

Archaeological and Cultural Landscape Technical Review

Private Plan Change 23 (Whisper Creek)

John Messerly, May 2026

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1. Scope, Purpose, and Relationship to Submission

This technical review is provided in support of the submission lodged by the Messerly and Lemzin Families on Private Plan Change 23 (Whisper Creek) to the Christchurch District Plan.

The report expands upon and provides further technical analysis regarding matters raised in that submission relating to:

- natural, cultural, archaeological, and historic values;
- effects on the Pūharakekenui / Styx River environment and associated cultural landscapes;
- Māori cultural values, mahinga kai, and waterways;
- cumulative environmental effects associated with rezoning and urbanisation;
- adequacy of technical investigations and evidential uncertainty relevant to rezoning-stage decision-making.

In particular, this report elaborates upon matters raised in:

- Section 8 (Ecology, Biodiversity & Te Mana o Te Wai);
- Section 9 (Cultural, Archaeological & Heritage Values);
- Section 3 (Natural Hazards and Climate-Change Risk);
- and the broader concerns throughout the submission regarding incomplete technical assessment and deferred investigation.

This review does not purport to provide definitive archaeological determination of the entire PPC23 area. Rather, it evaluates whether the presently available archaeological and cultural landscape evidence is sufficiently comprehensive, integrated, and reliable to support rezoning and associated urban intensification at the scale proposed.

The report therefore focuses primarily on:

- adequacy of investigation;
- evidential limitations;
- archaeological and cultural landscape uncertainty;
- survivability of archaeological material within modified environments;
- and whether unresolved archaeological issues are being inappropriately deferred to later subdivision or consent stages.

The analysis is informed by existing archaeological investigations and reports within the wider Lower Styx / Brooklands / Spencerville area, including investigations associated with recorded archaeological site M35/2009 and Lower Styx infrastructure works.

2. Introduction

This report addresses archaeological and related cultural landscape issues associated with Private Plan Change 23 (PPC23), which proposes substantial urban rezoning and future residential development within the Lower Styx / Brooklands / Spencerville area of Christchurch.

The principal issue examined is not whether archaeological effects can necessarily be mitigated through future management processes, nor whether archaeological material has conclusively been demonstrated across the entirety of the PPC23 footprint. Rather, the central question is whether the present evidential platform is sufficiently complete and reliable for the Hearing Panel to confidently

evaluate the archaeological and cultural landscape implications of enabling rezoning and subsequent urbanisation at the scale proposed.

The report adopts the position that the current evidential basis remains materially incomplete. Existing investigations, while informative, appear fragmented, site-specific, opportunistic, and substantially tied to prior infrastructure or development works rather than comprehensive landscape-scale assessment directed toward rezoning-stage decision making.

Accordingly, the report evaluates whether:

- archaeological sensitivity has been adequately characterised;
- assumptions regarding prior disturbance and survivability are empirically justified;
- the cumulative implications of rezoning-scale earthworks have been sufficiently examined;
- unresolved uncertainty is being deferred to future subdivision or consent stages;
- reliance on accidental discovery protocols (ADPs) is functioning as a substitute for adequate upfront investigation.

This report also examines archaeology within a broader environmental and cultural landscape context, including:

- estuarine and wetland occupation patterns;
- waterways and drainage systems;
- geomorphological evolution;
- historic modification of the Lower Styx environment;
- Māori resource-use landscapes and mahinga kai associations;
- nineteenth-century settlement and drainage activity;
- survivability of archaeological material within modified coastal and wetland environments.

The analysis aligns with broader concerns raised elsewhere in PPC23 evidence regarding unresolved system-level effects and incomplete evidential foundations.

3. Archaeology as a Landscape-Scale Issue

A recurring limitation within planning processes involving archaeological assessment is the tendency to evaluate archaeological sensitivity narrowly through the presence or absence of currently recorded sites within a development footprint.

However, archaeological landscapes are not confined to formally recorded sites. Recorded sites are instead partial indicators within broader cultural and environmental systems. This distinction is particularly important within estuarine, wetland, river-margin, and historically modified coastal environments, where archaeological survivability, burial, exposure, and detectability may vary significantly across relatively short distances.

Archaeological investigations associated with works elsewhere within the northern Christchurch coastal plain further illustrate that Māori archaeological material may occur in patterned association with waterways and associated resource-use landscapes rather than solely as isolated recorded points. Archaeological investigations undertaken during Christchurch City Council stormwater infrastructure works and the Spring Grove subdivision at Belfast identified multiple oven features

associated with Māori occupation along the Kā Pūtahi corridor, with the reporting archaeologists concluding that similar patterns of unrecorded oven sites could reasonably be expected elsewhere along the waterway system (Bawden & Mearns, 2022) (Wadsworth et al., 2025).

The Lower Styx / Brooklands / Spencerville environment possesses several characteristics commonly associated with archaeological sensitivity, including:

- proximity to waterways and estuarine environments;
- historical wetland and resource-rich ecological systems;
- evidence of Māori occupation and resource use;
- nineteenth-century drainage and settlement activity;
- complex geomorphological and hydrological modification over time;
- substantial post-earthquake land disturbance and changing groundwater conditions.

The archaeological record associated with such environments is often incomplete and spatially discontinuous. Consequently, absence of currently recorded archaeological sites within a particular parcel cannot safely be treated as evidence of archaeological absence.

This issue becomes particularly important at rezoning stage because rezoning enables cumulative and irreversible landscape transformation through subdivision, infrastructure installation, bulk earthworks, drainage modification, road construction, utilities, and residential intensification.

The evidential question is therefore not merely whether known sites can be managed individually, but whether the broader archaeological and cultural landscape consequences of enabling urbanisation have been sufficiently understood.

3.1 Analytical Consistency Across Disciplines

The Section 42A report requires integrated, system-level, and climate-aware assessment for stormwater and natural hazard effects, including consideration of groundwater interaction, flood behaviour, sea-level rise, vertical land movement, and compound environmental processes (CCC S42A Report, 2026).

The underlying methodological rationale for this approach is that site-specific assessment alone is insufficient to understand system-scale environmental effects within complex estuarine and wetland environments.

In my opinion, a similar issue arises in relation to archaeology and cultural landscape assessment.

Archaeological survivability, burial, exposure, and detectability within the Lower Styx / Brooklands environment are also influenced by broader landscape-scale processes, including:

- wetland evolution;
- estuarine dynamics;
- hydrological change;
- historical drainage modification;
- groundwater conditions;
- sedimentation;
- and geomorphological transformation over time.

However, the presently available archaeological evidence appears substantially derived from:

- isolated infrastructure works;
- monitored earthworks;
- accidental discoveries;
- wastewater and roadworks investigations;
- and site-specific investigations associated with unrelated development activity.

Consequently, the archaeological evidential platform presently available appears fragmented in investigative provenance and analytical integration rather than derived from a comprehensive rezoning-scale assessment of the PPC23 environment itself.

In this respect, the archaeological issues associated with PPC23 reflect a broader issue of analytical consistency across disciplines. If integrated system-level assessment is considered necessary to understand stormwater and natural hazard effects within this estuarine environment, then reliance solely upon isolated site investigations and accidental discoveries may similarly be insufficient to confidently evaluate rezoning-scale archaeological and cultural landscape effects.

4. Archaeological Evidence and Limitations

4.1 Existing Archaeological Evidence in the Lower Styx / Brooklands Area

Existing archaeological investigations within the wider Lower Styx and Brooklands area demonstrate that archaeological material survives within landscapes that have nevertheless undergone substantial modification.

The archaeological investigation undertaken at 361 Lower Styx Road under HNZPT authority 2019/525eq identified midden/oven deposits associated with archaeological site M35/2009. The report records that midden/oven material was encountered during monitored earthworks following an accidental discovery protocol (ADP) callout and that the site was subsequently excavated and analysed under archaeological authority procedures. (Bawden HNZPT 2019/525eq)

The midden/oven classification associated with M35/2009 is also analytically significant.

While shell midden material alone may sometimes reflect dispersed refuse or isolated shell deposition, midden/oven classifications commonly indicate more organised occupation or food-processing activity involving thermal features such as charcoal, burnt stones, heat-affected sediments, or cooking-related deposits.

The Lower Styx Road sewer monitoring report similarly records archaeological material including charcoal, shell, and burnt stones associated with site M35/25 (Cable, 2022).

Such material is commonly associated with repeated occupation, food-processing activity, and estuarine resource-use landscapes rather than incidental shell scatter alone.

This does not establish dense settlement across the PPC23 area, nor does it demonstrate that archaeological material necessarily exists throughout the rezoning footprint. However, it materially weakens simplistic assumptions that the broader Lower Styx environment can safely be characterised as a straightforward low-risk archaeological context.

Importantly, the report expressly concludes that archaeological material may still remain in situ within unexcavated portions of the property and recommends that future earthworks continue to be archaeologically assessed.

This finding is significant for several reasons.

First, it demonstrates survivability of archaeological material within a modified landscape context.

Second, it demonstrates that archaeological material was not identified through prior predictive certainty, but rather through monitored earthworks and subsequent investigation.

Third, the report itself recognises that excavation exposure was partial rather than exhaustive.

The Marshland Road / Hawkins Road / Lower Styx Road investigations undertaken under HNZPT authority 2021/401 similarly identified archaeological material associated with nineteenth-century occupation and drainage history within the wider Lower Styx corridor (Bawden HNZPT 2021/401).

Additional archaeological investigations associated with Lower Styx Road wastewater infrastructure and sewer works provide considerably stronger evidence that the broader Brooklands / Lower Styx corridor has long been recognised as an archaeologically sensitive environment rather than a straightforward low-risk context. (Cable HNZPT 2012/548eq)

The monitoring report records that the Brooklands area, historically known to Māori as Pūharakekenui, possessed a long history of occupation and use as a mahinga kai landscape, including exploitation of shellfish, raupō, flax, and aruhe resources. The report specifically references comments from Ngāi Tahu archaeologist Joseph Hullen regarding the archaeological and cultural significance of the area.

Importantly, the report states that five archaeological sites had already been formally recorded within the project area prior to commencement of the sewer works, including multiple midden/oven sites located along Lower Styx Road and within Brooklands and Spencerville. These included:

- M35/25 — Midden/Oven;
- M35/125 — Midden/Oven;
- M35/126 — Midden/Oven;
- M35/145 — Midden;
- M35/318 — Midden/Oven.

The report also notes that site M35/25 included a cultural layer containing charcoal, shell, and burnt stones, indicating archaeological material associated with food-processing or occupation activity rather than merely isolated shell scatter.

Of particular significance, the report records differing archaeological opinions regarding the likelihood of encountering buried archaeological remains along the lower Pūharakekenui Catchment. In many of these locations, archaeologists considered the archaeological risk sufficiently significant to warrant archaeological authority applications prior to development works.

Following post-earthquake survey work, prominent New Zealand archaeologist and South Island Māori archaeology specialist Michael Trotter — formerly archaeologist at the Canterbury Museum — further concluded that the risk of encountering unrecorded archaeological sites during remedial works within Brooklands was sufficiently high to justify archaeological authority coverage (Trotter 2011).

Collectively, this material indicates that archaeological sensitivity within the broader lower Pūharakekenui catchment environment was already recognised within the professional archaeological context prior to PPC23. It also materially weakens any implication that the PPC23

environment can safely be characterised as a simple low-risk archaeological setting adequately addressed solely through accidental discovery protocols.

To assist in understanding the spatial relationship between PPC23 and recorded archaeological material within the Lower Styx / Brooklands environment, Figure 1 reproduces relevant archaeological site information from the New Zealand Archaeological Association (NZAA) ArchSite database. The figure illustrates the close proximity of multiple recorded midden sites to the PPC23 boundary, including recorded site M35/133, portions of which extend within the PPC23 rezoning area itself. While ArchSite records do not establish the precise extent or condition of subsurface archaeological material, they provide an important evidential indicator of archaeological sensitivity and known archaeological occurrence within the surrounding estuarine landscape (NZAA ArchSite 2026).

The presence of recorded midden site M35/133 partially within the PPC23 boundary materially weakens any inference that prior agricultural or landscape modification has eliminated archaeological survivability within the rezoning area. To the contrary, the spatial continuity of recorded midden sites immediately adjoining and intersecting the PPC23 footprint suggests that archaeological preservation within portions of the site remains plausible and cannot be dismissed through generalised assumptions regarding prior disturbance.

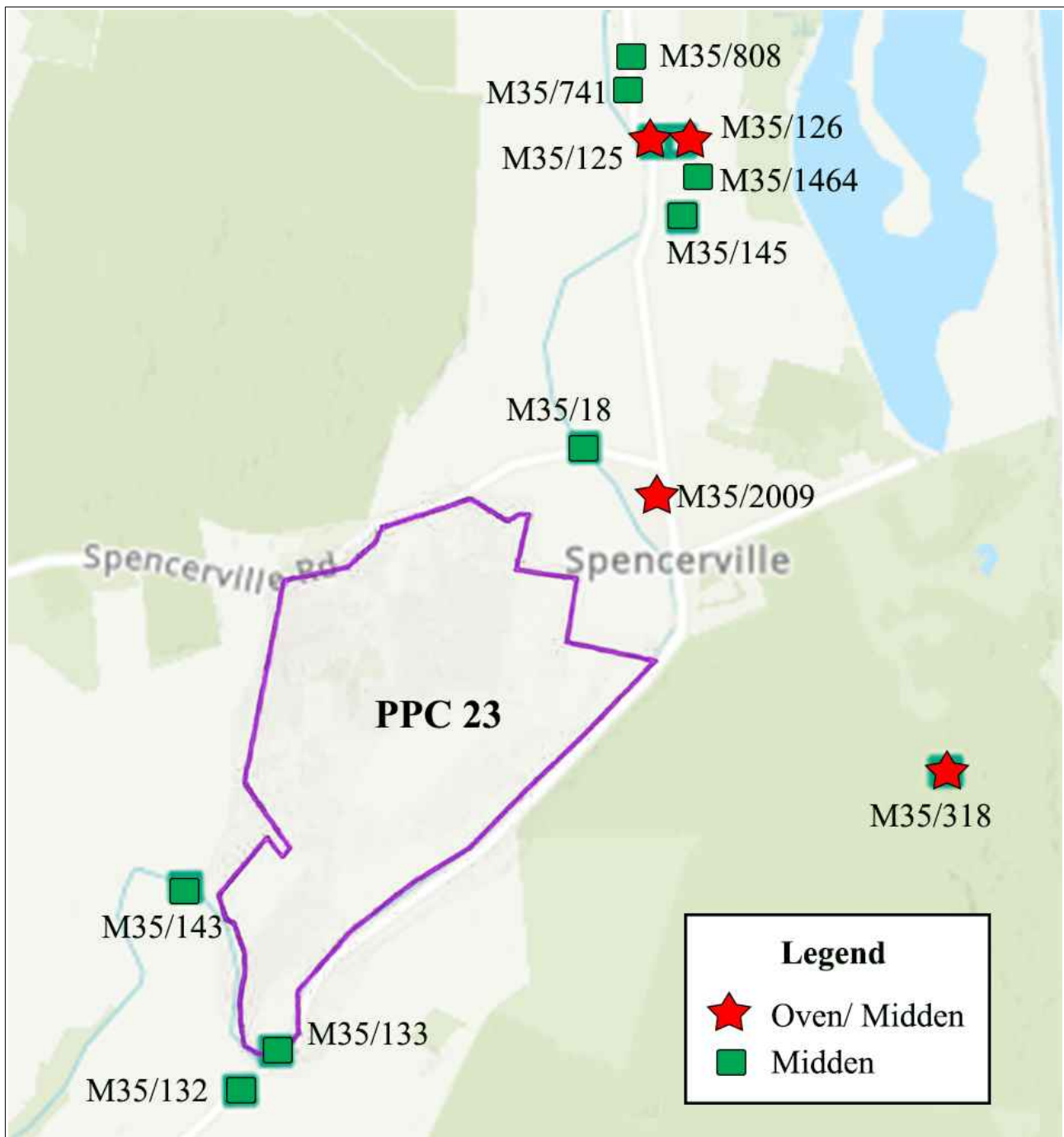


Figure 1. PPC23 in relation to recorded archaeological sites within the Lower Styx / Brooklands corridor. Multiple recorded midden sites occur immediately adjacent to the PPC23 boundary, including site M35/133, portions of which extend within the PPC23 rezoning area. Additional nearby sites include midden sites M35/132 and M35/143, and midden/oven site M35/2009. The figure illustrates the close spatial relationship between PPC23 and known archaeological material within the estuarine Lower Styx landscape. [Source: NZAA Archsite, 2026]

4.2 Significance of Archaeological Authorities and Monitoring Requirements

The repeated use of archaeological authorities and archaeological monitoring within the broader Lower Styx / Brooklands corridor is itself materially relevant.

Under the Heritage New Zealand Pouhere Taonga Act 2014, archaeological authorities are required where modification or destruction of archaeological sites may occur. The repeated issuance of authorities across nearby infrastructure, drainage, road, and development works strongly suggests recognised archaeological sensitivity within the wider corridor environment.

This does not establish that archaeological material is necessarily present uniformly across the entirety of the PPC23 footprint. However, it materially weakens any implication that the PPC23 area can safely be treated as a straightforward low-risk archaeological context requiring only minimal upfront assessment.

The evidential significance lies not merely in isolated site discoveries, but in the repeated necessity for archaeological oversight within the surrounding geomorphological and cultural landscape.

4.3 Archaeological Survivability Within Modified Landscapes

A recurring theme within the available planning and cultural material is the apparent assumption that historical modification substantially reduces archaeological sensitivity.

However, the presently available archaeological evidence does not demonstrate that historical modification reliably eliminates archaeological survivability within the Lower Styx environment.

Indeed, several of the archaeological discoveries discussed in this report occurred within landscapes already subject to:

- drainage modification;
- infrastructure installation;
- agricultural activity;
- post-earthquake disturbance;
- and changing groundwater conditions.

Importantly, archaeological material associated with M35/2009 survived despite substantial modification of the surrounding landscape (Bawden & Gibson, 2022a).

Wetland, estuarine, and river-margin environments may preserve, bury, or obscure archaeological material rather than entirely remove it. Archaeological survivability within such settings may therefore remain spatially variable and difficult to predict solely from surface appearance or prior modification history.

This issue becomes particularly relevant within the Lower Styx / Brooklands environment given:

- historical wetland transition;
- estuarine sediment processes;
- post-earthquake liquefaction and land disturbance;
- groundwater change;
- and long-term drainage modification.

Consequently, assumptions that historical modification necessarily implies low archaeological sensitivity do not appear sufficiently tested within the presently available evidential material.

Archaeological investigations associated with subdivision works elsewhere within the northern Christchurch coastal plain further demonstrate that substantial Māori archaeological material may continue to survive within heavily modified and developing landscapes. Investigations undertaken during the Spring Grove subdivision at Belfast identified multiple Māori occupation features during

subdivision earthworks, with the reporting archaeologists observing that similar patterns of unrecorded oven sites could reasonably be expected elsewhere along the waterway corridor (Wadsworth et al., 2025).

4.4 Limitations of the “Modified Landscape” Argument

The proposition that substantial historical modification necessarily implies low archaeological survivability appears insufficiently supported.

Indeed, existing archaeological investigations within the Lower Styx environment appear to demonstrate the opposite proposition: namely, that archaeological material can survive despite substantial landscape alteration, drainage modification, earthquake disturbance, and modern infrastructure works.

Archaeological investigations associated with the Blakes Road Stormwater Basin development further demonstrate that substantial Māori archaeological material may continue to survive within modified and actively developing landscapes. Multiple oven features associated with Māori occupation were identified during stormwater infrastructure works and topsoil stripping despite extensive prior landscape modification and modern development activity (Bawden & Mearns, 2022).

This observation is important because survivability and disturbance are not binary conditions. Archaeological deposits may remain:

- spatially fragmented;
- partially truncated;
- buried beneath fill sequences;
- preserved within wetland or estuarine contexts;
- or unevenly distributed across modified landscapes.

Consequently, broad assertions regarding prior modification cannot safely substitute for actual archaeological assessment directed toward the rezoning footprint itself.

4.5 Limitations in the Applicant and Section 42A Archaeological Assessment Framework

The archaeological issues associated with PPC23 appear to have been addressed through a relatively limited assessment framework that does not fully engage with the broader archaeological evidence available for the Lower Styx / Brooklands environment.

The applicant’s cultural planning material acknowledges that earthworks associated with subdivision and development may affect wāhi tapu, wāhi taonga, and archaeological material, and references planning provisions relating to accidental discovery protocols (ADPs) and management responses for sites of significance.

However, the applicant material appears to characterise the PPC23 environment as presenting a comparatively low archaeological risk context without undertaking a dedicated archaeological assessment addressing:

- the wider Lower Styx archaeological landscape;
- nearby archaeological discoveries and archaeological authorities;

- archaeological survivability within the estuarine environment;
- or the cumulative implications of rezoning-scale urbanisation.

This is significant because as discussed in Section 4.1 above, the publicly available archaeological investigations within the Lower Styx / Brooklands corridor demonstrate:

- surviving archaeological material within modified landscapes;
- repeated archaeological monitoring requirements associated with infrastructure and civil works;
- recognised Māori occupation and mahinga kai associations;
- and acknowledged uncertainty regarding the extent of surviving subsurface material.

Collectively, those investigations indicate that the broader Lower Styx environment cannot safely be treated as a straightforward low-risk archaeological context.

In that setting, reliance principally upon accidental discovery protocols as the primary management response risks functioning as a substitute for adequate upfront archaeological characterisation at rezoning stage.

This concern is reinforced by the broader archaeological record of the Belfast–Lower Styx coastal corridor, where multiple investigations associated with subdivision, infrastructure, stormwater, and cemetery works have identified previously unrecorded Māori archaeological material, including ovens, midden features, and short-term occupation evidence, despite substantial historic landscape modification. Archaeological reports repeatedly note that such discoveries often occurred during earthworks rather than through comprehensive pre-development identification, and several reports conclude that additional unrecorded archaeological material may reasonably be expected within comparable environments adjacent to waterways and wetland margins. (Bawden & Mearns, 2022; Trendafilov et al., 2020; Wadsworth et al., 2025)

The Section 42A report also appears to conflate archaeological concerns with biodiversity and ecological issues.

The report records submissions raising concerns regarding wāhi taonga, archaeological sites, pre-contact settlement features, and cultural landscape effects, including relief seeking an archaeological assessment and Cultural Impact Assessment (CCC S42A Report, 2026).

However, the conclusion that “no sites of interest have been identified” was given as the rationale for rejection of the relief sought of providing an archaeological assessment, an updated CIA, and mahinga kai assessment. The analysis supporting the rejection relies on Appendix 13 of the Section 42A material, being the ecological review prepared by Dr Antony Shadbolt in his capacity as Team Leader Biodiversity. [CCC S42A Report, 2026- 5.10.2 (g), 5.10.5]

Appendix 13 concerns ecological and biodiversity matters rather than archaeological assessment. Dr Shadbolt does not present himself as undertaking a professional archaeological evaluation of archaeological survivability, archaeological sensitivity, or cultural landscape archaeology. Consequently, ecological analysis does not appear capable of properly resolving the archaeological issues raised in submissions. [CCC Appendix 13, 2026].

In my opinion, this creates a significant evidential and disciplinary gap within the planning assessment framework.

The issue is not whether archaeological effects can necessarily never be managed. Rather, the issue is whether rezoning-scale urbanisation can properly be evaluated where:

- no dedicated archaeological assessment appears to have been undertaken for PPC23 itself;
- publicly available archaeological evidence demonstrating archaeological sensitivity within the Lower Styx corridor was not substantively engaged with;
- assumptions regarding disturbance and archaeological absence remain insufficiently tested;
- and archaeological uncertainty is substantially deferred to future accidental discovery processes after rezoning approval.

The absence of any apparent archaeological assessment addressing the immediate proximity of multiple recorded midden sites — including site M35/133's archaeological polygon extending partially within the PPC23 boundary — further limits confidence that archaeological effects and uncertainty have been adequately characterised at rezoning stage. Under those circumstances, the present evidential platform does not appear sufficiently complete to confidently exclude the possibility of materially greater archaeological and cultural landscape effects than presently assumed.

4.6 Reliance on Accidental Discovery Protocols

A central concern arising from the presently available material is the apparent reliance upon accidental discovery protocols (ADPs) as a principal management mechanism without corresponding demonstration that the archaeological environment has first been adequately characterised.

ADPs are management responses intended to address unexpected discoveries during works. They are not substitutes for upfront archaeological assessment where archaeological sensitivity may reasonably exist.

This distinction is important.

The issue is not whether ADPs are appropriate supplementary safeguards. Rather, the issue is whether the archaeological sensitivity of the PPC23 environment has been sufficiently evaluated before reliance is placed upon downstream discovery-based management responses.

Existing evidence appears inconsistent with characterising the broader Lower Styx / Brooklands environment as a straightforward low-risk archaeological context adequately addressed solely through accidental discovery protocols.

Published archaeological management frameworks used in Christchurch infrastructure projects further demonstrate that archaeological responses are commonly graduated according to assessed archaeological sensitivity rather than relying solely upon accidental discovery protocols.

Archaeological management plans associated with infrastructure works along the Belfast / Marshland corridor distinguished between low-, medium-, and high-risk archaeological contexts, with higher-risk areas requiring initial stand-over archaeological monitoring, periodic site attendance, or continuous monitoring during earthworks where archaeological material might reasonably be anticipated (Hickey et al., 2021).

Reliance primarily upon accidental discovery protocols becomes increasingly difficult to justify where recorded archaeological sites already occur immediately adjoining, and in at least one case partially within, the rezoning footprint itself. In such circumstances, accidental discovery

procedures function less as contingency safeguards for unforeseeable discoveries and more as substitutes for comprehensive upfront archaeological assessment.

This concern is reinforced by the correspondence from archaeologist Tristan Wadsworth, who stated that he would not consider the planning approach sufficient for due diligence without the applicant providing an archaeological assessment.

Repeated reliance upon accidental discovery protocols within the Lower Styx corridor is itself evidentially significant.

The strongest archaeological evidence presently available for the broader corridor repeatedly emerges through:

- monitored earthworks;
- infrastructure excavations;
- sewer works;
- road upgrades;
- post-earthquake remediation;
- and accidental discoveries during construction activity.

In that context, repeated reliance upon accidental discovery protocols demonstrates continuing archaeological uncertainty rather than reliable evidence of archaeological absence.

Importantly, ADPs are mitigation mechanisms intended to manage residual uncertainty following adequate investigation. They are not substitutes for rezoning-stage archaeological characterisation where cumulative urbanisation and irreversible landscape transformation are proposed.

4.7 Evidential Deficiency at Rezoning Stage

The principal issue arising from the archaeological material presently available is therefore methodological rather than purely site-specific.

The current evidential platform appears fragmented, opportunistic, and substantially derived from prior infrastructure and development works rather than comprehensive rezoning-stage assessment directed specifically toward cumulative urbanisation effects.

The archaeological question before the Hearing Panel is not merely whether isolated discoveries could later be managed through future consenting processes.

Rather, the relevant question is whether:

- archaeological sensitivity has been adequately characterised;
- assumptions regarding disturbance and survivability are empirically justified;
- cumulative earthworks implications have been sufficiently evaluated;
- and unresolved uncertainty is being improperly deferred to future subdivision or consent stages.

In this respect, the archaeological issues associated with PPC23 closely parallel broader concerns raised elsewhere regarding unresolved infrastructure, groundwater, natural hazard, and wastewater effects. In each case, significant uncertainty appears to be managed primarily through deferred future processes rather than through sufficiently complete evidential assessment at the rezoning stage itself.

5. Disturbance Assumptions and Archaeological Survivability

A recurring theme within planning assessments involving modified landscapes is the assumption that prior disturbance materially reduces archaeological sensitivity.

However, the available archaeological material does not support treating historical modification as equivalent to complete archaeological removal or low archaeological sensitivity. Multiple archaeological investigations undertaken within modified and actively developing landscapes elsewhere in the northern Christchurch coastal plain have continued to identify previously unrecorded Māori archaeological material during subdivision, infrastructure, cemetery, and stormwater works, including ovens, midden deposits, and occupation evidence associated with waterways and estuarine margins. (Trendafilov et al., 2020; Bawden & Mearns, 2022; Wadsworth et al., 2025)

Importantly, several of these investigations expressly concluded that additional unrecorded archaeological material could reasonably be expected elsewhere within comparable waterway environments. The archaeological evidence therefore suggests that modification and prior earthworks do not necessarily eliminate archaeological survivability within coastal plain and wetland-edge landscapes, particularly where occupation patterns were historically associated with waterways, estuarine resources, and episodic movement corridors. (Bawden & Mearns, 2022)

Modified wetland and floodplain environments may contain:

- buried deposits;
- discontinuous survivals;
- preserved subsurface material;
- deposits obscured beneath fill or drainage alteration;
- archaeological survivals protected by alluvial or estuarine processes.

The archaeological reports themselves repeatedly acknowledge incomplete exposure and residual uncertainty regarding surviving material.

The issue is therefore not whether modification has occurred. Clearly it has.

Rather, the issue is whether the current evidential basis is sufficient to confidently conclude that archaeological potential has been adequately characterised across the scale of rezoning proposed.

The presently available material does not appear sufficient to support that conclusion.

6. Limitations of Existing Investigations

The archaeological investigations identified to date appear primarily associated with:

- infrastructure works;
- road upgrades;
- utility installation;
- emergency or operational projects;
- site-specific development activities.

These investigations were not designed as integrated rezoning-scale landscape assessments for PPC23.

Several limitations emerge repeatedly across the available material:

6.1 Partial Spatial Exposure

Multiple reports expressly state that only portions of project areas were excavated or exposed.

Examples include:

- approximately 50% surface exposure at 361 Lower Styx Road (Bawden HNZPT 2019/525eq);
- approximately 50% exposure within the Marshland/Hawkins/Lower Styx works area (Bawden HNZPT 2021/401).

These investigations therefore cannot reasonably be interpreted as exhaustive spatial characterisation.

6.2 Opportunistic Discovery

Several archaeological findings arose during active earthworks or monitoring processes rather than systematic landscape-scale pre-investigation.

Earlier archaeological assessment and monitoring work associated with the Spring Grove subdivision at Belfast had already identified the Kā Pūtahi corridor as possessing archaeological sensitivity extending beyond previously recorded sites prior to the later discovery of multiple occupation features during subdivision earthworks (Wadsworth et al., 2018). The subsequent identification of repeated oven and occupation features during later excavation phases therefore illustrates how archaeological landscapes associated with waterways may remain only partially characterised prior to active ground disturbance and development exposure.

This introduces uncertainty regarding:

- undiscovered deposits;
- uneven detectability;
- buried survivals;
- survivability within untested areas.

6.3 Fragmented and Opportunistic Evidential Record

The presently available archaeological evidence appears largely derived from discrete infrastructure, remediation, subdivision, and development-related investigations undertaken for unrelated works programs within the broader Lower Styx / Brooklands corridor.

These investigations include:

- wastewater infrastructure works;
- road and intersection upgrades;
- post-earthquake remediation;
- monitored earthworks;
- and accidental discovery protocol callouts.

While collectively informative, these investigations do not appear to constitute a comprehensive archaeological assessment directed specifically toward rezoning-scale evaluation of PPC23 itself.

This distinction is important because the archaeological significance of estuarine and river-margin landscapes is not necessarily confined to isolated recorded sites or discrete excavation locations.

Rather, archaeological material and cultural landscape associations may reflect broader spatial relationships involving:

- waterways and wetland margins;
- mahinga kai systems;
- occupation and movement patterns;
- drainage and resource-use networks;
- historical shoreline and estuarine processes;
- and changing geomorphological conditions over time.

Published archaeological investigations elsewhere within the Christchurch coastal plain further suggest that Māori occupation evidence associated with waterways may extend beyond previously identified archaeological sites. Investigations along the Kā Pūtahi corridor identified repeated occupation features and concluded that similar patterns of unrecorded oven sites could reasonably be expected elsewhere along the waterway system (Wadsworth et al., 2025).

The presently available evidential platform therefore appears fragmented not in a spatial sense, but in its investigative provenance and analytical integration.

Consequently, archaeological understanding of the PPC23 environment presently appears substantially inferred from dispersed prior works rather than derived from a dedicated landscape-scale archaeological assessment directed specifically toward the rezoning proposal itself.

6.4 Absence of Analysis of Archaeological Preservation Factors

The presently available archaeological material appears largely derived from site-specific investigations associated with prior infrastructure or development works, rather than from a comprehensive landscape-scale assessment directed toward understanding archaeological survivability and distribution across the broader Lower Styx environment.

In particular, the material presently before the Hearing Panel does not appear to comprehensively examine how factors such as geomorphological change, wetland and estuarine evolution, groundwater conditions, historical landscape modification, and sediment processes may influence archaeological preservation, burial, exposure, or detectability within this coastal river-margin setting.

7. Reliance on Accidental Discovery Protocols

The current planning framework appears to rely substantially upon future accidental discovery protocols and later-stage archaeological management processes.

However, accidental discovery protocols are fundamentally residual contingency mechanisms.

They are not substitutes for adequate upfront investigation.

ADPs function reactively after earthworks exposure has already commenced. Their effectiveness depends upon:

- visibility of material during excavation;
- recognition during active construction;
- timely reporting;
- survivability despite disturbance;
- adequacy of monitoring coverage.

They do not eliminate the possibility that:

- deposits remain undiscovered;
- material is damaged before identification;
- cumulative landscape effects occur incrementally across staged subdivision;
- contextual archaeological relationships are lost.

This distinction becomes especially important at rezoning stage.

The Hearing Panel is not merely determining whether future earthworks can be conditionally managed. It is determining whether the environmental consequences of enabling urbanisation are sufficiently understood to justify rezoning itself.

Where substantial uncertainty remains regarding archaeological sensitivity and cultural landscape effects, reliance on future reactive management frameworks does not fully resolve present evidential insufficiency.

This concern is reinforced by the broader evidential pattern within the Belfast and Lower Styx archaeological record. Multiple archaeological investigations associated with subdivision, infrastructure, cemetery expansion, and stormwater works have identified previously unrecorded Māori archaeological material during earthworks within modified landscapes, including ovens, midden deposits, and occupation evidence associated with waterways and wetland margins. Several reports further indicate that comparable unrecorded archaeological material may reasonably be expected within similar environments elsewhere in the corridor. (Trendafilov et al., 2020; Bawden & Mearns, 2022; Wadsworth et al., 2025)

That pattern does not establish that severe archaeological effects are certain. However, it does indicate that unresolved uncertainty remains regarding the adequacy of the present investigative platform and the extent of archaeological sensitivity within the wider landscape.

8. Cultural Landscape and Environmental Integration

The archaeological issues associated with PPC23 should not be treated as isolated technical matters detached from the broader environmental setting.

The Lower Styx / Brooklands / Spencerville area represents a historically dynamic estuarine and wetland environment influenced by:

- waterways and floodplains;
- drainage alteration;
- estuarine transition processes;
- changing groundwater conditions;

- historic reclamation and modification;
- coastal evolution.

Such environments frequently contain complex archaeological signatures shaped by:

- changing shorelines;
- buried landscapes;
- episodic occupation;
- resource gathering;
- drainage and reclamation activity;
- transport and access corridors.

Archaeological investigations undertaken within other northern Christchurch coastal-plain waterway systems have similarly interpreted Māori archaeological material as reflecting connected patterns of movement, resource use, and occupation associated with estuarine and river-margin environments. Investigations associated with Belfast Cemetery works along the Kā Pūtahi corridor interpreted midden deposits dominated by coastal shellfish species as evidence of movement inland from the coast via the waterway system (Trendafilov et al., 2022). While the Kā Pūtahi environment is distinct from the Lower Styx / Pūharakekenui corridor, the investigations nevertheless reinforce the broader archaeological principle that coastal-plain waterways within northern Christchurch functioned as interconnected cultural and resource-use landscapes rather than isolated archaeological locations viewed solely through modern property boundaries.

The available archaeological reports repeatedly intersect with environmental and hydrological themes, including:

- drainage systems;
- estuarine shell midden;
- modified wetlands;
- infrastructure corridors;
- historic water management.

These relationships reinforce that archaeology cannot be adequately evaluated solely through isolated parcel-scale site recording.

Instead, archaeological assessment requires broader landscape interpretation integrating:

- environmental history;
- geomorphology;
- hydrology;
- settlement history;
- ecological systems;
- cultural use patterns.

The presently available evidential platform does not appear to comprehensively integrate these factors at rezoning scale.

9. Māori Cultural Interests, Te Tiriti Considerations, and Evidential Sufficiency

The archaeological and cultural landscape issues associated with PPC23 also engage broader statutory obligations relating to Māori cultural interests and Te Tiriti considerations under the Resource Management Act 1991 (RMA).

The Section 42A report states that there is no statutory obligation requiring a private plan change proponent to consult with mana whenua prior to lodging a plan change request and recommends rejection of associated submissions on that basis.

In procedural terms, that statement is narrowly correct. Schedule 1 of the RMA does not impose a mandatory pre-lodgement consultation requirement upon a private plan change proponent.

However, that procedural point does not resolve the separate substantive obligations imposed upon decision-makers under the RMA.

Under section 6(e) of the RMA, decision-makers must recognise and provide for the relationship of Māori with ancestral lands, water, wāhi tapu, and other taonga. Section 7(a) requires particular regard to kaitiakitanga, and section 8 requires Treaty principles to be taken into account.

Those obligations remain directly engaged within the PPC23 context given:

- the proximity of the proposal to the Pūharakekenui / Styx River system;
- the estuarine and wetland character of the wider landscape;
- the relationship between waterways, mahinga kai, ecological systems, archaeological landscapes, and cultural values;
- unresolved archaeological uncertainty;
- and unresolved wastewater, groundwater, flooding, and environmental risk issues identified elsewhere in the evidential record.

The National Policy Statement for Freshwater Management 2020 (NPS-FM) also remains relevant in this context. Although recent legislative amendments have softened the former strict hierarchy associated with Te Mana o te Wai in some decision-making contexts, the NPS-FM continues to recognise the importance of protecting the health and mauri of freshwater systems and provides interpretive context for the obligations contained within Part 2 of the RMA.

The issue is therefore not merely whether consultation occurred.

Rather, the issue is whether the Hearing Panel presently possesses sufficient reliable information to confidently evaluate effects on the wider Pūharakekenui / Styx River cultural landscape prior to enabling rezoning and subsequent urbanisation.

That issue extends beyond discrete archaeological sites. It encompasses the broader interaction between:

- waterways and wetlands;
- mahinga kai associations;
- archaeological survivability;
- wastewater and groundwater interaction;
- estuarine and floodplain processes;
- cumulative environmental effects;

- and long-term landscape transformation associated with urbanisation.

The presently available evidence indicates that substantial uncertainty remains regarding both archaeological survivability and broader system-level environmental behaviour within the receiving environment.

Elsewhere in the evidential record, unresolved uncertainty remains regarding:

- wastewater system performance;
- groundwater interaction;
- flood and coastal processes;
- cumulative effects on waterways;
- and long-term environmental change within the estuarine landscape.

Where the physical behaviour of the receiving environmental system is not adequately characterised, and where archaeological investigation likewise remains incomplete, the Panel may lack an adequate evidential basis to confidently determine whether Māori relationships with water and associated taonga are appropriately recognised and provided for.

In those circumstances, it becomes difficult for a decision-maker to be satisfied that the obligations arising under sections 6(e), 7(a), and 8 of the RMA have been adequately addressed.

This issue is not resolved merely because future management measures, accidental discovery protocols, or consent-stage processes may later occur. The relevant question at rezoning stage is whether the environmental and cultural implications of enabling urbanisation are presently understood with sufficient confidence to support the rezoning decision itself.

10. Rezoning and Irreversible Change

The scale of urbanisation enabled by PPC23 materially alters the archaeological risk profile of the landscape.

Rezoning is not a neutral administrative exercise. It enables:

- cumulative subdivision;
- bulk earthworks;
- utilities;
- roads;
- drainage modification;
- service corridors;
- residential intensification.

Once enabled, these processes progressively transform landscape context and reduce opportunities for integrated archaeological understanding.

The issue is therefore not confined to management of isolated archaeological finds.

Rather, the issue is whether irreversible landscape transformation is being enabled before archaeological and cultural landscape effects are sufficiently characterised.

Where uncertainty remains substantial, there is a legitimate planning question as to whether rezoning-stage assessment has been adequately completed.

11. Evidential Sufficiency and Planning Implications

The available evidence does not conclusively establish that PPC23 will necessarily result in severe archaeological effects.

However, neither does it demonstrate that archaeological and cultural landscape effects have been comprehensively characterised at the scale relevant to rezoning.

Instead, the evidential record presently appears to contain:

- incomplete spatial investigation;
- partial excavation exposure;
- fragmented assessment history;
- reliance on reactive discovery frameworks;
- unresolved uncertainty regarding survivability;
- limited integrated landscape-scale analysis.

Importantly, the archaeological material currently available repeatedly identifies the possibility that additional archaeological material remains in situ beyond investigated areas.

This distinction is central.

The question before the Hearing Panel is not whether future management processes may partially mitigate risk. It is whether the Panel presently possesses sufficient reliable information to confidently evaluate the consequences of enabling urbanisation across the PPC23 landscape.

At present, the evidential platform appears materially incomplete.

12. Rezoning, Cumulative Urbanisation, and Irreversible Landscape Transformation

The archaeological implications of PPC23 must also be understood in relation to the scale and cumulative consequences of rezoning itself.

The archaeological investigations presently available largely relate to isolated or linear works programs, including:

- wastewater infrastructure;
- road upgrades;
- monitored excavations;
- and individual development sites.

Rezoning-scale urbanisation, however, enables substantially broader and cumulative landscape transformation through:

- subdivision earthworks;
- road construction;
- stormwater infrastructure;
- utility corridors;
- foundation preparation;
- fill placement;
- drainage modification;

- groundwater alteration;
- trenching and service installation;
- and long-term urban intensification.

The cumulative physical consequences of such transformation substantially exceed the scale of the isolated investigations from which the presently available archaeological evidence has largely been derived.

This distinction is important because the rezoning stage is the point at which the appropriateness of enabling cumulative urbanisation must be evaluated.

Once rezoning occurs:

- urbanisation expectations become established;
- infrastructure investment follows;
- and future subdivision and development processes become structurally enabled.

Under those circumstances, unresolved archaeological uncertainty cannot safely be deferred indefinitely to later-stage accidental discovery protocols and site-specific consent processes.

13. Conclusions

1. Existing archaeological investigations within the wider Lower Styx / Brooklands environment demonstrate that archaeological material survives within modified landscapes.
2. NZAA ArchSite records identify recorded midden site M35/133 extending across the PPC23 boundary. The recorded site extent and clustering of nearby midden sites materially weaken any assumption that the PPC23 environment can safely be characterised as a straightforward low-risk archaeological setting.
3. The presently available investigations appear fragmented, site-specific, and substantially tied to infrastructure or operational works rather than comprehensive rezoning-scale assessment.
4. Multiple archaeological reports expressly acknowledge partial excavation exposure and the possibility that additional archaeological material remains in situ.
5. Assumptions that prior disturbance materially eliminates archaeological potential do not appear empirically established across the wider PPC23 landscape.
6. The current evidential platform does not appear to comprehensively integrate archaeology with broader environmental and cultural landscape processes including waterways, wetlands, geomorphology, estuarine evolution, drainage history, and landscape modification.
7. Reliance on accidental discovery protocols and future consent-stage processes does not fully resolve present uncertainty regarding archaeological and cultural landscape effects.
8. Rezoning enables cumulative and irreversible landscape transformation. Accordingly, rezoning-stage assessment requires a sufficiently reliable understanding of archaeological and cultural landscape implications before urbanisation is enabled.
9. On the presently available evidence, substantial unresolved uncertainty appears to remain regarding the archaeological and cultural landscape effects associated with PPC23.

In my opinion, the presently available archaeological evidence base does not appear sufficiently comprehensive to confidently characterise archaeological and cultural landscape effects associated with rezoning and cumulative urbanisation at the scale proposed under PPC23.

The current evidential platform appears substantially fragmented, opportunistic, and dependent upon isolated prior infrastructure and development investigations rather than comprehensive rezoning-stage assessment directed toward the broader Lower Styx cultural landscape.

Under those circumstances, significant archaeological uncertainty appears likely to remain deferred to future subdivision-stage investigations, accidental discovery protocols, and later consent processes.

Accordingly, the presently available material does not appear sufficient to confidently evaluate the cumulative archaeological and cultural landscape implications of enabling rezoning-scale urbanisation within the PPC23 environment.

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