues addressed in this evidence are within my area of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in my evidence
7. I have been engaged by the Bay of Plenty Regional Council (BOPRC) to provide expert ecological advice on Proposed Plan Change 94. Involved in technical feedback to inform submission and undertook a site visit on 21 January 2022.

Scope of evidence

8. My evidence will discuss the existing ecological values at the site and the stormwater and on-site pollution proposal from an ecological perspective.
9. My evidence should be considered together with the evidence of **Mr Nathan Te Pairi** and **Ms Sue Ira**.

ECOLOGICAL VALUES OF THE SITE

10. The Ohineangaanga Stream runs along the eastern boundary of the sites proposed for the Washer Road, Structure Plan Change 94. The water quality and ecological values of the Ohineangaanga Stream have been described in the report by Boffa Miskell (2022). I agree with the general findings of this survey that: *“the Ohineangaanga Stream adjacent to the proposed Structure Plan area has moderate to high ecological values”* and that *“Stormwater collected on site will need to be treated to a high standard prior to discharge to the Ohineangaanga Stream to protect the ecological values.”*
11. Boffa Miskell (2022) recommended additional stormwater treatment (over and above what had previously been proposed) to ensure stormwater from the structure plan area has minimal adverse effects on the Ohineangaanga Stream. I support these recommendations. It applies a water sensitive urban design approach appropriate for the industrial subdivision and receiving environment.

PROPOSED STORMWATER SYSTEM AND POLLUTION PLANS

12. Urbanisation of a catchment can cause a range of water quality, hydrological and ecological effects on streams and adversely affect the ecological values of urban streams. These cumulative effects are well documented and commonly referred to as ‘the urban stream syndrome’ (Storey et al. 2013, Walsh et al. 2005). The effects can be minimised by implementing good practice water sensitive design.
13. In order to avoid adverse effects on downstream water quality, hydrology and ecology the proposed development requires systems and devices for the treatment, detention and retention of stormwater. Evidence of **Ms Sue Ira** has considered the efficacy of the Structure Plan’s approach to avoid, remedy or mitigate water quality effects. I agree with her assessment, including the need to prepare site specific pollution plans (**SSPPs**) to minimise the risk of contaminants being discharged from a particular site as a result of the activity or

storage of materials which would occur on that site. This is important because industrial landuse can have high contaminant discharges with their stormwater.

14. I am supportive of the provisions recommended by **Mr Te Pairi** to avoid, remedy or mitigate cumulative effects of stormwater discharges on the Ohineangaanga Stream.

CONCLUSIONS

15. The Ohineangaanga Stream has moderate to high ecological values where it runs past the Washer Road Structure Plan site.
16. I am supportive of the provisions recommended by **Mr Te Pairi** to avoid, remedy or mitigate cumulative effects of stormwater discharges on the Ohineangaanga Stream.

REFERECES

Boffa Miskell 2022. *Ohineangaanga Stream Ecological Assessment*. Prepared by S. DeLuca for David Marshall, 27 May 2022.

Storey R, Brierley G, Clapcott J, Collier K, Kilroy C, Franklin P, Moorhouse C and Wells R 2013. *Ecological responses to urban stormwater hydrology*. Prepared by NIWA for Auckland Council. Auckland Council technical report TR2013/033.

Walsh CJ, Roy AH, Feminella JW, Cottongham PD, Groffman PM, Morgan II RP 2005. The urban stream syndrome: current knowledge and the search for a cure. *Journal of the North American Benthological Society*, 24(3): 706-723.