

**Before Independent Hearings Commissioners
At Wellington**

Under the Resource Management Act 1991

In the matter of Applications for resource consents, and a Notice of Requirement for a Designation, by Wellington Water Limited ('WWL') on behalf of Upper Hutt City Council, for the construction, operation and maintenance of the structural flood mitigation works identified as the Pinehaven Stream Improvements Project

Joint Witness Statement - Erosion and Sediment Control

Dated 17 July 2020

Experts participating: *To be inserted prior to conference*

- 1 Claire Conwell (WWL)
- 2 Tim Haylock (WWL)
- 3 Gregor McLean (GWRC)

[Facilitator: *The conferencing was self-facilitated]*

1 Introduction

- 1.1 All experts confirm that they have read and are familiar with Code of Conduct for Expert Witnesses in the current Environment Court Practice Note (2014) and agree to comply with it.
- 1.2 The primary purpose of expert conferencing is to assist the Commissioners and to reduce hearing time.
- 1.3 The issues discussed by the witnesses were:
 - a) Existing water quality in the project area (including sensitivity to adverse effects);
 - b) Appropriate reasonable mixing zone;
 - c) The effects of construction of the project on water quality;
 - d) The effects of the project on water quality after construction is complete;
 - e) Whether the project discharges will lead to any of the effects listed in section 107(1)(c) to (g) of the RMA;
 - f) Whether the measures proposed to manage erosion and sediment control will be appropriate;
 - g) Any possible alternative methods of discharge;
 - h) Proposed resource consent conditions relating to water quality (including triggers);
 - i) Winter works Condition 40 and 41.

Areas of general agreement were discussed as follows:

- a Existing water quality in the project area (including sensitivity to adverse effects):

The experts agreed that water quality (for the purpose of this statement is restricted to clarity, suspended sediment concentration (SSC) and turbidity) is good in dry weather conditions, and that after heavy rain these parameters are all significantly affected (i.e. reduced clarity, increased in SSC and increased turbidity).

- b Appropriate reasonable mixing zone:

The experts agreed that the mixing zone was in general appropriate for the activity.

It was acknowledged that for Section 12 Blue Mountain Road to Whitemans culvert– a 50m reasonable mixing zone cannot be achieved given it discharges into the Hulls Creek via the culvert

- c The effects of construction of the project on water quality:

The experts acknowledge that the proposed construction methodology is considered industry best practice, and should appropriately protect downstream environmental values and associated water quality measures (as clarity, SSC and turbidity).

- d The effects of the project on water quality after construction is complete:

Downers (Tim Haylock) generally regards the effect after completion to be sustainable – i.e. the construction will not lead to any adverse impacts on overall water quality (clarity, SSC and turbidity) .

- e Whether the project discharges will lead to any of the effects listed in section 107(1)(c) to (g) of the RMA:

See (c) above. Experts agreed that given Site Specific Environmental Management Plan (SSEMP) and Erosion and Sediment Control Plan (ESCP) are industry best practice, then items 107(1) (c) to (g) will be managed.

f Whether the measures proposed to manage erosion and sediment control will be appropriate:

See (e) above.

g Any possible alternative methods of discharge;

The experts did not identify /discuss alternatives; it was agreed that the most appropriate methods of discharge were already included in the management plans.

Items where different views were discussed and prompted further discussion

h Proposed resource consent conditions relating to water quality (including triggers):

There was considerable discussion around consent conditions and wording relating to the ESCP, and the proposed limit of 50 mg/L SSC in Condition 26, the role of the Adaptive Management Plan (AMP) and where this sits in relation to the ESCP, SSEMP and proposed Consent Condition 26.

The uncertainty and 'unknowns' in relation to whether the proposed trigger level of 50 mg/L SSC was an appropriate number (or not) was the main focus of discussion – the experts agreed that this remains an unknown until the works will commence and field data can be collected, analysed and reviewed in the context of the construction methods.

Tim Haylock pointed out that the downstream trigger limit was reduced from 150 mg/L to 50 mg/L SSC, and that this change was a prompt for some of the uncertainty regarding if this new limit of 50mg/L SSC was achievable.

Gregor McLean indicated that the proposed revision of the limit from 150 to 50 mg/L SSC was to recognise the items specific to s107, especially regarding conspicuous change in water clarity.

The experts discussed at length the issue regarding 'workability' of the limit of 50mg/L SSC, and if the 50mg/L is exceeded – will this result in immediate enforcement action from GWRC, or will this be considered part of the AMP / notification processes. Exceedance reporting conditions are contained within Condition 29 and are considered appropriate and allow for an adaptive approach to be implemented.

Claire Conwell indicated that the limit of 50mg/L SSC seems reasonable – based on her assessment of Hutt River State of the Environment monitoring data for the site immediately downstream of the Hulls Creek discharge to the Hutt River main stem (corresponding to site 'Hutt River Opposite Manor Park Golf Club' (RS21) from the GWRC Rivers Water Quality and Ecology long term monitoring programme – also known as the freshwater SoE monitoring programme).

Tim Haylock acknowledged there is uncertainty around the costs associated with the overall implications of the trigger exceedance set at 50 mg/L SSC – and with this the associated costs of the construction method and monitoring programme to demonstrate compliance.

Gregor McLean indicated that his understanding, the wording of the consent conditions and the intent of the application (via the ESCP & SSEMP) provide actions for uncertainty in the earlier stages of constructions, and that the learnings of these earlier stages can be applied to later stages of construction via an adaptive management approach. Gregor noted that the adaptive management approach does contain uncertainties, including impacts on cost and programme,

i Winter works discussion – Conditions 40 and 41

Tim Haylock raised the question as to why the condition regarding winter works included. Tim indicated that June- Oct may not be wetter than any other months. The condition will increase the programme, cost and impact to the stakeholders

Gregor McLean explained that works during the winter period are considered higher risk given the higher water table, higher frequency of rainfall triggers.

Gregor indicated that Condition 40 & 41 allows for winter work, but an extra approval process will need to be met to allow for risks associated with winter works to be appropriately managed.

- 1.4 The following drawings, data and published standards/ paper relied upon in coming to their opinion were referred to during the course of the conferencing:
- a Greater Wellington Regional Councils River Water Quality and Ecology data for clarity (measured as black disk (m)), turbidity (NTU) and SSC (mg/L) at site 'Hutt River Opposite Manor Park Golf Club (RS21)', from 1 January 2017 to 16 March 2020.
 - b Site construction plans, set out in Appendix B of the Draft ESCP

Date: 17 July 2020

Signed



Claire Conwell



Tim Haylock



Gregor McLean