

Southern Link Inland Port
Bryony Miller – for SLPL - Summary Statement on Freshwater Ecology

Introduction

1. My section 55 evidence addresses how the design and management of the Southern Link Inland Port (**SLIP**) stormwater treatment system and adopted instream water quality trigger levels protects the freshwater ecology of the Silverstream /Whakaehu. This is supported by the Freshwater Ecology Impact Assessment (FEcIA, April 2026, Part B.04 of the substantive application).

Summary of the ecological design process

2. The iterative process taken to designing the stormwater treatment system for the SLIP allowed it to be targeted at the specific types of activities that will take place on the site, alongside the ecological values identified within the Silver Stream / Whakaehu, drawing on baseline water quality and ecological characterisation. This included an initial baseline water quality sample taken in September 2025 and long-term Otago Regional Council monitoring data from sites upstream (Three Mile) and downstream (Gordon Road) of the site. Ecological values were identified as High in this work, while site-specific water quality was assessed as good at both the upstream and downstream sites.
3. Existing stormwater compliance monitoring data from the comparable Port Otago Ltd site at Port Chalmers has been used by Stantec to help verify the Contaminant Load Model (**CLM**), further informing the stormwater treatment design. The site-specific ecological and water quality information gathered for the Silverstream is then supplemented by a robust ongoing validation monitoring programme both within consent conditions and within the draft Stormwater Monitoring Plan (**SMP**).

Summary of avoidance and mitigation measures

4. Potential effects on instream habitat, spawning habitat, fish migration and broader ecological processes have each been addressed through specific, targeted measures. Instream habitat quality is protected through erosion and sediment control procedures following the Auckland Council GD05 guidelines for the construction phase of the project, together with the designed stormwater attenuation and treatment systems. Potential effects on spawning habitat and fish migration are addressed through outlet design, under which preliminary designs place the

primary footprint outside the wetted bed and, where any works in the wetted bed are required, avoidance of trout spawning timing is proposed.

5. Broader ecological attributes, including nutrient, contaminant and sediment inputs, water temperature and flow regime, are addressed through the stormwater treatment system, and are assessed as very unlikely to give rise to ecological impacts from these sources, with precautionary, trigger-based monitoring in place to confirm this assessment.

Summary of the ecological monitoring framework

6. The proposed conditions of consent set compliance limits based on the range of factors described by Mr Bloomberg and require management actions when there are exceedances recorded. Each stormwater discharge is designed to cease 12-24 hours after a rainfall event ends, with the frequency of large discharges expected to align with a modelled flood frequency of 12.3 events per year.
7. The monitoring framework has been refined to provide an appropriately sensitive early indicator of change: macroinvertebrate community index (**MCI**), quantitative macroinvertebrate community index (**QMCI**), and average score per metric (**ASPM**) are each assessed against baseline conditions from the FEClA. Where the prescribed 10% change threshold is exceeded across two of the three metrics, unless mirrored at the upstream reference site, the management actions set out in the SMP and are reflected in proposed condition B.31.

Summary of construction phase management

8. During construction, sediment management at source is addressed through the ESCP required under the Construction Management Plan, with turbidity and total suspended solids guidelines for the Silver Stream / Whakaehu built into the SMP's proposed triggers, informed by baseline and storm sampling currently underway, and with a baseline deposited fine sediment survey already completed in September 2025 and set out in the FEClA. Ecological monitoring is also proposed during construction phase and linked to a tiered response framework under proposed conditions B.30-B.32 and the SMP.
9. Proposed conditions B.21C and B.21D cover water quality and sediment monitoring under construction Stage 1 and condition B.32 and the SMP covers sediment monitoring under construction Stages 2 and 3. Stage 1 monitoring includes monthly sampling and assessment of

fine sediment cover at the downstream and upstream sites. Stages 2 and 3 will have the full attenuation pond and stormwater treatment system online, and areas of open construction will be smaller than during Stage 1. As such, the sediment monitoring is aligned with the reduced risk profile of these activities. Stage 2 and 3 monitoring includes an assessment of deposited fine sediment at both the upstream and downstream site in accordance with the SAM-2 method. Further sampling and management steps are then required if sediment deposition is found to show a 10% increase at the downstream site, relative to the upstream site.

10. Further to this, total suspended solids (**TSS**) and turbidity will be tested quarterly throughout the operational stage and construction Stage 2 and 3 (as part of the water quality monitoring sampling) which provides ongoing monitoring and trigger levels of sediment inputs from the site (see Table 1 of SMP).

Response to Minute 9; point [22]

11. Paragraph 2.22 of Mr Bloomberg's evidence explains that the baseline dataset and site-specific triggers will be continuously supplemented with upstream reference-site data for storm-flow conditions. It also explains that, where samples are collected during trigger response, downstream compliance-site and upstream baseline-site data will be used for base-flow or dry-weather conditions. This adaptive framework allows the site-specific trigger limits to be continuously calibrated so that natural variability can be accounted for in a practicable way. In practice, trigger levels can be adjusted quarterly in response to the data collected at the upstream site. This means that if water quality parameters improve over time, the trigger levels will also adjust to reflect the improved condition of the stream. This may result in some or all analytes aligning with the ANZG (2018) 99th percentile ecological protection limits in the future, if overall catchment health improves.
12. The proposed quarterly monitoring programme will include a discharge sample collected at the same time as the upstream and downstream samples. This will allow the direct stormwater input from the site to the Silver Stream / Whakaehu to be identified, understood and characterised. The proposed instream trigger levels will operate as the primary ecological safeguard. They will confirm whether existing ecological values are being maintained within the stream's natural variability and will provide a practical basis for responding if monitoring identifies a relevant change.

13. The viability of adopting 'end of pipe' or retention pond discharge limits, whether from the discharge sample or from a sample taken at the retention pond, is addressed further in the evidence summaries of Dr Conwell and Mr Bloomberg. From a freshwater ecology perspective, however, the ANZG (2018) guideline limits are based on instream concentrations. Maintaining trigger levels based on instream water quality parameters is therefore consistent with the ecological protection limits set out in the ANZG (2018) guidelines and allows for a direct measure of potential effects on instream ecology.

Summary of recommendations

14. I support the approach put forward through the section 55 evidence and condition set. In particular I support:
- (a) the revised 10% macroinvertebrate change threshold across two of MCI, QMCI and ASPM under condition B.31;
 - (b) the baseline deposited fine sediment survey method be updated from SAM-1 to SAM-2 (Clapcott *et al.* 2011) as reflected in condition B.32;
 - (c) outlet design continues to be developed to keep the primary footprint outside the wetted bed, with trout spawning timing avoidance (15 May to 30 September) applied if wetted bed works are required as addressed by Dr Allibone; and
 - (d) Mr Bloombergs' evidence which shows how water quality triggers will remain in continuous alignment with Silver Stream / Whakaehu reference conditions, allowing for upstream improvements to be incorporated into triggers and to protect the existing stream ecology.
15. Overall, it is my opinion that the proposed approach to stormwater attenuation and treatment, construction management, monitoring and the setting of discharge limits will ensure the discharge maintains the ecological attributes of the Silver Stream / Whakaehu identified during the baseline assessments. This evidence does not change the views I expressed in the Freshwater Ecology Impact Assessment.



Bryony Miller
10 September 2026