

Southern Link Inland Port
Simon Bloomberg – for SLPL- Summary Statement on Water Quality

Introduction

1. My section 55 evidence addresses the water quality monitoring and adaptive management framework for the Southern Link Inland Port (**SLIP**). I did not write a technical report in support of the application but was involved in the preparation of the draft Stormwater Monitoring Plan (**SMP**) and draft Standard Operating Procedure (**SOP**) for collecting monitoring samples from the Silver Stream / Whakaehu. I contributed to the updated draft SMP with my s 55 evidence, as well as a draft SOP.

Summary of the conceptual site model and baseline programme

2. The objective of the SMP is to verify stormwater treatment performance by setting out the measures that will be implemented to monitor the operational phase stormwater discharge into Silver Stream during the operation of the SLIP, and set out the management response to avoid, remedy or mitigate any potential effects of the stormwater discharge on the water quality and ecology of Silver Stream. The framework is built on a conceptual site model linking the sources of potential instream contaminants (upstream catchment, inland port activities, and historic land uses), the pathway of sitewide stormwater runoff through an onsite treatment system, and the discharge of treated stormwater to the sensitive receptor of the Silver Stream / Whakaehu.
3. The SOP sets out the monitoring methodology for establishing the baseline, during construction and operation phases, and is to be incorporated into the SMP prior to that plan being certified.
4. Collection of baseline water quality data commenced in April 2026 with the aim to characterise the natural variability in water quality prior to the discharge commencing. At least 24 baseline samples will be collected in order to satisfy the ANZG (2018) approach for calculating the 80th percentile of a reference dataset with confidence. Baseline samples will be collected at different flows and seasonal conditions to account for the main drivers of natural water quality variability. The flows are categorised as 'base flow' conditions (flows of less than 1 m³/s with a flat hydrograph) which are to be collected at least seasonally; and 'storm flow' conditions (flows greater than 1 m³/s) be monitored over a minimum of four events (quarterly). Storm flow samples should make up the majority of the 24 samples in order to develop a robust understanding of the natural variability in water quality at the higher flows expected during the

discharge of treated stormwater. SLPL intend to collect as many of the 24 samples as possible prior to construction phase 1 commencing. To date six samples have been obtained.

Summary of the trigger-setting methodology for Silver Stream / Whakaehu

5. As per table 1 in my evidence, the proposed adaptive management framework uses trigger limits for water quality in the Silver Stream / Whakaehu derived from the 80th percentile (80%ile) values of the baseline dataset collected at upstream and downstream monitoring sites. The published (e.g. ANZG) guideline values are adopted where the 80%ile of the baseline dataset meets them. Where baseline concentrations already exceed the published guideline value, a Site-Specific Trigger Limit (**SSTL**) is set at the 80%ile of the baseline dataset. If neither a DGV or SSTL is considered suitable then an alternative limit may be set for any key analyte where, in the opinion of a suitably qualified and experienced practitioner (**SQEP**) it is appropriate to do so based on the results of the baseline monitoring and specific characteristics of the key analyte (e.g. where the 80%ile value is considered to pose too high a risk due to toxicity concerns).
6. Additionally, a Baseline Modification Factor (**BMF**), being the 80%ile of the difference between paired upstream and downstream baseline samples, is applied to distinguish natural variability from any change attributable to the discharge.
7. This trigger framework is applied on a quarterly basis, rather than the annual timescale recommended in the ANZG guidance, so that any issue is identified and acted on promptly, while avoiding both the masking of high concentrations during discharge events and unnecessary triggers from natural variability between the reference and impact sites. Table 2 in my evidence provides an example of assessing the trigger and response compliance.
8. Figure 1 in my evidence provides a flow chart for stepping through the trigger limit setting and monitoring process through to Trigger 1. Proposed condition B.35(1-5) sets out the full trigger and response framework.

Summary of discharge characterisation

9. The attenuation pond will capture first flush waters and allow them to mix and be diluted by later-stage inflows with lower contaminant loads. This design results in a well-mixed discharge (e.g. like an 'event mean concentration') which significantly reduces the risk of first flush peak concentrations reaching the receiving environment. It is for this reason that water in the Silver

Stream / Whakaehu is anticipated to be maintained at its existing good quality in the reach adjacent to the SLIP site and within the 50m downstream mixing zone.

Summary of sampling methods

10. Once the discharge commences, samples of the discharge water quality at the point of discharge will be collected in addition to samples from the upstream and downstream monitoring sites. Because the design of the stormwater attenuation pond results in a well-mixed 'event mean concentration' type discharge, the use of grab sampling is an appropriate method for monitoring the discharge and surface water quality. The proposed grab sampling method is consistent with National Environmental Monitoring Standards (NEMS, 2019) and NIWA (2019) guidance for surface water quality and stormwater quality sampling. Two grab samples will be collected per event to assess concentration changes over time and different flow conditions. I address the appropriateness of using end of pipe samples as a compliance limit, further below.
11. In addition to water quality monitoring, the discharge monitoring programme includes ecological indicators and sediment, and is linked to a tiered response framework under proposed condition B.35.

Summary of adaptive management framework for managing the effects of the stormwater discharge

12. If a non-compliant result is identified, the consent authority will be notified following the review in B.35(1)(a), and prior to any follow-up sampling. If an exceedance is confirmed (e.g. Trigger 3) ORC will also be notified within 48-hours. An annual report will be provided to ORC under condition B.37.

Response to Minute 9 para [22]

13. Paragraph 22 notes that "end of pipe" limits may be a potential option for example if water quality improves over time and all parameters measured meet the 99% species protection default guideline values. As stated in paragraph 2.22 of my evidence, the baseline dataset and site-specific triggers will be continuously supplemented with data from the upstream / reference site. Therefore, if water quality improves in the upper catchment, then the 80%ile value would change to reflect those improvements. In the situation where that meant the 80%ile value met the published guideline value then that published value would then be adopted as the trigger

limit rather than a site-specific trigger limit. In this way, the existing adaptive management framework accounts for improvements or otherwise in the upstream water quality.

14. In my opinion, it is not appropriate to adopt compliance limits at the end of pipe because it is not possible to assess potential effects in Silver Stream / Whakaehu based on an end of pipe concentration due to flow variation in the Silver Stream / Whakaehu diluting the discharge to an unknown amount. A relationship could be generated between flow measured in the waterway and the end of pipe; however, I consider the current proposed approach to be more robust as it assesses actual concentrations instream as a direct measure of effects.
15. The discharge sample (end of pipe) results will be used for management purposes but are not in my view considered appropriate as a specific compliance limit. To be clear, the purpose of collecting the discharge sample (end of pipe sample) is for the occasion when 'Trigger 1' is exceeded and there is need to undertake a review of the potential causes of the exceedance (see proposed condition B.35(1)(a)).

Summary

16. Overall, it is my opinion that the proposed adaptive management framework is suitably robust and responsive for managing the effects of the discharge on the receiving waters over time. The short-duration and intermittent discharge of treated stormwater to a waterway requires a site-specific management approach to ensure that the discharge is unlikely to cause adverse effects (acute or chronic) and meets the water quality objective (e.g. maintain existing water quality).
17. This evidence does not change the views I have contributed to the draft Stormwater Monitoring Plan and Standard Operating Procedure.



Simon Bloomberg
10 September 2026