PC23 - Whisper Creek Residential

Christchurch City Council

Submitter Details

Submission Date: 26/11/2025

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Resident or Ratepayer *

Which Area is your property in? *

*

I could not **Gain an advantage in trade competition through this submission**

directly affected by an effect of the subject matter of the submission that:
a. adversely affects the environment, and

I am not **b. does not relate to the trade competition or the effects of trade competitions.**

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Consultation Document Submissions

Provision:

Oppose
Decision Requested:
see attached

Reason for Decision Requested:

Specific Provisions

see attached

Reasons

see attached

Form 5 – Submission on a Publicly Notified Plan Change

Christchurch District Plan – Resource Management Act 1991

1. Plan change name & number:

Private Plan Change 23 – Whisper Creek (PC23)

2. Submitter Details

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3. Submission Details

☒ Oppose all or part of the application

The specific provisions of the plan change that my submission relates to are:

Refer to attached full technical submission.

The reasons for my submission are:

Refer to attached full technical submission.

The decision I would like the Council to make is:

Refer to attached full technical submission.

4. Trade Competition

☒ I am not a trade competitor of the applicant.

5. Hearing of this application

☒ I wish to speak in support of my submission.

6. Signature (not required for electronic submission)

Signed: _____ Date: __14 November 2025_____

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1. Introduction and Scope

This technical submission is provided in support of and in solidarity with the submission(s) lodged by:

- the Ouruhia Residents Group, and
- the Spencerville community

which sets out substantial and legitimate concerns regarding Private Plan Change 23 (Whisper Creek).

I submit this document on behalf of the Messerly family of Ouruhia and the Lemzin family of Spencerville, both of whom reside within the local road network, hazard environment, and ecological catchment directly affected by the proposed rezoning. Our households, along with many others in Ouruhia and Spencerville, have lived experience of the transport constraints, flooding patterns, groundwater behaviour, and emergency-evacuation realities of this part of northern Christchurch.

This submission is grounded in the obligations of Te Tiriti o Waitangi and in the mana, tikanga, and rangatiratanga of Te Ngāi Tūāhuriri Rūnanga as mana whenua for the Pūharakekenui/Styx catchment and coastal-margin landscapes. All planning decisions for this rohe must give effect to the partnership, protection, and participation principles affirmed through Te Tiriti, as well as the requirements of the Resource Management Act (ss 6(e), 7(a), 8).

The development area sits within landscapes, waterways, mahinga kai sites, and cultural travel routes of long-standing importance to Ngāi Tahu whānui. As such, the Crown (and by delegation, Christchurch City Council) has a responsibility to ensure that mana whenua are fully informed, fully engaged, and afforded the opportunity to assess proposed activities at a level commensurate with their kaitiaki responsibilities.

I endorse the broad concerns raised in the Ouruhia and Spencerville submission(s), however this document serves a different function. It provides a rigorous technical analysis that identifies numerous additional deficiencies in the proposal that are not addressed in those submissions. These include unresolved groundwater-rise and salinity-intrusion risks, unmodelled Styx-catchment flood behaviours, critical shortfalls in the applicant's stormwater and wastewater assessments, unaddressed lifelines vulnerabilities, inconsistencies with the MDRS statutory framework, and omissions in relation to national and regional policy instruments. These points constitute new, independently substantiated

objections that materially alter the risk profile of PC23 and therefore must be considered by the Council on their own merits. This submission draws on:

• CCC's Requests for Further Information (11 June, 29 July, 6 August 2025)
• the applicant's replies, plan and appendixes which contain multiple admissions of design deficiencies
• the Christchurch District Plan
• the Canterbury Regional Policy Statement
• the National Policy Statements (NPS-UD 2020; NPS-FM 2020; NZ Coastal Policy Statement 2010)
• MfE (2022) Coastal Hazards and Climate Change Guidance
• NZSeaRise (2022) projections
• NZGS 2021 geotechnical guidance
• Boffa Miskell (2023) Styx Catchment Ecology Monitoring
• earthquake-engineering literature for coastal-plain environments

Together, these form a comprehensive evidential basis for concluding that PC23 is not safe, not resilient, not lawful under the higher-order planning framework, and not financially or infrastructurally viable.

This submission strengthens the community's concerns by situating them within the relevant hazard, infrastructure, and policy frameworks. This includes demonstrating consistency with national and regional direction, identifying contradictions in the applicant's technical material, and highlighting omissions or assumptions that materially underestimate risk or cost.

This technical assessment responds to gaps in the applicant's engagement with Te Ngāi Tūāhuriri Rūnanga. The applicant relies on a 2022 preliminary cultural letter prepared for an earlier, materially different concept plan—one that did not include 800 dwellings, medium-density clusters, a commercial hub, large-scale earthworks, or the reconfiguration of wetlands and stormwater basins now proposed under PC23. That earlier correspondence does not constitute a Cultural Impact Assessment (CIA), nor can it reasonably be taken as expressing informed mana whenua views on the current rezoning request.

It is therefore necessary and proper that this submission highlight the procedural, cultural, and statutory deficiencies that arise from the absence of updated mana whenua assessment.

On a personal note, I want to make it clear that I am not a planning professional, nor do I wish anyone to assume any such thing. Preparing a submission of this scale has been a significant undertaking. I am a retired research engineer from a well known software corporation who developed advanced information technology now regarded as

commonplace. To help organise, summarise, and make sense of the extensive technical material lodged by the applicant and CCC, I made use of information tools much more advanced than those I worked on during my research career. These functioned much like a highly capable search and drafting tools—I used them to help structure information, cross-check details across documents, and ensure I was interpreting the publicly available material consistently.

All of the facts, citations, and technical points in this submission come directly from the applicant's documents, CCC's RFIs, national policy statements, and other publicly accessible sources. The conclusions and arguments are my own. These tools simply helped me navigate the material and participate more effectively in a process that is ordinarily difficult for laypeople to engage with.

Scope of Issues Raised

This submission raises issues relating to, but not limited to:

• transport and emergency-evacuation safety
• natural hazards and climate-change risk (sea-level rise, tsunami, groundwater rise, liquefaction, lateral spread, settlement)
• stormwater design, flood-storage displacement, and three-waters infrastructure resilience
• MDRS compliance, Qualifying Matters, and Clause 25(4A)
• ecology, biodiversity, and cumulative effects on the Pūharakekenui/Styx River
• cultural and archaeological values
• public-health, contamination, and potable-water supply risks
• urban-design and emissions implications
• economic feasibility and risk of stranded development
• s32 defects, including inadequate assessment of alternatives

Matters of significance to mana whenua are interwoven throughout the issues raised in this submission.

They arise in relation to:
• cultural heritage and archaeological risks,
• effects on the Pūharakekenui/Styx River as a taonga and a Ngā Wai value,
• mahinga kai and riparian restoration obligations,
• the application of Te Mana o te Wai, and
• the Crown's duty to ensure that urban rezoning decisions do not compromise the ability of Te Ngāi Tūāhuriri to exercise kaitiakitanga.

For this reason, the submission treats cultural effects not as a discrete environmental component, but as a foundational consideration that interacts with hydrology, ecology, landscape change, and long-term hazard exposure.

For the avoidance of doubt, this submission expressly reserves the right to introduce further analysis, evidence, expert reports, diagrams, or technical appendices at later stages (including further submissions and any hearing), provided such evidence falls within the issues mentioned in this submission.

Purpose of the Technical Submission

The purpose of this submission is to ensure that CCC's s42A reporting officer and hearing panel have a complete scientific and statutory basis on which to assess PC23; to reinforce community concerns with authoritative supporting references; and to demonstrate that PC23 fails the tests of robustness, precaution, and efficiency required by the RMA, the CRPS, and national direction.

An additional purpose of this submission is to ensure that CCC's assessment of PC23 genuinely reflects its Treaty-based obligations. This includes providing for early, informed, and culturally appropriate engagement with Te Ngāi Tūāhuriri Rūnanga, and ensuring that planning decisions affecting their takiwā are made with a robust evidential understanding of cultural landscape values, mahinga kai practices, and ancestral associations with the Pūharakekenui.

In summary, PC23 exposes residents, infrastructure, ecosystems, and cultural landscapes to unacceptable and unquantified risks; relies on outdated and incomplete modelling; contradicts national, regional, and district planning direction; and fails to substantiate its claims of hazard resilience, infrastructure capacity, transport safety, ecological integrity, or cultural appropriateness.

The proposal does not provide the information necessary for the Council to discharge its obligations under Te Tiriti o Waitangi or to ensure that Te Ngāi Tūāhuriri Rūnanga can exercise informed kaitiakitanga over the Pūharakekenui/Styx catchment.

In the absence of updated, transparent, and mana-whenua-led assessment, and given the unresolved technical, environmental, and procedural deficiencies identified throughout this submission, PC23 cannot proceed.

2. Executive Summary of Reasons for Opposition

Private Plan Change 23 (Whisper Creek) seeks to rezone a low-lying, hazard-prone, infrastructure-constrained coastal-plain site for an 800-dwelling residential development. While increasing housing supply is an important public good, such supply must be delivered in a manner that is safe, resilient, affordable over its long-term lifecycle, and aligned with both national policy and the Christchurch District Plan. PC23 does not meet these requirements.

This Executive Summary sets out the principal reasons why the plan change should not proceed.

2.1 The site is subject to multiple interacting natural hazards that have not been adequately quantified

The site is located within:
• the Lower Styx Ponding Area,
• a High Flood Hazard Management Area (HFHMA),
• a known tsunami evacuation pathway,
• an area of shallow, rising groundwater influenced by sea-level rise,
• a dune–swale–floodplain assemblage highly susceptible to liquefaction and lateral spread.

Updated flood and groundwater modelling from CCC and the NZSeaRise (2022) programme indicates that effective sea-level rise in northern Christchurch may be 0.3–0.4 m by 2050, exceeding CCC's legacy planning value. The applicant proposes extensive filling to achieve minimum floor levels, but has not demonstrated:
• 1:1 compensatory flood-storage volume,
• the effects of fill on flood behaviour in the Lower Styx, or
• the implications of rising groundwater for liquefaction, settlement, and lateral spread.

Rezoning before this analysis is complete conflicts with the MfE (2022) Coastal Hazards and Climate Change Guidance, the CRPS, and CCC's own hazard overlays.

2.2 Emergency evacuation under tsunami or flooding conditions has not been demonstrated to be safe

A subdivision of 800 homes requires the ability to evacuate thousands of residents under extreme time pressure. The road network serving the site:
• lacks capacity,
• includes narrow rural roads not built to collector-road standards,
• includes a one-lane bridge with poor sight lines,
• has substandard intersections (including Chaney's Corner),
• has no public transport services since 2019.

The applicant has not provided NZTA-standard travel-time modelling. Existing congestion observed during summer peaks at Spencer Park illustrates how quickly these roads reach failure conditions.

The CRPS Chapter 6 requires avoiding development that increases risk to life during natural hazards. PC23 does the opposite.

2.3 Critical Water Services infrastructure is already inadequate or operating at reduced performance

Potable water
CCC has confirmed there is no capacity within the city's reticulated water supply to service PC23. The applicant proposes relying on deep bores and on-site treatment, raising:
• ECan allocation concerns,
• interference risks with neighbouring wells,
• long-term maintenance and resilience risks.

Wastewater
The Kainga–Spencerville wastewater network:
• was not designed for an additional 800 homes,
• has pump-station performance reduced from 40 L/s to ~30 L/s post-earthquakes,
• may not achieve assumed performance even with "proactive maintenance,"
• has infiltration rates exceeding model assumptions due to earthquake damage.

Stormwater
Stormwater proposals rely on:
• basins located directly within flood-hazard areas,
• hydraulic discharge to Spencer Drain (gradient 1:6000),
• reliance on flood-gates at the Styx River mouth that remain closed during Waimakariri floods or king tides,
• wetlands sized incorrectly (error factor of two identified by CCC engineers),
• future groundwater and salinity conditions not yet modelled.

None of these systems have been demonstrated to meet long-term resilience requirements.

2.4 Reliance on unresolved regional consents under the Canterbury Land and Water Regional Plan

The applicant's s32 report states that consistency with the Canterbury Land and Water Regional Plan (LWRP) and Canterbury Air Regional Plan (CARP) can be addressed at subdivision stage and that "clear consenting pathways" exist for the required works. However, under s 75(4)(b) RMA, the Christchurch District Plan cannot be inconsistent with regional plans at the point of rezoning. In the Styx–Lower Waimakariri environment, LWRP (as amended by Plan Change 4) tightly constrains groundwater takes, stormwater and wastewater discharges, and activities affecting wetlands and floodplains.

PC23 provides no quantified assessment of whether the proposed bores, stormwater basins, wetland reconfiguration and earthworks can obtain the necessary LWRP and NES-

Freshwater consents without breaching catchment limits or Te Mana o te Wai obligations. Treating these as post-rezoning matters is procedurally deficient. CCC must assume that some or all regional consents may not be granted. It therefore cannot lawfully rely on speculative future LWRP and NES-FM approvals as the basis for committing this high-hazard site to urban use.

2.5 The proposal fails to demonstrate compliance with MDRS, Qualifying Matters, and Clause 25(4A)

Under Clause 25(4A) of Schedule 1, CCC must incorporate the Medium Density Residential Standards (MDRS) unless reduced enablement is justified by spatially defined Qualifying Matters (QMs). The applicant:
• has not supplied any spatial QM mapping,
• misapplies "open space" as a QM, despite proposing RNN zoning,
• relies on self-selected infrastructure constraints that have not been assessed under s77L.

The lower terrace is already subject to hazard overlays inconsistent with residential zoning. Without a proper QM assessment and s77L evaluation of alternatives, PC23 does not satisfy Clause 25(4A) requirements.

2.6 Ecological effects on the Pūharakekenui/Styx River are poorly assessed

The Styx River is ecologically degraded, with:
• elevated zinc levels,
• declining EPT invertebrate indices,
• increased fine-sediment accumulation.

Any additional sediment, stormwater discharge, or floodplain modification will worsen these conditions and breach the NPS-FM (2020) requirement to maintain and improve freshwater ecosystem health.

2.7 The proposal imposes significant financial and infrastructure costs on the Council and ratepayers

PC23 relies on:
• unbudgeted upgrades to roads,
• two bridges (one to two-lane expansion),
• wastewater network upgrades,
• stormwater pumping and flood-gate upgrades,
• significant maintenance costs for private water-supply and treatment systems.

The developer seeks to privatize early-stage gains while shifting long-term infrastructure liability to the public. This contradicts s32 efficiency tests and CCC's Long-Term Plan commitments.

2.8 The overall planning rationale is weak, outdated, and inconsistent with higher-order instruments

The application:
• relies on superseded hazard data,
• relies on geotechnical assumptions contradicted by its own evidence,
• underestimates transport impacts,
• does not meet NPS-UD intensification tests,
• fails to evaluate feasible alternative locations,
• does not recognise Te Mana o te Wai hierarchy obligations,
• does not demonstrate a coherent or deliverable Outline Development Plan.

2.9 Major contradictions exist in the Urban Form, Centres Hierarchy, Urban Design, Landscape & Economic Evidence

This submission demonstrates that the applicant's evidence relating to urban form, commercial hierarchy, transport integration, landscape effects, and economic viability is **internally inconsistent**, with each expert discipline relying on assumptions that are directly contradicted by the others.

The result is an **urban design and effects assessment that collapses under its own contradictions**.

Key examples include:

- **Urban Design (Appendix G)** asserts walkability, integration, and an "activated" neighbourhood centre,
  while **Transport (Appendix E)** confirms no public transport, no cycling infrastructure, unsafe footpaths, and car-only accessibility.

- **Economic (Appendix A)** asserts a viable, demand-led commercial node,
  while **both Transport (Appendix E)** and **Urban Design (Appendix G)** confirm that the node has no effective walkable catchment, no passing trade, and will primarily attract car trips.

- **Urban Design claims a softened rural interface**,
  while **Landscape Graphics (Appendix F-i)** clearly show visually exposed medium-

density clusters and large, unmitigated built form elements facing the Styx corridor and rural margins.

- **Economic Appendix A characterises the existing site as "already urban"**, while **Landscape Appendix F** describes an open rural/coastal-fringe landscape with high sensitivity to visual dominance, lighting, and cumulative effects.

These inconsistencies are not minor differences of professional emphasis—they go to the core of whether the applicant's assessment of environmental effects can be relied upon at all.

In planning law and hearings practice:

> **Where expert evidence is internally contradictory, none of it can be given material weight. That is the case here.**

Taken together, the contradictions demonstrate that the proposal **cannot simultaneously be walkable, car-dependent, centre-supportive, rural-edge-respectful, hazard-resilient, and economically viable**.
The evidence simply does not describe a coherent or feasible urban environment.

Accordingly, **Section 11** concludes that the applicant's combined evidence base fails to meet the requirements of the NPS-UD, CRPS Chapter 6, and the Christchurch District Plan, and that **PC23 should not be approved** unless and until the applicant provides a comprehensive, internally consistent, multi-disciplinary reassessment.

2.10 Procedural Deficiencies in the Section 32 Evaluation

The Section 32 assessment does not evaluate reasonable alternatives to locating 800 dwellings in this hazard-prone environment, contrary to s32(1)(b)(i). This omission is a significant procedural defect.

2.11 Failure to Demonstrate Statutory Consistency at Rezoning Stage

PC23 does not demonstrate consistency with the Canterbury Land and Water Regional Plan as required by s75(4)(b). Reliance on unmodelled, unconsented, and uncertain regional-plan pathways is procedurally inadequate.

2.12 Incomplete Mandatory Spatial and Technical Information

The application lacks required spatial mapping of Qualifying Matters, hazard overlays, and infrastructure constraints; provides an ODP not in a form suitable for Chapter 8 insertion; and omits mandatory transport, cultural, and climate-adaptation assessments. These

omissions constitute incomplete information under Clause 23 and prevent lawful notification.

2.13 Conclusion of Executive Summary

PC23 is not a responsible or resilient mechanism for delivering additional housing. It exposes future residents, neighbouring communities, and public infrastructure to unacceptable risk and long-term costs. It conflicts with national direction, the CRPS, the Christchurch District Plan, and the precautionary principles embedded in hazard and infrastructure policy.

For these reasons, and for the detailed reasons that follow in subsequent sections, this submission respectfully requests that the Council decline Private Plan Change 23.

3. Natural Hazards and Climate-Change Risk

The Whisper Creek site is exposed to a combination of riverine flooding, coastal inundation, tsunami evacuation constraints, liquefaction, lateral spread, high groundwater, and long-term sea-level-rise impacts, all of which interact to produce a multi-hazard environment unsuitable for large-scale residential zoning. PC23 relies on outdated modelling, unverified assumptions, and deferred investigations that do not meet the precautionary obligations of the Resource Management Act, the Christchurch District Plan, or national and regional hazard policy.

3.1 Outdated flood modelling and incomplete hazard information

CCC's Senior Stormwater Planning Engineer has confirmed that the Styx flood model underpinning the applicant's assessment is obsolete and does not incorporate:

- modern sea-level-rise projections,
- updated tidal-closure scenarios at the river mouth,
- climate-change-driven storm-rainfall intensification, or
- updated groundwater conditions.

New modelling is expected in late 2025. Until this modelling is available, CCC cannot reliably determine peak flood levels, flood-storage capacity, effects of fill, or safe Finished Floor Levels (FFLs). The applicant proposes to defer hazard quantification until after rezoning, contrary to MfE (2022), CDP 5.3.1, and CRPS 11.3.2(4).

3.2 Rising groundwater and sea-level rise (NZSeaRise 2022)

NZSeaRise (2022) shows parts of northern Christchurch are subsiding, producing effective sea-level rise of 0.3–0.4 m by 2050. Higher tailwater levels in the Styx will raise

groundwater beneath the entire site. The applicant has not provided:
• coupled SLR–groundwater modelling,
• future water-table projections,
• salinity-intrusion modelling for stormwater basins,
• geotechnical hazard assessments using future groundwater conditions, or
• long-term settlement analyses.

These omissions breach MfE (2022) requirements for 100-year hazard projections.

3.3 Liquefaction, lateral spread, and long-term settlement risks

The site consists of loose sands, overbank deposits, shallow groundwater, and proximity to the Styx River and proposed excavated lakes. NZGS Modules 3 and 4 identify these as high-likelihood liquefaction environments. The applicant's TC2-equivalent claim is methodologically incorrect and inconsistent with MBIE/NZGS guidance, which prohibits pre-assigning TC categories prior to certified ground improvements.

3.4 Lower Styx Ponding Area and flood-storage displacement

The lower terrace sits within the Lower Styx Ponding Area. Filling will displace floodwater, reduce storage capacity, and alter flood conveyance. CCC requires 1:1 compensatory storage below RL 3.08 m NZVD before rezoning. Deferring this analysis conflicts with CRPS 11.3.2(4), CRPS 6.6.1, CDP 5.4, and s6(h) RMA.

3.5 Tsunami evacuation modelling and life-safety obligations

The site is within a tsunami evacuation corridor served by narrow rural roads, a one-lane bridge, and substandard intersections. No NZTA-standard travel-time modelling has been provided. CRPS 6.3.1 and 6.3.3 require avoiding development patterns that increase hazard exposure.

3.6 Tidal-closure events and backflow from Styx River mouth

Flood behaviour in the Styx is affected by tidal cycles, storm surge, and Waimakariri flood-gate closures. These dynamics were not modelled by the applicant. CCC engineers state updated hydrodynamic modelling is needed to assess tidal closure and backflow risks.

3.7 Deferred investigations are inconsistent with national guidance

Key investigations—groundwater modelling, salinity intrusion, wetland redesign, liquefaction modelling, flood-storage displacement—are proposed "following rezoning." This sequencing breaches:

- MfE (2022),
- NPS-UD Policies 1 & 5,
- CRPS 11.3.2(4),
- CDP 5.4,
- CDP 5.3.1.

3.8 Conclusion

PC23 underestimates hazard severity, relies on outdated modelling, and omits critical investigations. A residential rezoning of 800 homes cannot be approved until updated hydrodynamic modelling, groundwater–SLR modelling, liquefaction analysis, and flood-storage displacement assessments are completed and independently peer-reviewed. The safest and most lawful course is for CCC to decline PC23 or defer decision-making until all hazard information is provided.

4. Water Network – Adverse Effects

PC23 depends on potable water, wastewater, and stormwater systems that are already constrained, damaged, or operating below intended design performance in the Kainga–Spencerville–Lower Styx area. Following the repeal of the previous Three Waters reform programme through the Water Services Entities Repeal Act 2024, responsibility for drinking water, wastewater, and stormwater services has been fully returned to local authorities. However, repeal did not restore the previous status quo. The Government's replacement framework—Local Water Done Well—now requires councils to demonstrate long-term financial sustainability, regionalised coordination of water services, and strict compliance with the Water Services Act 2021 and Taumata Arowai's national water-quality and risk-management standards. These obligations materially heighten the burden on Christchurch City Council. Any new development that increases long-term 3-waters liabilities, particularly in areas with constrained or damaged networks, must now satisfy strengthened sustainability and resilience tests. PC23's reliance on bespoke bores, degraded wastewater infrastructure, unverified pump performance, and stormwater systems exposed to tidal, groundwater, and sea-level-rise influences significantly increases CCC's financial and regulatory risk exposure. The infrastructure assessments provided by the applicant predate the 2024–2025 policy shift and do not demonstrate compliance with the new requirement that growth areas be supported by financially sustainable, climate-resilient, and certifiable water services capable of meeting long-term public-health and environmental performance obligations. The applicant proposes to defer key assessments until after rezoning, despite clear requirements in the NPS-UD, NPS-FM, CRPS, and CDP that

capacity and long-term resilience be demonstrated before zoning or intensification decisions are made.

The evidence, including CCC's own RFI correspondence, indicates that the infrastructure network in this part of Christchurch is at or beyond functional limits. PC23 would impose additional loads that cannot be accommodated without substantial, unbudgeted upgrades, many of which are technically challenging or uncertain under future climate conditions.

4.1 Potable Water Supply: No existing capacity and high long-term risk

CCC staff have confirmed that there is no available capacity in the Council's reticulated water supply to service PC23. The previous concerns regarding insufficient potable-water capacity are sharpened under the post-repeal framework. The bespoke on-site bore and treatment plant proposed for PC23 impose long-term monitoring, treatment, and certification obligations that would ultimately fall on CCC or any future regional water entity created under **Local Water Done Well**. The applicant has not demonstrated how source protection, treatment reliability, or long-term compliance with Taumata Arowai standards will be secured. This raises concerns regarding:

- Allocation limits and long-term security of groundwater supply
- Potential interference effects on neighbouring private wells
- Public-health and resilience risks under the Water Services Act

These issues are incompatible with NPS-UD Policy 10, which requires "adequate and resilient" infrastructure.

4.2 Wastewater: Network-wide constraints and reduced pump-station performance

The Kainga–Spencerville wastewater network, already degraded and operating below its original design capacity, lacks confirmed ability to service an additional 800 dwellings. Post-2024 regulatory requirements demand that councils verify long-term financial and operational sustainability before approving growth areas. The applicant's modelling assumes pump performance improvements without evidence, ignores infiltration and inflow increases since the Canterbury earthquakes, and fails to address long-term maintenance liabilities. Key constraints include:

- Pump Station PS78's reduced real operating capacity (~30 L/s versus 40 L/s design)
- Earthquake-damaged pipes and high infiltration/inflow (I/I)
- Network spare capacity intended for gradual infill, not large greenfield development

These conditions risk overflows and reduced system performance during wet-weather events.

4.3 Stormwater: Severe conveyance limitations and incomplete hydrological assessment

Stormwater management constraints—including basin undersizing, high groundwater, tidal gate dependencies, and the extremely shallow gradient of Spencer Drain—remain unresolved. Under **Local Water Done Well**, councils must ensure stormwater systems are climate-resilient and financially sustainable over the long term. The applicant's stormwater proposal, which relies heavily on excavated basins in a floodplain with rising groundwater and saline intrusion risks, does not meet these requirements. Issues include:

- Wetland and basin sizing errors (factor-of-two underestimation identified by CCC)
- Detention basins located within flood-hazard areas
- Tidal closure and storm-surge influences not modelled
- Groundwater rise reducing basin storage and treatment function

These gaps undermine confidence in long-term flood and stormwater performance.

4.4 Lifelines and network resilience

The development's reliance on vulnerable coastal lifelines includes:

- Power supply exposed to storm and salt corrosion
- Telecommunications infrastructure partly located in flood zones
- Wastewater systems dependent on pump operation
- Potable water requiring continuous treatment and power supply

Such dependence on fragile lifelines is inconsistent with resilient urban development principles.

4.5 Long-term infrastructure funding is uncertain or absent

PC23 requires major upgrades to roads, bridges, wastewater conveyance, pump stations, and stormwater systems. These upgrades:

- Do not appear in the CCC 2024–2034 Long-Term Plan
- Have not been costed by the applicant
- Have no identified funding source

This fails to meet s32 RMA requirements to demonstrate efficiency and least-cost planning.

4.6 Conclusion: PC23 is not serviceable, not resilient, and not compliant with post-2024 water-infrastructure obligations

PC23 cannot be serviced in a manner that is safe, sustainable, or financially credible under the regulatory framework now governing drinking water, wastewater, and stormwater services in New Zealand. Potable water supply depends on an unproven private bore and treatment system with unresolved source-protection, capacity, and certification risks. Wastewater networks in the Kainga–Spencerville corridor remain damaged, hydraulically constrained, and subject to infiltration loads that have not been quantified since the Canterbury earthquakes. Stormwater conveyance is critically limited by shallow gradients, tidal-gate controls, rising groundwater, and the displacement effects of large-scale fill. None of these systems possess redundancy, and none are supported by committed or funded upgrades in CCC's Long-Term Plan.

With the repeal of the Water Services Entities framework and the introduction of the Local Water Done Well regime, councils must now demonstrate that new growth areas are financially sustainable, climate-resilient, and capable of meeting Taumata Arowai performance standards over the full asset life cycle. PC23 fails each of these tests. Its servicing model is dependent on speculative assumptions, defers critical analysis to post-rezoning stages, and exposes CCC to significant long-term liabilities for which no funding pathway exists. The applicant's evidence predates the 2024–2025 policy shift and does not satisfy the strengthened statutory duty to ensure safe and resilient Three Waters infrastructure before committing new land to urban use.

Accordingly, the Three Waters and lifelines environment for PC23 is inadequate, unresilient, and inconsistent with national and regional planning direction, including:

NPS-UD Policy 1 – requirement for well-functioning, infrastructure-aligned urban environments

NPS-FM / Te Mana o te Wai – protection of drinking-water sources and freshwater health

CRPS Chapter 6 – integrated, sustainable infrastructure and hazard-resilient urban form

Christchurch District Plan infrastructure policies – ensuring servicing feasibility prior to zoning decisions

PC23 should therefore be declined. At minimum, it must be deferred until a complete, independently peer-reviewed Three Waters and lifelines assessment is produced,

demonstrating long-term viability, regulatory compliance, and financial sustainability under the post-repeal framework.

5. Stormwater, Floodplain Function & Hydraulic Constraints

Stormwater management is one of the most critical determinants of the long-term safety and viability of PC23. The Whisper Creek site lies within a low-gradient coastal plain characterised by shallow groundwater, tidal influences, limited conveyance capacity, and a history of widespread flooding. Stormwater solutions must therefore be robust enough to function under increased rainfall intensity, rising groundwater, sea-level rise, tidal closure events, elevated Styx River water levels, and backwater conditions during Waimakariri flood events.

5.1 The Turners Road stormwater system is hydraulically constrained

The stormwater catchment draining to Turners Road relies on Spencer Drain, which has an extremely shallow gradient (~1:6000), tidal flood-gates at the Styx mouth, and a wide floodplain storage system. These features restrict stormwater discharge, extend detention times, and require basins capable of performing under frequent tailwater constraints. The applicant's modelling does not address these dynamics.

5.2 CCC has identified significant basin sizing errors

CCC engineers have noted a factor-of-two error in the wetland sizing calculations, incorrect detention assumptions, and missing storage volumes necessary for water-quality treatment and flood attenuation. These errors materially understate peak discharges, overtopping risk, and wetland performance.

5.3 Reliance on basins located within flood-hazard areas

Several proposed stormwater basins and wetlands are located within the Lower Styx Ponding Area and High Flood Hazard Management Area (HFHMA). Basins within these zones face reduced detention volume, increased backflow risk, and unpredictable performance during Waimakariri flood closures. This conflicts with CDP 5.4.1, CRPS 11.3.2(4), and Te Mana o Te Wai Objective 1.

5.4 Flood-storage displacement from extensive filling has not been quantified

The applicant proposes extensive filling to achieve minimum Finished Floor Levels, but has not provided 1:1 compensatory storage analysis. Filling within the Lower Styx Ponding Area risks reducing storage volume, increasing flood levels, and altering flow paths. Deferring analysis until after model updates conflicts with MfE (2022), CRPS 6.6.1, and CDP 5.4.2.

5.5 Rising groundwater undermines stormwater function

NZSeaRise (2022) indicates effective sea-level rise of 0.3–0.4 m by 2050. Rising

groundwater reduces basin storage volume, compromises wetland vegetation, and eliminates infiltration capacity. The applicant has not provided future groundwater modelling or salinity intrusion assessment.

5.6 Tidal closure, storm surge, and backflow have not been modelled

Stormwater systems at coastal interfaces must account for tidal locking, storm surge, Waimakariri flood-gate closures, and Styx River tailwater conditions. These influences can prevent stormwater discharge, cause backflow, and fill basins from downstream. The applicant's modelling excludes these dynamics, despite CCC's requests.

5.7 Stormwater quality treatment is insufficient for an ecologically degraded catchment

The Styx River is ecologically degraded, with elevated zinc levels, declining EPT indices, and sediment accumulation. Under the NPS-FM and Te Mana o Te Wai, waterway health must be prioritised. The applicant's treatment system relies on undersized wetlands and does not account for saline intrusion or increased contaminant loading from high-density housing.

5.8 Conclusion

Stormwater and floodplain effects for PC23 remain inadequately assessed, reliant on outdated modelling, unsupported by compensatory storage analysis, and compromised by rising groundwater. The proposal does not meet requirements under MfE (2022), CRPS, NPS-FM, NPS-UD, and CDP provisions. Rezoning must not proceed until stormwater performance is fully modelled and demonstrated to be resilient under future climate and hydrological conditions.

6. Transport, Traffic Safety & Tsunami Evacuation

Transport safety and evacuation performance are central determinants of whether a residential rezoning can occur safely and efficiently. PC23 proposes 800 dwellings in an area serviced by narrow rural roads, a one-lane bridge, substandard intersections, and no public transport. These constraints cannot safely accommodate the development's projected traffic volumes, let alone provide a reliable evacuation route during tsunami or extreme flood events.

6.1 Existing Road Network Constraints

The local road network serving the Whisper Creek site consists primarily of:

- Turners Road – a low-volume rural road with limited shoulders and poor alignment
- Spencerville Road – narrow, with constrained geometry approaching the one-lane bridge
- Kainga Road – servicing both residential and rural traffic
- Marshland Road – already operating near capacity at peak times, including Chaney's Corner

The applicant has not provided evidence that these roads can maintain acceptable performance under normal peak-hour operations, let alone during emergency evacuations.

6.2 One-Lane Bridge and Intersection Hazards

The Spencerville one-lane bridge presents a major bottleneck, with:
• insufficient width for two-way evacuation flow
• poor sight lines
• documented queuing during recreational peak periods
• no redundancy in the event of blockage or failure

Additionally, intersections at Spencerville/Kainga Road and Marshland/Kainga Road have substandard geometry and limited capacity. No upgrade plans are provided.

6.3 Absence of Public Transport and Increased Vehicle Dependence

There has been no public transport service to Spencerville or Turners Road since 2019. Residents of an 800-dwelling development would therefore be entirely dependent on private vehicles. This conflicts with:
• NPS-UD Policy 1 (well-functioning urban environments)
• CCC climate and emissions-reduction strategies
• CRPS urban form and transport integration objectives

Vehicle dependence also increases exposure to congestion and delays during emergency evacuations.

6.4 Underestimated Traffic Generation

The applicant's traffic assessment assumes approximately 720 vehicle trips per peak period. This is inconsistent with comparable developments and empirical trip rates. A more realistic estimate is 1,400–1,600 peak-hour trips. Without accurate modelling, downstream impacts on:
• Chaney's Corner
• Marshland Road
• Spencerville Road
• Kainga Road intersections
cannot be reliably assessed.

6.5 Tsunami Evacuation Performance Not Demonstrated

The site lies within a tsunami evacuation corridor. Safe evacuation requires:
• accurate travel-time modelling
• performance under peak occupancy
• modelling of bottlenecks (bridge, intersections)

• assumptions for school populations
• sensitivity testing under multiple hazard scenarios

None of this has been provided. NZTA-standard modelling is essential for developments of this scale.

6.6 Lack of Redundancy and Lifeline Dependencies

There is no alternative evacuation route if:
• the one-lane bridge is blocked
• Marshland Road becomes congested
• power outages disable traffic control
• flooding restricts road access

Given the site's location within a coastal hazard zone, redundancy is essential for life-safety obligations.

6.7 Effects on Spencerville and Ouruhia Communities

The increased traffic from 800 dwellings will impose:
• greater noise and safety risks
• access difficulties for Spencerville residents
• higher congestion for school routes
• conflicts with recreational traffic to Spencer Park and Bottle Lake Forest

CCC's RFI notes that increased traffic will require substantial upgrades, none of which are funded in the CCC Long-Term Plan.

6.8 Consistency with Planning Instruments

PC23 does not meet:
• CRPS 6.3.1 – avoid patterns that increase hazard exposure
• CRPS 6.3.4 – transport infrastructure must support urban form
• CDP transport objectives for safe and efficient movement
• NPS-UD well-functioning urban environment policies

6.9 Conclusion

Transport, traffic safety, and tsunami-evacuation performance for PC23 remain unmodelled, underestimated, or unaddressed. The site's access constraints, lack of public transport, and absence of redundancy represent significant risks to both existing and future residents. Until robust modelling and funded infrastructure upgrades are provided, PC23 should not proceed.

7. MDRS, Qualifying Matters, and Clause 25(4A) Requirements

The Medium Density Residential Standards (MDRS) and the provisions introduced under the Enabling Housing Supply Amendment require that territorial authorities enable intensification unless specific, spatially identified Qualifying Matters (QMs) justify a reduction in development capacity. Private Plan Change 23 relies on incomplete or incorrect application of these requirements and has not provided the analyses or spatial hazard data needed to lawfully reduce MDRS standards or justify a bespoke zoning outcome.

7.1 Clause 25(4A) Requirements Have Not Been Met

Clause 25(4A) of Schedule 1 of the RMA requires councils to incorporate the MDRS into all residential zones unless:

- a Qualifying Matter applies; and
- the QM is spatially identified; and
- the reduction in development capacity is the "least modification necessary"; and
- alternatives have been assessed.

The applicant has not:

- provided spatial mapping of any Qualifying Matter,
- carried out a s77L assessment of alternative development forms,
- demonstrated why RNN zoning is appropriate for an area with significant hazard overlays,
- identified any lawful QM that justifies reduced enablement.

7.2 Incorrect Use of "Open Space" as a Qualifying Matter

The applicant asserts that "open space" functions as a Qualifying Matter. This is incorrect. QMs must:

- be identified in legislation (e.g., s77I(1)(d): natural hazards), or
- be based on specific physical constraints.

Open space zoning is not a QM unless linked to a physical constraint. The applicant proposes RNN zoning over hazard-prone areas without acknowledging that:

- the lower terrace is within HFHMA and ponding areas,
- coastal hazards under MfE (2022) apply,
- liquefaction and lateral-spread risks are unquantified.

Thus, the QM is the hazard itself, not the zoning label, and must be spatially mapped.

7.3 Absence of Spatial Hazard Mapping

The applicant has not supplied spatial hazard maps for:

- liquefaction susceptibility,
- lateral-spread risk zones,

• tsunami evacuation pathways,
• groundwater rise,
• flood-storage or ponding areas.

Under the RMA, without hazard mapping, the Council cannot apply QMs correctly or determine whether MDRS reductions are justified. This is a fundamental information deficiency.

7.4 Failure to Follow s77L Evaluation of Alternatives

To justify reduced development capacity, the applicant must demonstrate:
• why MDRS-enabled development is inappropriate in this specific location,
• how the proposed RNN zoning is the "least modification necessary,"
• what alternative layouts or densities were considered.

The applicant provides none of this. No density comparisons, alternative layouts, or risk-based zoning options have been explored. This violates s77L requirements and renders the plan change inconsistent with the MDRS framework.

7.5 Conflict with CRPS and Christchurch District Plan Policies

CRPS and CDP provisions require hazard risk to be avoided, not mitigated through ad hoc zoning. Key conflicts include:
• CRPS 6.6.1 – avoid increasing natural hazard risk,
• CRPS 11.3.2(4) – avoid new development in high-hazard areas,
• CDP 5.3.1 – avoid coastal hazard exposure,
• CDP 5.4 – maintain ponding and flood-storage function.

The lower terrace and ponding areas are inherently unsuitable for MDRS-level development. Without spatial QMs, the proposal conflicts with both regional and district policy.

7.6 Deferred Hazard and Infrastructure Analysis is Inconsistent with MDRS Requirements

The applicant proposes to:
• undertake groundwater–SLR modelling after rezoning,
• redesign wetlands after new flood models are released,
• quantify flood-storage displacement "later,"
• reassess liquefaction and lateral-spread risk "post-rezoning."

This is incompatible with MDRS and QM requirements. QMs must be justified at the rezoning stage, not deferred.

7.7 Inadequacy of the s32 Evaluation

The s32 analysis must:

• identify costs and benefits,
• examine alternatives,
• provide evidence supporting reduced MDRS enablement.

PC23's s32 evaluation:
• does not quantify infrastructure costs,
• omits alternative development scenarios,
• lacks hazard and groundwater evidence,
• underestimates Three Waters constraints,
• does not analyse long-term resilience.

Therefore, the s32 assessment is incomplete and does not support adoption of the plan change.

7.8 Conclusion

PC23 does not satisfy the legal requirements of MDRS or Clause 25(4A). The applicant has not provided spatial QMs, has not met s77L requirements, and relies on deferred investigations that cannot justify reduced enablement. Without robust hazard mapping and evaluation of alternatives, CCC cannot lawfully approve PC23. The plan change should therefore be declined or deferred until full compliance with MDRS, QM, and s32 obligations is demonstrated.

8. Ecology, Biodiversity & Te Mana o Te Wai

The Whisper Creek proposal is located within the lower Pūharakekenui/Styx River catchment, an ecologically sensitive, culturally significant, and hydrologically complex environment. The catchment is already exhibiting signs of ecological decline, including elevated zinc levels, sediment accumulation, declining macroinvertebrate indices, and degradation of riparian habitat. Under the National Policy Statement for Freshwater Management (NPS-FM 2020) and the Te Mana o Te Wai framework, the health of the waterbody must be prioritised above the proposed land-use change. PC23 does not meet these obligations.

8.1 Declining Ecological Health of the Pūharakekenui/Styx River

The 2023 Boffa Miskell ecological monitoring report for the Styx catchment documents:
• elevated zinc concentrations in stream sediments,
• reduced EPT (Ephemeroptera–Plecoptera–Trichoptera) indices indicating lower water-quality and macroinvertebrate health,
• increased fine-sediment deposition over benthic habitats,

• low Macroinvertebrate Community Index (MCI) scores, and
• degradation of instream and riparian ecological integrity.

Any increase in sediment, metals, or nutrient loads from urban runoff will further degrade an already stressed ecosystem. PC23 would introduce a significant new source of contaminant generation into this catchment.

8.2 Insufficient Riparian Buffers and Habitat Fragmentation

The lower terrace is part of a continuous ecological corridor used by:
• at-risk wading birds,
• native freshwater fish including tuna/eels and īnanga,
• lizard species,
• long-tailed bats (potential seasonal habitat), and
• diverse invertebrate communities.

The applicant does not provide:
• continuous 20 m riparian buffers,
• habitat connectivity analysis,
• assessment of fragmentation effects,
• mapping of seasonal wetland values, or
• protection measures for threatened species.

Spatial omissions weaken the ecological assessment and prevent CCC from determining whether ecological effects can be avoided, remedied, or mitigated.

8.3 Stormwater Quality Treatment is Inadequate for a Sensitive Catchment

The applicant's stormwater quality treatment system is based on undersized wetlands, unverified detention assumptions, and incomplete peak-flow modelling. For an ecologically degraded waterway like the Styx, this is insufficient.

Potential effects include:
• mobilisation of zinc from roofing materials,
• sediment pulses from construction and urban runoff,
• hydrocarbon contaminants from vehicle movements,
• long-term nutrient loading,
• wetland vegetation die-off from salinity intrusion.

Without high-confidence water-quality treatment, PC23 risks exacerbating catchment decline. Under Te Mana o Te Wai, such effects are unacceptable unless avoided at the source.

8.4 Failure to Apply the Te Mana o Te Wai Hierarchy of Obligations

Te Mana o Te Wai establishes a three-tiered hierarchy:

1. First: the health and wellbeing of waterbodies and freshwater ecosystems
2. Second: the essential health needs of people
3. Third: other social, economic, and cultural uses

PC23 does not satisfy Tier 1 because:

- wetlands and basins are undersized,
- the design assumes outdated hydrological models,
- the proposal increases contaminant loads,
- groundwater–SLR interactions are unmodelled,
- ponding and floodplain storage functions are compromised.

Enabling housing is a Tier 3 activity. It cannot override Tier 1 obligations unless ecological health is protected first.

8.5 Seasonal Wetlands and Groundwater-Dependent Ecosystems

The lower terrace contains seasonal wet patches, groundwater-fed wetlands, and shallow-saturated soils that support:

- native sedges,
- wetland birds,
- amphibians,
- invertebrates dependent on ephemeral habitat.

These ecosystems are sensitive to:

- fill placement,
- groundwater drawdown,
- sedimentation,
- changes in surface-water dynamics.

The applicant has not mapped these habitats nor assessed effects on them.

8.6 Cumulative Effects on the Catchment

Cumulative effects are a major concern because:

- the Styx catchment already receives stormwater from urban areas,
- the receiving environment is showing progressive degradation,
- flood events mobilise sediment and contaminants downstream,
- PC23 would add an additional 800 dwellings' worth of runoff and pollutants.

Under the NPS-FM, cumulative degradation must be halted and reversed. PC23 provides no pathway to achieve this.

8.7 Inconsistency with Policy Direction

PC23 is inconsistent with:

- NPS-FM (2020) – maintain and improve freshwater health,
- Te Mana o Te Wai – prioritise ecological health,
- CRPS Chapter 7 – protect and enhance biodiversity,
- Christchurch Biodiversity Strategy – avoid fragmentation of key habitats,
- CDP 8.6.1 and 8.6.2 – protect indigenous biodiversity and natural values.

Given the site's proximity to the Styx River and its ecological significance, the burden of proof lies with the applicant to demonstrate no net loss of biodiversity and freshwater health. They have not provided the necessary analysis.

8.8 Conclusion

Ecological and freshwater effects associated with PC23 remain incompletely assessed, underestimated, or inconsistent with statutory requirements. With declining Styx catchment health, inadequate treatment systems, missing habitat mapping, and unaddressed cumulative effects, PC23 cannot satisfy the obligations of the NPS-FM, Te Mana o Te Wai, CRPS, or CDP ecology provisions. Rezoning should not proceed until full ecological and freshwater assessments are completed and demonstrate protective outcomes for the Pūharakekenui/Styx River.

9. Cultural, Archaeological & Heritage Values

The Whisper Creek proposal is located within the lower Pūharakekenui/Styx River catchment, an ecologically sensitive, culturally significant, and hydrologically complex environment. This landscape contains evidence of early Māori occupation, mahinga kai, travel routes, and intergenerational associations that remain relevant today. Any rezoning proposal of this scale must demonstrate that cultural values have been identified, understood, and protected—something PC23 does not achieve.

9.1 Introduction and Context

This section provides an updated assessment of the cultural and heritage implications of Private Plan Change 23 (PC23) for Te Ngāi Tūāhuriri Rūnanga, the manawhenua authority for the Pūharakekenui/Styx River catchment. It supersedes the preliminary cultural information appended to the applicant's material (Mahaanui Kurataiao, January 2022), which was prepared for a substantially smaller, different, and less hazardous proposal advanced under the COVID-19 Fast-track Consenting Act. That document cannot be relied upon to represent rūnanga interests in relation to the present 800-dwelling rezoning request, which introduces materially different effects, hazards, and infrastructure pressures.

Ngāi Tahu have a longstanding cultural, historical, and genealogical relationship with the Pūharakekenui/Styx River and its associated wetlands, mahinga kai, and cultural landscapes. Protection of Ngā Wai—the water bodies of particular cultural significance—is central to the Mahaanui Iwi Management Plan (IMP). PC23 sits directly within this culturally sensitive landscape and triggers significant concerns relating to waterway health, sedimentation, contaminated stormwater, freshwater ecology, hydrological alteration, cultural heritage, and intergenerational kaitiakitanga responsibilities.

9.2 The 2022 Preliminary Cultural Assessment Does Not Apply to PC23

Te Ngāi Tūāhuriri Rūnanga declined to prepare a Cultural Impact Assessment (CIA) likely sometime in 2021 on the basis of an outdated proposal comprising approximately 200 dwellings, relying on existing water supply, avoiding the Flood Ponding Management Area, and maintaining a comparatively modest construction footprint. That earlier design contemplated naturalised drainage systems and more limited ecological and hydrological effects.

The PC23 rezoning request now before the Council is fundamentally different:

• quadrupled residential yield (800 dwellings rather than ~200);

• large-scale earthworks and extensive filling within the Lower Styx Ponding Area;

• reliance on a private bore and on-site treatment plant rather than the reticulated water network;

• materially increased wastewater, stormwater, and sedimentation pressures;

• stormwater basins and wetlands exposed to rising groundwater, tidal closure events, saline intrusion, and floodplain inundation;

• dramatically increased impervious surfaces and contaminant loads entering Spencer Drain and the Styx River; and

• a significantly greater likelihood of encountering archaeological and wāhi taonga sites.

Given these changes, Te Ngāi Tūāhuriri Rūnanga have never had the opportunity to assess, comment on, or provide kaitiaki guidance for the actual development proposed. Their preliminary 2022 position cannot be taken as endorsement—explicit or implicit—of PC23. A new CIA is required.

9.3 Effects on Pūharakekenui/Styx River (Ngā Wai)

The Pūharakekenui/Styx River is a Ngā Wai, a category of water explicitly requiring protection in the Mahaanui IMP. PC23 introduces several major risks inconsistent with the IMP's cultural provisions (P4.1, P6.1, P11.1, P11.9, WM6.19):

• Hydrological alteration: Extensive filling in the Lower Styx Ponding Area will displace floodwaters, alter flood behaviour, and modify natural drainage patterns that underpin the cultural landscape.

• Rising groundwater: NZSeaRise (2022) projections indicate effective sea-level rise of 0.3–0.4 m by 2050, reducing stormwater treatment performance, threatening wetland vegetation survivability, and mobilising contaminants.

• Contaminant loading: An 800-dwelling subdivision will generate significant zinc, copper, hydrocarbons, microplastics, and sediment, which are incompatible with the cultural requirement to maintain and improve water quality.

• Tidal and backflow effects: Stormwater systems draining into Spencer Drain will be affected by tidal closure, storm surge, and backflow during Waimakariri River flood-gate closures—none of which have been assessed.

• Wetland sizing errors: CCC engineers have identified a factor-of-two calculation error in wetland sizing, undermining claims of adequate treatment performance.

These cumulative effects pose substantial risks to the cultural health and mauri of the river, contrary to Te Mana o te Wai and the Mahaanui IMP.

9.4 Effects on Mahinga Kai

Mahinga kai values in the Styx corridor are of fundamental significance to Te Ngāi Tūāhuriri Rūnanga. They include tuna, īnanga, invertebrates, kākahi, riparian flora, and habitat connectivity across the dune–swale–floodplain mosaic.

PC23 undermines these values by:

• increasing sedimentation and turbidity;

• degrading invertebrate habitat;

• altering riparian hydrology and groundwater–surface water interactions;

• increasing pollutant loads beyond the assimilative capacity of the catchment; and

• threatening connectivity of ecological and cultural habitat.

The applicant has provided no assessment of effects on mahinga kai, nor demonstrated how mahinga kai values will be protected, restored, or enhanced. This is a substantive deficiency.

9.5 Cultural Landscape and Heritage Risks

The lower Styx corridor is a cultural landscape with known and likely wāhi taonga, archaeological sites, pre-contact settlement features, and historical mahinga kai locations. The PC23 proposal involves:

• extensive excavation;

• deep trenching;

• large-scale subsoil disturbance; and

• significant recontouring of the landscape.

The applicant has relied solely on an Accidental Discovery Protocol (ADP), which is appropriate only for low-risk sites. A project of this scale requires:

• an updated CIA;

• a cultural landscape assessment; and

• an archaeological investigation by a qualified archaeologist.

Failing to obtain these assessments risks breaching s6(e) RMA (relationship of Māori with ancestral lands, water, sites, wāhi tapu, and taonga).

9.6 Te Mana o te Wai Obligations Not Met

Under the NPS-FM (2020), Te Mana o te Wai establishes a strict hierarchy:

1. Protect the health and well-being of water bodies (including Ngā Wai)

2. Provide for human health needs (drinking water)

3. Enable social and economic well-being

PC23 reverses this sequence by:

• prioritising residential development over waterway health;

• relying on unproven and potentially vulnerable private drinking-water sources;

• introducing stormwater systems unlikely to perform under future climate and groundwater conditions; and

• increasing pollutant inputs into a degraded cultural waterway.

A rezoning decision that diminishes waterway health is contrary to national direction, the Mahaanui IMP, and the cultural expectations of Te Ngāi Tūāhuriri Rūnanga.

9.7 Procedural Inadequacy of Engagement

Mahaanui IMP Policy P4.1 requires:

• early and meaningful engagement with rūnanga;

• identification of effects on tangata whenua values;

• assessment of cumulative effects;

• culturally appropriate mitigation measures; and

• use of CIA reports for developments with potential cultural impacts.

PC23 fails each of these requirements. No updated engagement with Te Ngāi Tūāhuriri Rūnanga has occurred despite the substantial change in scale, hazard environment, and infrastructure footprint. The absence of any recent consultation is inconsistent with good-faith engagement and with the expectations of both the RMA and the IMP.

9.8 Conclusion: PC23 is Inconsistent with Cultural, Heritage, and Kaitiakitanga Obligations

On the basis of the above analysis, PC23:

• relies on an outdated and inapplicable cultural assessment;

• has not assessed effects on Ngā Wai or mahinga kai in accordance with Te Mana o te Wai;

• introduces significant unassessed hydrological and contaminant risks to a culturally sensitive river system;

• increases risks to wāhi taonga and archaeological heritage;

• lacks the engagement required under the Mahaanui IMP; and

• cannot be said to represent or protect the cultural values of Te Ngāi Tūāhuriri Rūnanga.

Until a complete, updated Cultural Impact Assessment is prepared in partnership with Te Ngāi Tūāhuriri Rūnanga, PC23 cannot be considered consistent with the cultural, environmental, and statutory obligations governing the protection of tangata whenua values. The rezoning request should therefore be declined, or at minimum deferred, until

such an assessment is produced and its recommendations fully incorporated into the planning framework.

10. Contamination, Public Health & Soil / Groundwater Quality

The Whisper Creek proposal involves extensive earthworks, large-scale excavation of stormwater lakes, importation of fill, and development on land previously associated with horticultural activities and floodplain deposition. These factors introduce significant risks relating to soil contamination, groundwater quality, dust generation, and public-health exposure. The applicant has not completed the assessments required under the National Environmental Standard for Assessing and Managing Contaminants in Soil (NES-CS), nor provided sufficient evidence for CCC to evaluate long-term public-health risks.

10.1 NES-CS Applicability and Incomplete Site Contamination Assessment

The National Environmental Standard for Contaminants in Soil applies when a site has:
• past horticultural use,
• storage or use of agrichemicals,
• structures or soils with potential heavy-metal residues,
• excavation or soil disturbance over large areas.

The site has a long history of horticultural activity, meaning NES-CS should have been triggered. The applicant has not provided:
• a Detailed Site Investigation (DSI),
• sampling for heavy metals (lead, arsenic, copper),
• pesticide residue testing,
• analysis of contamination in areas proposed for excavation or fill.

Without a DSI, potential public-health risks cannot be assessed.

10.2 Risks from Imported Fill

PC23 requires substantial fill placement across the lower terrace. Risks include:
• contaminated fill from offsite sources,
• variable material quality affecting geotechnical performance,
• introduction of asbestos, hydrocarbons, or heavy metals,
• fill settlement issues under rising groundwater.

CCC's RFI requested confirmation of fill source, certification, and testing protocols. None have been provided.

10.3 Groundwater Quality and Salinity Intrusion

Groundwater beneath the site is shallow and influenced by tidal cycles. Concerns include:

• vertical migration of contaminants through permeable soils,
• mobilization of legacy horticultural chemicals,
• salinity intrusion from sea-level rise affecting groundwater chemistry,
• impacts on private wells used by surrounding communities.

The applicant proposes deep groundwater bores for potable water but has not assessed how rising salinity or contamination could compromise water supply.

10.4 Dust, Construction Contaminants & Public Health

Earthworks over large areas can generate:
• particulate matter (PM10 and PM2.5),
• contaminated dust containing heavy metals or pesticide residues,
• airborne asbestos if present in fill,
• nuisance and respiratory risks to nearby residents.

The applicant has not supplied:
• a dust management plan,
• contaminant-dust assessment,
• mitigation measures for prevailing nor'easterly winds that carry dust toward Spencerville and Ouruhia.

10.5 Soil Stability, Groundwater & Contaminant Transport

The interaction between:
• shallow groundwater,
• fill placement,
• liquefaction-prone soils, and
• stormwater infiltration
creates pathways for contaminant migration.

Without groundwater modelling, CCC cannot determine whether contaminants may be transported into stormwater basins or adjacent properties during flood events.

10.6 Public-Health Risks from Private Potable Water Supply

If PC23 relies on private water treatment systems, long-term risks include:
• system failure due to power outages,
• inconsistent treatment efficacy,
• vulnerability to contamination during groundwater rise,
• unclear responsibilities for monitoring and compliance.

Residents would be more exposed to health risks than those connected to council-supplied drinking water.

10.7 Consistency with Policy Requirements

The proposal is inconsistent with:
• NES-CS – lack of DSI and contamination testing,
• Part 2 RMA – protecting human health,
• NPS-FM – ensuring sources of human drinking water are protected,
• CDP contamination and earthworks policies.

10.8 Conclusion
Given the absence of a Detailed Site Investigation, lack of fill-quality assurance, unassessed groundwater contamination pathways, and inadequate dust and public-health assessments, PC23 presents unacceptable risks to human health and water quality. Rezoning should not proceed until a full NES-CS DSI, groundwater modelling, and public-health assessment are completed.

11. Urban Form, Centres Hierarchy, Urban Design, Landscape, and Economic Effects

11.1 Policy Context and Strategic Framework

This section evaluates PC23 against the statutory and strategic frameworks governing Christchurch's urban form, centres hierarchy, transport integration, and landscape outcomes. These include:

- **National Policy Statement on Urban Development (NPS-UD)**
  – Policies 1, 3, 6: well-functioning urban environments, integration of land use and transport, reduced emissions, accessibility, walkability, and multimodal choice.

- **Canterbury Regional Policy Statement (CRPS)**
  – Chapters 5 and 6: consolidated urban form, avoidance of leapfrog growth, protection and strengthening of the centres hierarchy, sequencing and efficient infrastructure, and resilience to natural hazards.

- **Christchurch District Plan (CDP)**
  – Chapter 3: Strategic Directions
  – Chapter 6: Urban Growth and Form
  – Chapter 15: Commercial Activities and Centres-Based Framework
  – Residential New Neighbourhood (RNN) Zone policies.

Together, these instruments explicitly direct Christchurch toward **compact, well-integrated, multimodal, hazard-resilient expansion** anchored on a **polycentric hierarchy of viable, strategically located centres**.

PC23 is evaluated against this framework, with explicit reference to LMM's supporting appendices (A: Economics, E: Transport, F: Landscape, F-i: Landscape Graphics, G: Urban Design). As demonstrated below, these appendices do not substantively address the decisive policy tests required of a private plan change seeking the creation of a new, semi-isolated urban node.

11.2 Strategic Urban Form and Consolidation Effects

11.2.1 A Peripheral, Non-Contiguous Satellite Settlement

PC23 is geographically and functionally **detached** from the existing urban fabric. It is:

- 2 km from Prestons,
- 3–4 km from Belfast/Northwood,
- 5+ km from the nearest full-service retail centre, and
- entirely outside any planned PT corridor or high-frequency multimodal spine.

This places PC23 squarely in the category that the CRPS warns against: **a "leapfrog", peripheral, car-dependent settlement pattern** that extends the urban footprint into rural/coastal-margin landscapes without structural integration.

The applicant's narrative that the site is already "urban" because of the Specific Purpose (Golf Resort) zoning misstates the relevant planning test. The golf-resort regime was a **destination-based tourism and recreation zone**, not a suburban extension. Replacing it with 800 dwellings yields a materially different pattern of **daily transport demand, emissions, infrastructure load, and catchment form**, and therefore triggers a fundamentally different policy assessment.

11.2.2 Conflict with the CRPS Requirement for Consolidated Urban Form

CRPS 6.3.1 and 6.3.2 require that:

- new urban areas adjoin existing ones,
- growth be sequenced to infrastructure capacity,
- and development patterns support multimodal transport.

PC23 fails all three criteria:

1. **Non-adjoining**: The project is surrounded on three sides by semi-rural land, low-density lifestyle blocks, and hazard-constrained land.
2. **Poorly sequenced**: There are no planned Council upgrades to support 800 additional homes on rural roads (CCC LTP 2024–34 shows no such investment).
3. **Not multimodal**: No public transport, no safe cycling infrastructure, and unsafe/indirect pedestrian connections.

See also:

- Section **3.1–3.4** for the detailed groundwater, inundation, and tsunami exposure analysis that fundamentally constrains feasible urban form.
- Section **3.3 d**emonstrates that liquefaction, lateral spread, and settlement risk directly undermine the residential densities assumed in Appendix A.
- Section **4** ('Post Three Waters Impacts') demonstrates that PC23 cannot be serviced to the standard required by RNN policies or NPS-UD Policy 1.
- Section **4.1–4.3** as well as 5.1 demonstrates that wastewater and stormwater constraints prevent the 'well-functioning urban environment' asserted in Appendix G.

11.2.3 "Walkability" Without Destinations Is Not Urban Integration

The applicant repeatedly asserts walkability because internal roads form a connected grid. But walkability is a **function of meaningful destinations within a 5–10 minute radius**, not simply footpaths within the subdivision.

PC23 provides:

- No school
- No medical centre
- No supermarket
- No employment base
- No public transport
- A commercial node too small to serve daily needs

Thus, internal footpaths become little more than a means to walk between houses and parking spaces. This fails NPS-UD Policy 1 ("well-functioning urban environments") and CDP Chapter 6 ("efficient urban patterns").

See also:

- Section **10:** Transport evidence summarised confirms that safe pedestrian or cycling access to the proposed hub is not feasible.
- See especially section **10.2–10.4** for quantified deficiencies in access roads that render the hub non-viable and inconsistent with CDP Chapter 15.

11.3 Centres Hierarchy and Commercial Viability

11.3.1 The Proposed "Hub" Is Not a Centre Under CCC Policy

The Christchurch Centres-Based Framework is explicit:

- Centres must be **viable**, **strategically located**, **multimodal**, and **able to service more than one neighbourhood**.
- CCC discourages **isolated, single-catchment, small-format nodes** that fragment demand and undermine the vitality of established centres.

PC23's proposed 0.3–0.45 ha "community and commercial hub" is:

- located at a **dead-end fringe**, not on a collector/arterial corridor,
- reachable only by car for anyone outside the subdivision,
- too small to anchor genuine mixed-use activity, and
- without sufficient catchment to sustain turnover.

LMM's own economic assessment confirms higher-order needs will continue to be met in Prestons, Northwood, Marshland Road, and The Palms—implicitly admitting the PC23 "hub" cannot function as a centre.

11.3.2 Failure of Agglomeration Thresholds

A viable neighbourhood centre requires:

- 3,000–5,000 residents in walking catchment,
- two-sided catchment draw,
- daily footfall from passing trade or public transport.

PC23 has:

- ~1,900 residents (800 dwellings × avg occupancy),
- **zero** passing trade,
- **zero** PT service,
- **zero** connected secondary catchment (Prestons & Spencerville are too distant to walk).

The structure is economically non-viable and structurally inconsistent with CDP 15.1.2.1 ("avoid proliferation of small commercial nodes in inappropriate locations").

11.3.3 Risk of Undermining Prestons Centre

The Prestons Local Centre has struggled to reach full viability and occupancy, even though:

- it is adjacent to high-density housing;
- it is directly connected to Marshland Road;
- it sits on a PT route.

PC23 introduces a competing node:

- Just large enough to draw leakage for low-margin convenience retail;
- Too small to form a distinctive centre identity;
- In the same broader catchment as Prestons.

This results in **mutual weakening**, where both centres underperform—a known pattern in polycentric urban form literature (Berry 1971; Guy 1998; Dunham-Jones 2010).

11.3.4 LMM's Economic Assessment Fails the Required Policy Test

Appendix A does not provide:

- retail gravity modelling;

- trade-draw analysis;
- VKT-based demand distribution;
- assessment of centres vitality;
- assessment of the hierarchy's orderly functioning.

Instead, the report relies on the assertion that the hub is "small" and "demand driven". Smallness is **not** a mitigation; it is a key risk factor for failure.

11.4 Economic and Retail Distribution Effects

11.4.1 The Counterfactual Is Invalid

Appendix A compares PC23 to a hypothetical **golf resort** that has never materialised and is inconsistent with contemporary policy direction. This artificially inflates the perceived relative benefits of rezoning.

11.4.2 Construction Benefits Are Generic and Overstated

The GDP and FTE estimates:

- are mechanically scaled from dwelling count (multipliers),
- do not account for hazard-driven engineering costs,
- do not offset the long-term infrastructure burden on CCC,
- and are therefore not net economic benefits.

11.4.3 Externalities Omitted

The report omits:

- increased car travel (720 peak-hour trips, 6,560 daily movements),
- emissions costs,
- network congestion,
- increased emergency response times,
- increased stormwater management costs in a climate-sensitive floodplain,

- loss of rural character and recreational amenity.

11.4.4 No Consideration of Long-Term Land Use Efficiency

The land is hazard-prone, low-lying, and physiographically unsuitable for intensification. A higher dwelling yield here **does not** represent optimal land use—contrary to the report's assertions.

11.5 Urban Design Integration and Walkability

11.5.1 Misrepresentation of "Integration"

The Urban Design Assessment (Appendix G) claims integration because:

- internal roads form a grid;
- edges have landscaping;
- the subdivision connects to three existing roads.

This confuses **geometric adjacency** with **functional integration**. A well-designed grid does not compensate for:

- the absence of multimodal transport,
- a lack of proximate services,
- inability to accommodate safe cycling,
- rural-speed boundaries with no footpaths,
- a design reliant on car access for all daily needs.

11.5.2 Walkability Claims Are Unsupported

The report provides no:

- walking catchment analysis,
- pedestrian level-of-service evaluation,
- safe cycling route assessment,
- analysis of walkability to essential services (because none exist nearby).

11.5.3 The Rural–Urban Interface Is Not Credibly Managed

Setbacks and "rural fencing" are decorative, not structural.

Appendix F-i graphics show:

- medium-density housing visually exposed to Turners Road,
- uninterrupted roof planes visible from Lower Styx Road,
- minimal seasonal screening,
- night-sky glow across the floodplain.

This contradicts CDP Rural Interface policies that require **minimisation of visual dominance**.

11.5.4 CPTED Risks on Styx River and Basin Edges

Hazard and ecological setbacks push houses back from the river corridor, reducing passive surveillance. The result is:

- intermittent paths with poor sightlines,
- deep vegetated margins,
- low visibility and increased CPTED risk.

11.6 Landscape, Rural Interface, and Visual Effects

11.6.1 Basins and Wetlands Are Hazard Infrastructure, Not "Amenity"

Appendix F rebrands mandatory hazard mitigation as aesthetic benefit.
Yet the basins are:

- responses to high groundwater,
- compensatory flood storage,
- vulnerable to salinity,
- likely to degrade in ecological quality under rising water tables.

See also Section **8.1–8.3** which detail the Styx corridor's at-risk wetland systems, which Appendix F incorrectly treats as compatible with urbanisation.

11.6.2 Mischaracterisation of Existing Landscape

The report claims the baseline is "urban" due to the golf resort zoning.
In reality, the site is:

- open rural plains,
- low structures,
- distant rural/coastal viewsheds,
- dark skies at night.

Replacing this with an 800-house suburb is a dramatic character shift.

11.6.3 Graphics Reveal Greater Effects Than Reported

Appendix F-i images show:

- significant visual exposure from Lower Styx Road,
- no modelling of night lighting,
- no seasonal visual analysis,
- medium-density clusters near visually sensitive edges.

The assessment underrates effects as "low" or "moderate" without robust modelling.

11.6.4 Cumulative Effects Ignored

Prestons + Belfast + PC23 collectively erode:

- rural separation,
- landscape identity of the Styx corridor,
- ecological integrity of the floodplain.

There is no cumulative analysis, despite CRPS requirements.

11.7 Transport Integration and Accessibility

11.7.1 Lack of Public Transport and Unlikely Future Provision

There are:

- no current bus services,
- no route in the Metroplan pipeline,
- no density or linearity to support future PT.

The applicant's "possible routing" diagrams are speculative and unsupported.

11.7.2 Car Trip Generation Understated

The ITA relies on outer-suburban trip rates.
But PC23 is a **rural satellite**, so trip generation is likely significantly higher (10–12 vpd/dwelling).

11.7.3 Hazard-Related Access Limitations Ignored

Lower Styx Road frequently floods.
All external access roads lack safe multimodal facilities.
The modelling assumes perfect, uninterrupted accessibility, contrary to actual hazard conditions

11.8 Incoherent Urban Design

A consistent theme across Appendices A (Economics), E (Transport), F/F-i (Landscape), and G (Urban Design) is that they do not describe the same environment. Each discipline makes assumptions that are explicitly invalidated by the others. This produces an internally contradictory and therefore methodologically unreliable evidence base.

1. **Economic Assessment of Proposed Rezoning at Whisper Creek (Appendix A) provides for 1500 m2 of retail space**, comparable in scale to a Neighbourhood Centre under the Christchurch District Plan and constitutes the establishment of a new commercial node.yet
    - **The same document characterizes** the impact as "minor", a "small scale of commercial activity", and "dispersed market impact" suggesting that it is of inconsequential concern to the council.
2. **Urban Design (Appendix G) asserts walkability and integration**, yet

- **Transport (Appendix E)** confirms there are *no* safe pedestrian or cycling facilities on any bounding road, *no* PT services, and *no* planned upgrades (ref. Section 10).
  → *The "walkable neighbourhood" claimed in Appendix G cannot exist in the transport environment actually described by the ITA.*

3. **Urban Design claims the rural–urban interface will be softened**, but

   - **Landscape Graphics (Appendix F-i)** show visually exposed medium-density clusters, unmitigated roof planes, and minimal screening.
     → *The "soft edge" claimed in G contradicts the visual reality documented in F-i.*

4. **Economic Appendix A claims the commercial node will be viable and demand-driven**, yet

   - **Transport (Appendix E)** shows the site has no passing trade and is accessible almost entirely by car, and

   - **Urban Design (Appendix G)** provides no walkable catchment to external anchors.
     → *The economic assumptions rely on a walkability and catchment model disproven by both transport and urban design evidence.*

5. **Economic Appendix A states the area is already 'urban' under the golf resort zoning**, yet

   - **Landscape Appendix F** describes a predominantly rural character with open vistas, agricultural landform, and minimal built form.
     → *The "urban baseline" assumption contradicts the landscape and planning reality.*

6. **Appendix G asserts strong ecological and riparian integration**, yet

   - **Appendix F** acknowledges the Styx margins require extensive buffers, setbacks, and no-passive-surveillance conditions.
     → *Urban design claims of activation contradict ecological constraints requiring disengagement.*

These contradictions make the applicant's urban design case structurally unsound: the proposal cannot simultaneously be walkable, car-dependent, integrated, isolated, rural-edge-softened, visually contained, and economically viable. The evidence cannot all be true at once.

11.8 Synthesis and Conclusion

PC23 does **not** achieve a well-functioning urban environment as required by NPS-UD, CRPS, and the CDP.
The proposal:

- establishes a **peripheral**, **car-dependent**, and **non-contiguous** satellite suburb;
- introduces a **weak, non-viable commercial node** that undermines the centres hierarchy;
- relies on landscape "mitigation" that is in reality hazard management;
- produces significant adverse transport, landscape, and character effects;
- contradicts the strategic spatial logic of Christchurch's planned urban form;
- fails to provide the social infrastructure required for resilient communities;
- provides no credible pathway to multimodal transport or reduced emissions;
- assumes future infrastructure capacity that does not exist or is unfunded.

Accordingly:

> **PC23 is inconsistent with the NPS-UD, CRPS Chapter 6, and the Christchurch District Plan. It does not represent efficient, resilient, or well-integrated urban development and should be declined.**

12. Insurability and Long-Term Financial Exposure

12.1 Introduction: Why Insurability is a Planning Matter
New Zealand's residential insurance market has shifted decisively toward hazard-based, address-specific risk pricing. High groundwater, liquefaction susceptibility, flood-plain exposure, and coastal-inundation pathways—all features present at the PC23 site—are now directly used by insurers to set premiums, impose large excesses, restrict coverage, or withdraw entirely. Loss of insurability affects homeowner resilience, mortgage availability, market value, and Council obligations under the RMA to avoid or mitigate natural-hazard risk.

12.2 Historical Precedent for Insurance-Driven Property Devaluation

Beyond the Canterbury earthquake sequence, several documented New Zealand cases show that insurance repricing in hazard-prone areas has driven down property values:

• South Dunedin: flooding and high groundwater led to higher premiums and restrictive terms; insurers publicly warned of future uninsurable zones.
• Napier: post-flooding insurance restrictions led to price stagnation and discounts.
• Wellington: insurers introduced higher premiums and declined new business in landslide- and liquefaction-prone suburbs.
• Nelson–Tasman: severe premium escalation followed the 2022 floods, reducing values in affected subcatchments.

12.3 Published Authorities Signalling Insurability Risk in Environments Like PC23

Several national authorities warn that areas with the same hazard profile as PC23 face heightened risk of insurance retreat:

• IAG (Climate Change Position Statements 2018–2022): warns that low-lying coastal floodplains and liquefaction-prone areas may become uninsurable by 2050.
• Reserve Bank of New Zealand (Climate Risk Insights Report 2022): notes that insurance withdrawal is a foreseeable financial hazard that can precede physical climate impacts.
• Deep South National Science Challenge (2019–2023): documents that rising groundwater and liquefaction amplification will drive "gradual insurance retreat" via higher excesses, premium escalation, and exclusions.
• NZ SeaRise (2022): reveals local subsidence in northern Christchurch, increasing effective sea-level rise beyond CCC's planning assumptions, worsening insurability.
• EQC/Toka Tū Ake (2021–2024): emphasises that private insurers may withdraw from high-hazard areas, regardless of EQC cap increases.

12.4 Why PC23 Presents a Perfect Storm of Insurance Risk

The PC23 site includes nearly every factor insurers classify as high-risk:

• High groundwater and future water-table rise.
• Tidal-influenced floodplain with extremely low fall gradients (1/6000 in Spencer Drain).
• Liquefaction-susceptible soils, dune sands, and overbank deposits.
• Free-face conditions at riverbanks and proposed stormwater lakes, enabling lateral spread.
• Proximity to tsunami-inundation pathways, with NZ SeaRise data indicating that the Orange Zone is likely to shift inland over the development footprint.
• Need for extensive filling within a flood-storage area, increasing long-term settlement and flood displacement.

12.5 Likely Insurance Outcomes for PC23 if Developed

Based on insurer practice since 2011:

• Significantly higher annual premiums compared with Christchurch averages.
• Large flood and liquefaction excesses.
• Special insurance terms (restricted cover, exclusions).
• Potential refusal to offer new policies in the lower terrace.
• Mortgage constraints as banks require full replacement insurance.
• Depressed long-term property values and reduced market liquidity.

12.6 Planning Implications Under the RMA and CRPS

Under s6(h) and s31 RMA, decision-makers must avoid or mitigate significant natural-hazard risks. Approving a development where insurability is foreseeably compromised conflicts with:
• NPS-UD Policy 1 (well-functioning urban environments),
• CRPS 6.3.3 and 6.3.4 (avoidance of hazard exposure),
• MfE Coastal Hazards Guidance (2022),
• CCC's climate-adaptation obligations.

13. Additional Substantive Issues Identified for Further Development

13.1 School Safety and Local Traffic Effects

Increased vehicle movements associated with PC23 will materially affect the safety environment at Ōhuruhi Model School on Turners road, where rural road conditions, lack of footpaths, and limited sight lines already present elevated risk. Tradies habitually assume the rural road allows 80km speed and travel around a blind curve into a congested area where extremely young children are crossing the narrow road.

13.2 Construction-Phase Noise, Vibration, Dust, and Haulage Effects

A multi-year construction programme has the potential to generate significant amenity, health, and ecological impacts on neighbouring communities and reserves, none of which have been evaluated.

13.3 Transport Emissions and Vehicle-Kilometres Travelled (VKT)

The proposed development is highly car-dependent and is likely to increase VKT substantially, contrary to CCC's Climate Resilience Strategy and relevant CDP Strategic Directions.

13.4 Firefighting Water Supply and Emergency Response Times

The site's peripheral location, combined with reliance on private water-supply infrastructure and constrained access routes, raises unresolved concerns regarding fire-flow capacity and emergency-service response times.

13.5 Groundwater Interference with Existing Domestic and Stockwater Wells

Additional groundwater abstraction may cause interference effects on neighbouring wells in Ouruhia and Spencerville; this risk has not been assessed.

13.6 Spencer Drain Capacity, Maintenance Requirements, and Ecological Sensitivity

The proposal does not address the capacity limitations, sedimentation vulnerability, or maintenance implications for Spencer Drain, a slow-velocity and ecologically sensitive receiving environment.

13.7 Historic Soil Contamination and Mobilisation Risks

Legacy agrichemicals and nitrate residues associated with long-term dairy and rural land use may be remobilised by earthworks, fill placement, and groundwater-rise dynamics.

13.8 Bird-Movement Patterns, Wetland Interfaces, and Low-Flight Operations

Urbanisation at this location may alter avian movement patterns between the Styx River corridor and Bottle Lake Forest, with potential implications for helicopter operations used in fire management.

13.9 Recreational Carrying Capacity of the Pūharakekenui/Styx Corridor

The expected increase in local population will place additional pressure on the Styx Vision 2000–2040 restoration network, including paths, riparian margins, and biodiversity values, without corresponding capacity or mitigation planning.

14. Relief Sought

This section sets out the relief sought in relation to Private Plan Change 23 (Whisper Creek). The requested relief is grounded in the technical evidence, policy analysis, and statutory requirements outlined in the preceding sections. Although this submission supports responsible, well-integrated, and resilient housing development, the evidence demonstrates that PC23 does not meet the standards required under the RMA, national direction, the CRPS, or the Christchurch District Plan, nor does it satisfy the Council's obligations under Te Tiriti o Waitangi or the partnership and kaitiakitanga responsibilities owed to Te Ngāi

Tūāhuriri Rūnanga as mana whenua.
Key elements of the proposal were never presented to Te Ngāi Tūāhuriri for informed consideration, and the assessment now required under the Mahaanui Iwi Management Plan, the Ngāi Tahu Subdivision and Development Guidelines, and Te Mana o te Wai remains incomplete.
The relief sought therefore reflects not only the unresolved technical and environmental risks, but also the procedural and cultural obligations that must be met before any rezoning decision is contemplated.

14.1 Primary Relief Sought – Decline Private Plan Change 23

Given the significant deficiencies relating to:
• natural hazards and climate-change risk,
• transport safety and tsunami evacuation,
• Three Waters capacity and long-term resilience,
• stormwater and floodplain performance,
• ecological and freshwater protection,
• cultural and archaeological values,
• emissions and urban-design consistency,
• funding and economic feasibility, and
• non-compliance with MDRS, QMs, and Clause 25(4A),

the primary relief sought is that **Christchurch City Council decline Private Plan Change 23 in its entirety**.

14.2 Alternative Relief – Defer or Suspend PC23 Pending Essential Information

If the Council determines that declining PC23 outright is not appropriate at this stage, the alternative relief sought is that the Council:
• defer or suspend consideration of PC23,
• require the applicant to complete, prior to any further processing of PC23, all outstanding hazard, transport, and infrastructure assessments, including: updated hydrodynamic flood-modelling; groundwater–SLR modelling; quantitative tidal-closure and backflow modelling for the Styx catchment; full liquefaction and settlement analysis in accordance with NZGS 2021 guidance; flood-storage displacement modelling for all proposed filling; updated *transport network modelling* for all affected corridors and intersections (including Marshland–Lower Styx–Spencerville Road and Chaney's Corner); and a full *traffic-safety assessment* including a KiwiRail Level Crossing Safety Impact Assessment for the Spencerville Road railway crossing and a Stage 1–2 Road Safety Audit of all site accesses and receiving roads, together with updated tsunami-evacuation travel-time modelling to NZTA standards.

• require independent peer review of all new technical information, and
• re-evaluate PC23 only once a complete and up-to-date evidence base is available.

This approach is consistent with MfE (2022) *Coastal Hazards and Climate Change Guidance*; NZSeaRise (2022) regional projections; the precautionary principle in s6(h) RMA; the Natural Hazards Chapter of the Christchurch District Plan; CRPS Policies 11.3.1–11.3.3 requiring avoidance of increased hazard risk; NZGS (2021) geotechnical guidelines; NPS-FM (2020) and NES-Freshwater requirements for hydrological and water-quality assessments; the Canterbury Land and Water Regional Plan; Waka Kotahi's Integrated Transport Assessment and Road Safety Audit Guidelines; KiwiRail's Level Crossing Safety Impact Assessment framework; and the information obligations under Schedule 4 and s32 RMA.

14.3 Site-Specific Relief – Conservation Zoning for the Lower Terrace

If the Council considers that some form of rezoning may still be appropriate after further assessment, the relief sought is that:
• the lower terrace (HFHMA and ponding areas) be rezoned **Conservation**,
• ecological restoration be prioritised within this area,
• riparian corridors be widened to a minimum of 20 m,
• stormwater basins be relocated outside of high-flood-hazard areas, and
• public access and habitat enhancement be integrated into long-term management.

This approach aligns with:
• CRPS biodiversity and ecological-network policies,
• NPS-FM (Te Mana o Te Wai),
• CDP ecology and riparian policies,
• CCC's Styx Vision 2000–2040.

14.4 Relief Regarding MDRS, QMs, and s77L Obligations

The submission seeks that Council require the applicant to:
• map all relevant Qualifying Matters spatially,
• complete a full s77L evaluation of alternative development forms,
• demonstrate the "least modification necessary" to MDRS,
• incorporate hazard and infrastructure constraints transparently into rezoning boundaries.

Without these steps, PC23 cannot be lawfully accepted or approved.

14.5 Relief Regarding Cultural and Archaeological Assessment

The submission seeks that Council require:
• an updated Cultural Impact Assessment prepared in partnership with Ngāi Tūāhuriri,
• a mahinga kai assessment consistent with Te Mana o Te Wai,

• a full archaeological desktop assessment and walkover survey,
• identification and protection of wāhi tūpuna and wāhi tapu.

14.6 Relief Regarding Infrastructure Funding and Long-Term Costs

The submission requests that Council require:
• a full infrastructure funding plan,
• identification of all unfunded or partially funded upgrades,
• analysis of who bears the long-term operational costs,
• confirmation that ratepayers will not be burdened by private development.

14.7 Relief Regarding Insurability

• Decline PC23 unless the applicant provides full, peer-reviewed insurability modelling demonstrating long-term insurance viability.
• Require evaluation of premium escalation, insurance retreat scenarios, and mortgage impacts across a 100-year planning horizon.
• Require an insurer-issued assurance that full replacement insurance will remain available for PC23 homes.
Without robust evidence, rezoning would expose 800 households to foreseeable financial and insurability risk.

14.8 Requirement for a Retail Distribution Effects Assessment

Given that the zoning provisions (see PC23-Appendix-A) enable up to 1,500 m^2 of food-and-beverage and retail floorspace — a scale comparable to a Neighbourhood Centre under the Christchurch District Plan — the proposal effectively establishes a new commercial node outside the planned centres hierarchy.

Under RMA effects-based planning, City planners must assume "full development potential," not hypothetical intentions. They must assess the maximum development that the zoning provisions enable.

They are not allowed to rely on: "likely" development, verbal assurances, informal design rationales. Thus, the relevant scale is 1,500 m^2, not the claim of "3–4 small shops."

Under the CRPS centres-based framework and District Plan commercial policies, any new centre of this scale requires a specialist Retail Distribution Effects Assessment (RDEA) to determine whether it would undermine the role and function of the Prestons, Belfast, or other centres, alter travel behaviour, or create an out-of-sequence commercial pattern.

No such assessment has been provided. The relief sought is therefore that Council require a full RDEA prior to determining PC23, and that PC23 not proceed until this assessment has

been completed, independently peer-reviewed, and shown to be consistent with regional and district policy.

14.9 Remedies Relating to Contamination, Public Health, and Soil/Groundwater Quality

• **Full Preliminary Site Investigation (PSI) and Detailed Site Investigation (DSI):** Require the applicant to undertake a comprehensive PSI and DSI in accordance with the NES-CS, covering all former agricultural areas, fill areas, soil and groundwater sampling, and identification of any contamination hotspots. No rezoning should occur until CCC has independently peer-reviewed and accepted the DSI.

• **Remediation Action Plan (RAP) and Long-Term Management Plan (LMP):** If contamination is confirmed, require a RAP specifying remediation methods, disposal pathways, verification testing, and a long-term management plan for any residual contamination.

• **Groundwater-Rise and Salinity-Intrusion Assessment:** Require quantitative modelling of groundwater rise under NZSeaRise 2022 SLR projections, saltwater intrusion risks, and effects on foundation performance, stormwater basins, and contaminant mobilisation.

• **Assessment of Fill Quality, Source, and Contaminant Risks:** Require full certification and testing of all imported fill, analysis of contaminant leaching potential, and assessment of fill behaviour in high-water-table floodplain conditions.

• **Public-Health Risk Assessment:** Require assessment of dust, particulates, groundwater contamination risks to neighbouring bores, and exposure pathways for nearby residents during earthworks.

• **Regional Consenting Feasibility (LWRP and NES-FM):** Require evidence that all required regional consents—including stormwater discharge, wetland modification, groundwater take, and earthworks—are realistically obtainable under the LWRP and NES-Freshwater.

• **Deferred Consideration of PC23 Until Evidence Is Complete:** If the applicant cannot provide the required investigations, CCC should decline, suspend, or return PC23 under Clause 23(5) due to insufficient information.

14.10 Relief Regarding Cultural Assessment and Engagement with Te Ngāi Tūāhuriri Rūnanga

Given the evidence set out in Section 9—namely, that Te Ngāi Tūāhuriri Rūnanga were briefed only on a materially different proposal in 2021, at a time when the extent, density,

hydrological impacts, hazard exposure, and cultural-landscape implications of PC23 were neither disclosed nor understood—the following relief is respectfully sought:

• require the applicant to re-engage appropriately and transparently with Te Ngāi Tūāhuriri Rūnanga as mana whenua, providing full and accurate information about the scale and nature of the current proposal, its hydrological and ecological effects, and its potential impacts on wāhi taonga, mahinga kai, Ngā Wai (the Pūharakekenui/Styx River), and the wider cultural landscape.

• require the preparation of a full, independent, mana-whenua-led Cultural Impact Assessment (CIA), commissioned through the appropriate rūnanga processes, consistent with the Mahaanui Iwi Management Plan (2013), the Ngāi Tahu Subdivision and Development Guidelines, and the tikanga-based assessment frameworks applied by Te Ngāi Tūāhuriri.

• suspend further consideration of PC23 until Te Ngāi Tūāhuriri Rūnanga have been given a fair, informed, and adequately resourced opportunity to assess the actual proposal now before the Council, and to determine whether a CIA is required and what the scope of that CIA must be.

• recognise, in accordance with Te Mana o te Wai and CRPS Policies 2.2.1, 2.2.2, and 2.2.4, that mana whenua must be provided the opportunity to make a fully informed assessment of potential effects prior to land-use decisions that may alter the cultural, hydrological, and ecological integrity of the Pūharakekenui/Styx catchment.

• ensure that any future planning, assessment, or decision-making arising from PC23 gives effect to the principles of Te Tiriti o Waitangi, including partnership, active protection, informed decision-making, and recognition of mana, rangatiratanga, and kaitiakitanga.

14.11 Relief Regarding Procedural and Statutory Deficiencies

PC23 should be declined, or at minimum suspended, due to unresolved procedural defects that prevent lawful acceptance or notification. Specifically:
(a) The Section 32 evaluation does not assess reasonable alternatives as required by s32(1)(b)(i).
(b) The plan change has not demonstrated consistency with the Canterbury Land and Water Regional Plan, contrary to s75(4)(b).
(c) Mandatory spatial information for Qualifying Matters and hazard overlays has not been provided as required under Schedule 1.
(d) The Outline Development Plan is incomplete and not in a form capable of insertion into Chapter 8.
(e) No strategic infrastructure assessment has been supplied, contrary to NPS-UD and CRPS

6.3.5.
(f) No updated cultural assessment has been undertaken for a proposal of this scale and effect on Ngā Wai and mahinga kai.
(g) The Integrated Transport Assessment does not meet the CDP requirements for a PPC and provides insufficient information under Clause 23.
(h) No climate-change adaptation evaluation has been provided under s6(h), s7(i), or MfE 2022 guidance.
These unresolved procedural matters provide independent grounds for declining or deferring PC23.

14.12 Relief Sought Regarding Further Expert Assessment

Should CCC proceed beyond the Clause 25 stage, the submitters seek that any further processing of PC23 be contingent on the applicant providing comprehensive, independently peer-reviewed assessments addressing the following matters:

(a) A school-safety and active-transport assessment for Ōhuruhi Model School.
(b) A construction-phase effects management plan covering noise, vibration, dust, and truck routes.
(c) A transport-emissions and VKT analysis consistent with CCC's Climate Resilience Strategy.
(d) A firefighting water-supply and emergency-response assessment meeting Code of Practice standards.
(e) A groundwater-interference assessment for neighbouring domestic and stockwater bores.
(f) A full hydrological and ecological assessment of Spencer Drain capacity and maintenance implications.
(g) A historic-contamination investigation including nitrate and legacy agrichemicals.
(h) An assessment of bird-movement and air-operations risks in relation to the Styx and Bottle Lake corridors.
(i) A recreational carrying-capacity assessment for the Styx Restoration Project network.

If these assessments cannot demonstrate that adverse effects will be avoided or reduced to an acceptable level, the plan change should be declined.

14.13 Scope of Relief Sought

For the avoidance of doubt, this submission seeks any combination of the following outcomes:
• decline the plan change;
• defer pending complete evidence;
• rezone hazard-prone areas as Conservation;

• impose more stringent development controls;
• require additional assessments consistent with national and regional policy.

14.14 Conclusion- Relief Sought

PC23 presents significant unresolved risks and systemic deficiencies across hazards, infrastructure, ecology, cultural values, and statutory compliance. The relief sought reflects the necessity of ensuring resilient, evidence-based, and community-safe planning outcomes. Until the applicant provides a complete, robust evidence base demonstrating that these risks can be safely managed, the plan change should not proceed.

15. Appendices & Supporting Materials

This section identifies recommended appendices and supporting materials that may accompany the Technical Submission for PC23. These appendices do not need to be finalised at submission time, but establishing their structure now ensures the submission can expand without raising new issues at later stages of the Schedule 1 process.

15.1 Purpose of Appendices

The appendices are intended to:
• Provide clarity and transparency regarding technical evidence
• Allow independent verification of data and policy references
• Supply maps, diagrams, and tables that support the submission text
• Ensure consistent cross-referencing for the hearing and any subsequent appeals
• Document the basis for relief sought

15.2 Recommended Appendix Structure

The following appendices are recommended for inclusion:

Appendix A – Hazard and Floodplain Mapping
• CCC Flood Hazard Maps (HFHMA, FMA, ponding areas)
• Styx floodplain context and elevation models
• Tsunami evacuation zone mapping
• NZSeaRise (2022) subsidence and SLR projections

Appendix B – Groundwater and Geotechnical Information
• Groundwater elevation summaries
• LiDAR elevation profiles of the lower terrace
• Extracts from NZGS Modules 1–5 relevant to liquefaction and lateral spread
• Site soil descriptions and inferred geomorphology

Appendix C – Stormwater and Hydraulic Constraints
• Spencer Drain gradient diagram (~1:6000)
• Styx tidal-gate operation schematic
• Ponding and conveyance pathway map
• CCC RFI excerpts on basin sizing errors

Appendix D – Three Waters Infrastructure
• PS78 pump station information (capacity, earthquake impacts)
• CCJ wastewater modelling extracts
• Known pipe deformation/I&I areas
• Potable water supply constraints documentation

Appendix E – Transport and Evacuation Modelling Inputs
• Annotated maps of Turners, Spencerville, and Kainga Roads
• One-lane bridge geometry diagrams
• Intersection constraints at Chaney's Corner
• Evacuation travel-time assumptions and bottleneck locations

Appendix F – Ecological and Te Mana o Te Wai Material
• Excerpts from Boffa Miskell (2023) Styx Catchment Report
• Maps of seasonal wetlands and riparian vegetation
• Species lists for Styx corridor (tuna, īnanga, birds, lizards)
• Te Mana o Te Wai values hierarchy summary

Appendix G – Cultural & Archaeological Resources
• CIA excerpts and identified gaps
• Heritage New Zealand Pouhere Taonga Act summary
• Known archaeological records near Styx/Brooklands Lagoon
• Recommended accidental discovery protocol

Appendix H – NES-CS and Public Health Material
• Soil contamination risk summary
• Potential pesticide/heavy-metal contaminant profiles
• Groundwater salinity intrusion risk notes
• Dust and air-quality considerations

Appendix I – Economic Feasibility and s32 Analysis
• Infrastructure cost comparison tables
• Funding gap analysis
• Summary of unbudgeted upgrades in the CCC Long-Term Plan
• Alternative development forms and sequencing options

Appendix J – Insurability Risk, Insurance-Market Behaviour, and Financial Exposure

J.1 National Insurance-Market Behaviour Since 2011

• Insurers have shifted from uniform regional pricing to address-specific natural-hazard pricing.
• Premiums, excesses, exclusions, and refusals of cover now directly reflect liquefaction susceptibility, groundwater levels, floodplain behaviour, and coastal-inundation exposure.
• Insurance retreat typically begins gradually—via premium escalation and restrictive terms—before outright withdrawal.

J.2 Documented Precedents of Insurance-Driven Property-Value Decline

• South Dunedin (2015–2024): High groundwater and recurrent flooding led to premium escalation and suppressed property values.
• Napier (2020–2023): Post-flood insurance restrictions generated measurable stagnation and value divergence.
• Wellington (2019–2024): Premiums surged and some insurers declined new business in liquefaction- and landslip-prone suburbs.
• Nelson–Tasman (2022–2023): Severe premium escalation following major floods reduced marketability in affected subcatchments.

J.3 Authoritative Risk Signals Relevant to PC23

• IAG Climate Change Statements (2018–2022): Low-lying floodplains and liquefaction-susceptible soils are potential "future uninsurable zones."
• Reserve Bank of NZ Climate Risk Insights (2022): Insurance retreat is a foreseeable financial hazard with direct impacts on property values.
• Deep South National Science Challenge (2019–2023): Rising groundwater amplifies liquefaction risk and increases likelihood of insurance withdrawal.
• NZ SeaRise (2022): Local subsidence in northern Christchurch increases effective sea-level rise beyond CCC planning assumptions, degrading insurability.
• EQC / Toka Tū Ake (2021–2024): Notes that private insurers may withdraw from high-hazard areas regardless of EQC cap increases.

J.4 PC23 Site Factors Consistent with High Insurability Risk

• High current groundwater and projected future rise.
• Liquefaction-susceptible dune sands and overbank silts; shallow water table.
• Free-face conditions at Styx River banks and proposed lakes enabling lateral spread.
• Extremely low-gradient flood-conveyance (Spencer Drain approx. 1/6000).
• Development footprint adjacent to tsunami-inundation pathways; Orange Zone expected to shift inland.
• Extensive fill required to meet minimum FFL → long-term differential-settlement risk.
• Combined hazard environment consistent with insurer high-risk categories.

J.5 Foreseeable Insurance Outcomes if PC23 Proceeds
• Premiums materially higher than Christchurch averages.
• Large flood and liquefaction excesses and restrictive special terms.
• Potential refusal of new policies in groundwater-affected zones.
• Mortgage constraints due to inability to secure full replacement insurance.
• Depressed long-term asset values and impaired resale liquidity.

J.6 Planning Significance
• Loss of insurability is a foreseeable natural-hazard effect under s6(h) and s31 RMA.
• Failure to assess insurability conflicts with:
– NPS-UD Policy 1 (well-functioning urban environments)
– CRPS 6.3.3 and 6.3.4 (avoid significant hazard exposure)
– MfE Coastal Hazards Guidance (2022)
• Insurance-market evidence signals unacceptably high long-term financial risk for 800 households.

J.7 Relief Sought
• Require full, peer-reviewed insurability modelling incorporating groundwater-rise, liquefaction, lateral-spread, and flood-displacement effects through 2120.
• Require insurer-issued statements confirming likelihood of long-term availability of full replacement cover.
• Decline PC23 unless long-term insurability is robustly demonstrated.

15.3 Cross-Reference Table (Optional)

A cross-reference table may be included to help the hearing panel navigate the relationship between:
• submission sections,
• appendices,
• statutory policies, and
• RFI responses.

15.4 Future Evidence and Expert Inputs

This section confirms that further material may be added to the appendices as it becomes available, including:
• updated Styx flood modelling by CCC,
• additional ecological assessments,
• cultural and archaeological studies,
• expert evidence relating to hazards, stormwater, or planning law.

15.5 Conclusion- supplemental information placeholder section

The appendices are designed to support clarity, reinforce the technical basis of the

submission, and ensure that all evidence can be efficiently presented during the hearing and any subsequent Environment Court appeal. These materials strengthen the submission's alignment with statutory, ecological, cultural, and infrastructure requirements.