

IN THE MATTER
of the Resource Management Act 1991

AND

IN THE MATTER
of Private Plan Change 23
Whisper Creek, Spencerville

CLARIFICATION MEMORANDUM OF JOHN MESSERLY
OURUHIA RESIDENT AND SUBMITTER
ON WASTEWATER EVIDENTIAL ISSUES RELATING TO PPC23

Dated: 22 May 2026

Topics Addressed

1. Clarification of PS78 Capacity and Upgrade Interpretation
 2. Interpretation of Downstream Conveyance and Rising-Main Constraints
 3. Clarification of SCIRT Rehabilitation Scope and Historical System Condition
 4. Calibration, Validation, and Evidential Interpretation of Wastewater Modelling
 5. Clarification of the Degree of Confidence Reasonably Attributable to the Present Wastewater Assessment Framework
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Documents Referenced

- WSP Christchurch City Wastewater Model Update and Calibration Report (2020 draft)
 - Christchurch City Wastewater Model Update and Calibration Report (WSP, 2020)
 - Kainga, Brooklands, Spencerville (WW): Detailed Design Report. SCIRT Project #11058, 31 October 2014.
 - 2025-02-17 email – Visual results from Pump Test 77 undertaken
 - PPC23 – Messerly – Wastewater Technical Review Final
 - PPC23 – Messerly – Addendum – Wastewater Technical Review – Final
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Supplementary Clarification Memorandum
Prepared for the Independent Hearing Panel
Christchurch City Council
Private Plan Change 23 Proceedings

The submitter respectfully provides this supplementary clarification memorandum for the assistance of the Hearing Panel following oral wastewater evidence and associated Commissioner discussion during Day 3 of the hearing.

The purpose of this memorandum is narrow. It is not intended to introduce new substantive evidence, revisit the broader merits of the wastewater submissions, or challenge the professional integrity of any expert witness. Rather, its purpose is to assist the Panel where certain oral exchanges may unintentionally have created impressions regarding the scope, degree of validation, or evidential confidence associated with the wastewater assessment framework that differ from the limitations and qualifications contained within the disclosed technical material itself.

Because oral hearing exchanges necessarily occur in compressed and conversational form, technical distinctions concerning calibration scope, validation status, modelling assumptions, future-condition interpretation, and system-level assessment can occasionally become condensed or simplified in ways that may obscure the narrower methodological concerns raised within the submitter wastewater review.

This memorandum therefore seeks only to clarify several limited matters relevant to evidential interpretation and rezoning-stage reliance, particularly within the context of the coastal, shallow-groundwater, and climate-sensitive receiving environment relevant to the Kainga–Brooklands–Spencerville wastewater system.

The submitter respectfully considers that these clarifications may assist the Panel in accurately understanding the scope of the concerns advanced within the wastewater review and the distinction between:

- engineering feasibility; and
- the degree of predictive confidence presently established for long-term receiving-network behaviour under future coastal conditions.

Clarification points

1) During oral evidence, reference was made to reliance upon “2018 calibrated peer review models supported by recent performance testing and validated against 20 years of rainfall data.”

The submitter respectfully notes that this may create the impression that the wastewater model has been comprehensively validated for severe wet-weather and compound-event behaviour within the specific PS78 coastal receiving environment.

However, the disclosed WSP calibration report relied upon within Hall Appendix B was itself a draft document whose Executive Summary stated that “model validation is yet to be completed.” Further, the entirety of the report’s Section 8 “Validation” chapter consisted only of placeholder headings and editorial instructions, without completed validation analysis.

The submitter’s wastewater concern therefore related not to the absence of modelling activity, but to the degree of demonstrated validation and evidential confidence presently established for rezoning-stage reliance within this coastal receiving environment.

2) During oral evidence, reference was made to wastewater models being “validated against 20 years of rainfall data.”

The submitter respectfully notes that this may create the impression that the wastewater model has been demonstrated as sufficiently predictive for severe wet-weather and compound-event conditions comparable to the 2023 Auckland Anniversary flooding and Cyclone Gabrielle events.

However, the Christchurch City Council 2024 Design Storm Review Technical Memorandum expressly recognised that multiple storm-event scenarios are necessary in order to fully understand wet-weather impacts within the wastewater network. The submitter's concern therefore related not to whether calibration activity occurred, but whether the presently disclosed modelling framework sufficiently establishes rezoning-stage confidence regarding severe-event receiving-network behaviour within this coastal wastewater environment.

3) During discussion regarding infiltration vulnerability, reference was made to welded PE pressure pipes and pressurised wastewater infrastructure in response to concerns regarding flooding and groundwater interaction.

The submitter respectfully notes that this exchange may unintentionally create the impression that the broader receiving wastewater system relevant to PPC23 is now predominantly infiltration-resistant pressure infrastructure.

However, the principal concern identified within the submitter wastewater review was not directed toward the dual rising mains or the long pressurised conveyance sections associated with PS78. Rather, it concerned the remaining gravity reticulation components within the Kainga–Brooklands–Spencerville receiving catchment.

The SCIRT documentation records approximately 13 km of local wastewater gravity mains within the network upstream, together with extensive earthquake-related land damage, liquefaction, settlement, high groundwater conditions, and ongoing serviceability concerns.

As identified within the submitter wastewater review, the 4km Kainga gravity network dates from the late 1980s and early 1990s rather than fully replaced welded pressure systems. Similarly 91% of Spencerville's 3km are gravity mains with only 185M upgraded to LPS.

Discussion of the pressurised portions of the system can create the misleading impression that the infiltration and inflow issue has largely been resolved. However, materially significant portions of the coastal receiving network remain conventional gravity infrastructure potentially vulnerable to groundwater-driven infiltration and inflow during severe wet-weather and flood conditions. The presently disclosed evidential material did not identify empirical infiltration and inflow measurement specific to those gravity-network sections, nor evidence demonstrating direct wet-weather validation of their behaviour under severe compound-event conditions.

4) During oral discussion, reference was made to ongoing Council processes concerning future climate-related wastewater functionality, modelling, and infrastructure requirements, with the expectation that resulting conclusions would later inform infrastructure design and upgrade requirements.

The submitter respectfully notes that this may create tension between:

- the section 32 requirement to evaluate risk, efficiency, and infrastructure effects on the basis of sufficient information; and
- reliance upon the NPS-UD concept of “readily available infrastructure,” where future infrastructure requirements remain materially dependent upon unresolved investigations into climate-related functionality, resilience, and operational performance.

The clarification sought is not whether future engineering responses may ultimately exist, but whether the presently available evidential record sufficiently characterises the receiving-network behaviour and future infrastructure implications relevant to rezoning-stage reliance.

5) During discussion of PS78 capacity, a suggestion was made regarding the pump station being capable of upgrade up to “three times” its current capacity.

The submitter respectfully notes that this may create the impression that with pump replacement, cleanout and other minor improvements that substantially increased capacity is available in the readily available infrastructure.

However, the evidence also identified the rising mains, rather than the pumps themselves, as the limiting infrastructure. Of the approximately 9.5 km of dual rising mains between PS78 and the downstream Burwood receiving network, only approximately 2.2 km was replaced post-earthquake with PE100 pipe. Approximately 71% of the dual rising-main route therefore remains original 1986 rubber-gasketed uPVC infrastructure.

The submitter further notes that the DN225 section requiring post-earthquake replacement ran directly alongside the retained DN175 rising main which was not replaced. The evidential material did not identify condition assessment or hydraulic evidence demonstrating that the retained DN175 section remained suitable for materially increased high-pressure operation.

The clarification sought is therefore not whether increased flow may be theoretically possible, but whether the presently disclosed evidential record establishes sufficient confidence that the retained 1986 rising-main infrastructure can reliably satisfy the NPS-UD concept of “readily available infrastructure” for the materially increased operational capacity assumed for rezoning-stage reliance.

In particular, the evidential material did not identify whether achieving the assumed future performance would require substantial further renewal of the retained 1986 uPVC rising-main sections, including potential replacement with higher-resilience PE100 infrastructure over the remaining majority of the route.

6) During discussion of PS78 upgrade history, reference was made to the SCIRT works and subsequent pump upgrades in a manner that may create the impression that the presently asserted future-capacity assumptions had already been comprehensively assessed and resolved within the SCIRT design process.

The submitter respectfully notes that while the LGOMIA provided SCIRT design report was dated 2014 and could not record pumps being replaced in 2016, the replacement of the pumps failed to increase capacity as required in Appendix G of that report. The post earthquake WWF capacity requirement for the entire system (“PM78 (PS77 + Spencerville+ Spencer Park+PC45”) was indicated to be 59.7L/s. However, the 2015 PS78 pump test referenced within the disclosed LGOIMA correspondence recorded individual pump rates of approximately 31 L/s and 33 L/s respectively, but only approximately 35 L/s when both pumps operated together in parallel, with the reviewing engineer describing this as a “very poor flow rate” requiring further system-curve assessment. Submitter now understands these were the new pumps undergoing pre-commissioning testing. Noting that the actual pump capacity did not meet the SCIRT report objective of 59.7L/s target, we further note that recent drawdown tests show that current capacity with both running is less than half of the SCIRT target capacity.

Conclusion

The submitter respectfully reiterates that the purpose of this memorandum is confined to clarification of evidential interpretation issues arising during oral hearing discussion.

The memorandum does not assert that future wastewater servicing solutions are necessarily impossible, nor that future engineering mitigation could not ultimately be developed. Rather, the clarification sought concerns whether the presently available evidential platform establishes sufficient confidence regarding long-term receiving-network behaviour, future-condition resilience, and system-level infrastructure implications to support rezoning-stage reliance within this specific coastal receiving environment.

The submitter respectfully acknowledges the substantial technical work undertaken by both Council and applicant experts. The concerns identified instead relate to the interpretation, scope, validation status, and future-condition confidence reasonably attributable to the presently disclosed modelling and assessment framework.

The submitter therefore respectfully requests that the Panel consider these clarification matters when evaluating the degree of evidential certainty and infrastructure confidence appropriately attributable to the wastewater assessment material before the Panel.