BEFORE THE INDEPENDENT HEARINGS PANEL
OF HAMILTON CITY COUNCIL

UNDER	the Resource Management Act 1991 ("**RMA**")
AND	
IN THE MATTER	of Private Plan Change 17 to the Hamilton City Operative District Plan ("**PC17**")

STATEMENT OF EXPERT EVIDENCE OF DR GRAHAM THOMAS USSHER ON BEHALF OF FONTERRA LIMITED

ECOLOGY (FRESHWATER AND TERRESTRIAL)

7 OCTOBER 2025

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1. EXECUTIVE SUMMARY

1.1 This evidence is prepared on behalf of Fonterra Limited ("**Fonterra**"), addressing ecological matters relating to PC17. PC17 seeks to rezone approximately 91 hectares surrounding the Te Rapa Dairy Manufacturing Site ("**Manufacturing Site**") in Te Rapa North ("**Plan Change Area**"), to enable industrial development.

1.2 The Plan Change Area is predominantly pastoral land, with all original vegetation removed and only minor areas of planted or remnant vegetation remaining.

1.3 Field surveys and desktop assessments were conducted between March 2023 and April 2024, covering lizards, freshwater fish, birds, wetlands, streams, indigenous vegetation, and bats.

1.4 The Plan Change Area is highly modified and degraded, with limited indigenous ecological values, but some small pockets of value remain, particularly along watercourses. Ten small, low-value wetlands were identified, all likely induced by historic land use rather than being naturally occurring.

1.5 Streams are degraded but support some native fish species; no native lizards or bats were detected within the surveyed area, although copper skink may be present in very limited habitat.

1.6 The Structure Plan for PC17 incorporates significant ecological enhancements, including wide riparian setbacks, protection and restoration of Te Rapa Stream and its tributaries, minimisation of stream crossings, and extensive native planting.

1.7 PC17 will result in a significant net gain for indigenous biodiversity and ecological services within the Plan Change Area. The ecological enhancements, particularly along the Te Rapa Stream and its tributaries, will restore and connect habitats, improve water quality, and provide for the long-term protection and enhancement of remaining ecological values. The proposed provisions and management plans are considered appropriate and sufficient to address potential ecological effects at the resource consent stage.

2. INTRODUCTION

Qualifications and Experience

2.1 My name is Graham Thomas Ussher. I am a Principal Ecologist and Director at RMA Ecology Ltd ("**RMA Ecology**"). I have held this position for over nine years.

2.2 I have over 30 years' experience in the field of environmental research and consulting with a particular focus on land-based ecology and methods for providing improvements to indigenous biodiversity.

2.3 I have obtained qualifications of Bachelor of Science (Zoology) (1993), Master of Science (Conservation Ecology) (1995) and Doctor of Philosophy (Conservation Management) (2000) from the University of Auckland, New Zealand.

2.4 I have previously been employed as:

(a) A lecturer in Environmental Science at the University of Auckland (2000 – 2003).

(b) Regional Ecologist for the (former) Auckland Regional Council (2003 – 2007), with a focus on projects that managed species and ecosystems, and the restoration of Auckland coastal parklands.

(c) A Principal Ecologist at Tonkin & Taylor Limited, Auckland (2007 – 2016) where I was a senior-level ecologist and helped lead the Ecology Team. Over my period of employment at Tonkin & Taylor Ltd, I managed, undertook fieldwork, and reported on or reviewed in excess of 120 projects involving ecological effects assessments, management and ecological mitigation / restoration in New Zealand spanning small to large scale effects, and covering all aspects of land use.

2.5 I founded RMA Ecology in 2016. In my role as Director, I have undertaken approximately 300 projects since 2016 that have involved site assessment, impact evaluation, effects management design (including offsetting), management plan preparation, and construction management, including lizard, fish and plant salvage, stream reconstruction, and ecological monitoring and reporting.

2.6 My project experience spans land development, infrastructure, power generation, resource extraction, water management, and roading sectors. My involvement in projects ranges from pre-purchase due diligence, preliminary / concept development design, precinct and private plan change assessments, resource consent applications, and construction supervision, implementation, monitoring and reporting. Most of my project involvement has been in rural and greenfield sites where ecological values have been diverse, degraded and require specific interpretation in regard to national, regional or district policies around biodiversity classification, and interpretation of scale, significance and management of potential adverse effects.

2.7 Since the National Policy Statement on Freshwater Management 2020 ("**NPS-FM**") was gazetted, I have personally undertaken at least 200 wetland assessments under the NPS-FM associated protocols. This has included the application of vegetation, hydric soil and hydrological assessments using the methods outlined in the Wetland Delineation Protocols of the NPS-FM and the subsequent companion method documents produced or relied upon by the Ministry for the Environment, including the Clarkson Method, the Pasture Exclusion Method, and the US Corps of Engineers Wetland Delineation Manual. These documents are paired with a more general understanding of wetland processes, ecology, landscape modification and interpretation of site ecology under the RMA (including the definition of "wetland" under the RMA).

2.8 This is relevant to PC17 as it comprises substantial areas of flat, low gradient land with stream margins and surrounding paddocks subject to surface water retention, meaning that the accurate assessment of watercourses and wetlands is key for the Plan Change Area.

2.9 I have appeared as an expert witness at hearings on numerous occasions, most recently including:

(a) Proposed Plan Change 14 to the Waipā District Plan – Rezoning part of the C10 Growth Cell;

(b) Proposed subdivision by Tasman Bay Estates of 40 ha of rural land in Tasman for rural lifestyle allotments;

(c) Proposed Plan Change 103 to the Auckland Unitary Plan – rezoning Future Urban land at Silverdale West to Light Industry; and

(d) Proposed Plan Change 100 to the Auckland Unitary Plan – rezoning Future Urban land at Riverhead to Rural-Mixed Rural zone.

Involvement in PC17

2.10 I am the co-author and reviewer of the Ecological Values and Effects Assessment prepared by RMA Ecology for PC17 ("**Ecology Assessment**") which seeks to rezone approximately 91 ha of land in Te Rapa North, Hamilton.

2.11 I am familiar with the Plan Change Area and the surrounding locality, and visited the Plan Change Area to undertake field surveys on 20-23 March 2023, 6-10 June 2023, and 16 April 2024. The field surveys were limited to the land parcels within the Plan Change Area owned by Fonterra ("**Surveyed Area**"). The balance of the lots included in the Plan Change Area (approximately 6.5 hectares) were not surveyed due to access constraints (see Figure 1).[1] RMA Ecology also undertook a desktop-based assessment which covered the entire Plan Change Area.

Figure 1. Plan Change Area Boundaries (red boundary; parcels not included in the Surveyed Area shaded yellow).

Code of Conduct

2.12 I confirm that I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2023. I have complied with the Code of Conduct in preparing this evidence and I agree to comply with it while giving oral evidence before the Hearings Commissioners. Except where I state that I

[1] The lack of survey of these areas is not considered to affect the conclusions in this assessment as it is recommended that site-specific ecological assessments be undertaken at the resource consent stage prior to any future development, enabled by PC17, occurring.

am relying on the evidence of another person, this written evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

3. PC17

3.1 The majority of Plan Change Area currently has an underlying zoning of Te Rapa North Industrial Zone under the Hamilton City Operative District Plan ("**ODP**") but is overlaid by a Deferred Industrial Zone Overlay.

3.2 The Plan Change Area is located between the Waikato River and the North Island Main Trunk railway corridor, with the existing Manufacturing Site located along the eastern border (see Figure 1 above).

3.3 The existing land use of the Plan Change Area is predominantly pastoral agriculture. PC17 seeks to remove the Deferred Industrial Zone Overlay from the Plan Change Area to enable it to be developed for industrial activities.

3.4 Fonterra engaged RMA Ecology to undertake an assessment of the ecological values of the Plan Change Area and the effects of PC17.

4. SCOPE OF EVIDENCE

4.1 This statement of evidence will:

(a) describe the ecological context;

(b) summarise the key findings from the Ecology Assessment undertaken in relation to PC17;

(c) respond to terrestrial and freshwater ecology matters raised in the Hamilton City Council ("**Council**") Officer's Section 42A Report ("**Section 42A Report**");

(d) respond to terrestrial and freshwater ecology matters raised in submissions; and

(e) provide an overall conclusion on Fonterra's application for PC17 from a terrestrial and freshwater ecology perspective.

5. ECOLOGICAL CONTEXT AND FINDINGS

Ecological context and values

5.1 The ecology investigations included desktop reviews of wildlife and vegetation databases for regional and national values that could have been present in the Plan Change Area, as well as extensive field investigations of the Surveyed Area between March 2023 and April 2024. Specialist wildlife and environment investigations were undertaken by RMA Ecology for lizards, freshwater fishes, birds, wetlands, streams and indigenous vegetation, and by Kessels & Associates Limited (trading as "**Bluewattle Ecology**") under my instruction for bats.

5.2 The ecology investigations applied appropriate methods, sampling regimes, mapping and data collation to provide a thorough description of the Plan Change Area, its ecological values, the significance of those values, and the way in which those values are managed through the design of PC17, including whether more than minor adverse effects may require biodiversity offsets or ecological compensation. In my opinion, our investigations have been robust, rigorous, and proportional to the scale and importance of the potential ecology values of the Plan Change Area.

5.3 Overall, the ecology values as measured on the Plan Change Area reflect a highly modified landscape. Although most ecological features have been lost or are degraded, there are some small pockets of indigenous ecology value remaining. There is substantial opportunity to enhance the remaining features and return biodiversity and ecological function to the Plan Change Area. The Ecology Assessment identified the following features:[2]

(a) **Context**: The predominant existing land use of the Plan Change Area is pastoral agriculture.

(b) **Vegetation**: All original vegetation in the Plan Change Area has historically been removed. At least 98% of the Plan Change Area is in pasture grassland that is actively managed for crops or grazing. The only woody vegetation areas are the planted margins of some of the watercourses within the Plan Change Area, and several planted tree copses / shelterbelts / back yard orchard trees around two dwellings in the parcels not included in the Surveyed Area.

[2] Ecology Assessment at [3.4].

(c) **Birds**: Seven native and eight exotic bird species typical of rural Hamilton were detected within the Surveyed Area – none of which are At Risk, Threatened, or Rare at a national, regional or local scale. Four At Risk shag species may utilise the Waikato River and riparian vegetation alongside the Plan Change Area.

(d) **Bats**: Bat surveys at the Fonterra-owned land within PC17 over 2023 found no bats. Use by bats along the Waikato River margins at the most eastern part of PC17 is considered likely.

(e) **Lizards**: No native lizards were observed within the Surveyed Area. One native lizard (the copper skink) may be present within the Plan Change Area, although not within areas of grazed and managed pasture (that is, its distribution within the Plan Change Area, if even present, would be restricted to the 2% or less of non-pasture habitat). It is very unlikely that any species of native gecko or any other species of native skink are present, as the Plan Change Area does not support appropriate habitat now and has not supported appropriate habitat for many decades.

(f) **Wetlands**: There are 10 NPS-FM qualifying natural inland wetlands within the Plan Change Area. They are all located within the channel or along the margins of existing watercourses. All comprise weedy exotic plant species and all are of low ecological value. None of the wetlands are likely to be naturally occurring as they are probably induced by stock damage to soils though compaction, and by historic excavation of watercourses for drainage purposes.

(g) **Streams**: There are 3,083 m of streams and rivers within the Surveyed Area and 5,252 m of farm drainage canals. The streams are typically degraded from deforestation and sedimentation. The Structure Plan will protect and restore the mainstem of Te Rapa Stream, and most of the side tributaries.

(h) **Fish**: Native banded kokopu, common bully, giant kokopu, shortfin eel and longfin eel were recorded within the Surveyed Area. An additional three native fish have been recorded in the wider catchment and may be present within the Plan Change Area, including īnanga and black mudfish, although our surveys did not detect these species. That is despite two separate sampling occasions using equipment and methods specifically designed to sample for the presence of black mudfish.

PC17

5.4 The PC17 Structure Plan incorporates the recommendations for protection from Bluewattle Ecology and the Ecology Assessment.

5.5 The Structure Plan incorporates ecological considerations through several key design drivers, which are expressed as:

(a) Improving ecological connectivity through the Plan Change Area from south to north through the protection of the existing Te Rapa Stream and its tributaries, and the setting aside of land either side of the watercourses (10 m either side for Te Rapa Stream and 5 m either side for tributaries) for ecological and stormwater management purposes).[3] Doing so will improve the protection and restoration of wetlands, margins and instream habitats.

(b) Minimising crossings over Te Rapa Stream, and where needed arch culverts or bridges (as opposed to standard culverts) will be preferred in order to minimise disturbance to the bed of the stream and to minimise margins disturbance. Any proposal to modify the bed of any stream within the Plan Change Area will be accompanied by an assessment of ecological effects, a fish management plan (for the salvage and relocation of native freshwater fish), and an assessment against the culvert design standards laid out in National Environmental Standards for Freshwater,[4] which ensure that structures do not create barriers to the passage of native fish.

(c) Enhancing and protecting existing ecological features by enhancing existing ecological values and focusing on the creation of a green corridor along the Te Rapa Stream. This will enhance the stream and associated wetlands by removing stock from the Plan Change Area, and by undertaking riparian planting. The removal of stock will have a positive impact on water quality by reducing inputs of sediment, nutrient and faecal contamination. Planting with eco-sourced native vegetation is proposed along wetland and stream margins.

5.6 The PC17 provisions will contribute substantial ecological benefits compared to the existing degraded ecological features of the Plan Change Area. With an ecologically-focussed set of design guidelines at the resource consent stage, there is the potential to provide resilient ecological buffer planting to most

[3] 3.9.2.7 Blue-Green Corridor (Ecology and Stormwater Management).
[4] Resource Management (National Environmental Standards for Freshwater) Regulations 2020, clause 70.

streams, and to restore and integrate existing natural wetlands to provide for cohesive ecological restoration of aquatic and terrestrial biodiversity, and greatly improved ecological functions, processes, and values.

5.7 The Structure Plan provides for significant enhancements to the condition, extent, diversity, and connectivity of native vegetation, waterways, riparian margins, wetlands, and habitats for wildlife. The overall outcome from PC17 will be a clear, positive, net-benefit for indigenous biodiversity values and ecological services. This net-gain will be most evident through the establishment of a much-improved margin to the Te Rapa Stream and its tributaries.

5.8 The scale of ecological enhancement and protection works, and the commitment made by Fonterra to elevating biodiversity values, connectivity and ecological functions is welcome, given the extremely degraded ecological value of the Plan Change Area.

5.9 I am supportive of the objectives and policies of the proposed provisions in the PC17 provisions. The NPS-FM, National Policy Statement for Indigenous Biodiversity, the Wildlife Act 1953, Waikato Regional Policy Statement, the ODP and the provisions through PC17 provide a comprehensive set of objectives and policies that would support the protection and enhancement of the identified ecological features within the Plan Change Area. From an ecological perspective, the rules proposed in PC17 are appropriate to address relevant effects that may be generated at the time of resource consent.

6. SECTION 42A REPORT

6.1 A review of the Ecology Assessment was undertaken for the Council by Dr Hazel Burridge of Boffa Miskell Limited.

6.2 Dr Burridge raises several matters relating to ecology, including:[5]

(a) further information regarding bats, lizards, wetlands, and mudfish is needed prior to the initial subdivision and should be included in the proposed Ecological Management Plan;

(b) a rule should be included that relates to specific lighting limits for intensity and colour temp to prevent light spill into the Waikato River corridor; and

[5] Section 16 of Dr Burridge, H. 8 September 2025. Private Plan Change 17 – Te Rapa North Industrial – Technical Specialist Memorandum for Section 42A Reporting.

(c) a policy should be added or expanded upon that includes all measures necessary to avoid, remedy, mitigate, offset or compensate for adverse effects on habitats of indigenous fauna to ensure that all species are covered, not just bats, as the current focus appears to be.

6.3 With regard to the comments made by Dr Burridge:

(a) I do not support the need for further surveys of fish, bats, wetlands, or lizards prior to the initial subdivision and as part of the proposed Ecological Management Plan for the Plan Change Area. Our survey work has been extensive across the Surveyed Area and the values, or lack thereof, recorded are an accurate reflection of the values of the Plan Change Area.

(b) Further I note that:

(i) The parts of the Plan Change Area that may support the native copper skink amount to around 2% of the Plan Change Area, and parts of that 2% are prone to flooding or water ponding, which is usually not preferred by native lizards. Further, most of that 2% is located along stream corridors that are proposed by Fonterra to be protected and restored. Undertaking further surveys on the Plan Change Area for native lizards will not provide additional information of value. The Plan Change Area supports only small areas of poor-quality habitat for native lizards, and any that are present will be protected by the suite of PC17 provisions, including the assessment of ecological effects required to support any resource consent application for subdivision.[6]

(ii) We undertook two separate native fish surveys and included methods that were focussed on detecting mudfish (none were found). The watercourses within the Plan Change Area are extensively degraded. It is unlikely that further surveys will detect new fish species that could change the current framework of watercourse protection, enhancement and restoration, and the use of low impact crossing infrastructure.

[6] Information Requirement 1.2.2.30 (b).

(c) The bat survey was undertaken by one of New Zealand's leading bat experts (Mr Kessels). He has undertaken dozens of bat surveys across the Waikato and has worked with native bats for over 20 years. In his evidence, Mr Kessels notes that the absence of bats within the Plan Change Area aligns with the absence of findings from other surveys nearby.[7] Undertaking further surveys to confirm absence of absence is unnecessary, especially given bat surveys will be required at the consenting stage as part of the Ecological Management Plan,[8] there are agreed national protocols set by the Department of Conservation ("**DOC**") to address risk of harm to bats, and replacement of roost habitat should bat use of the Plan Change Area change between PC17 and development.

6.4 I support the inclusion of an additional policy at Policy 12.2.5 relating to avoiding, remedying, mitigating, offsetting or compensating for adverse effects on indigenous fauna and their habitats, including long-tailed bats. New policies 12.2.5f and 12.2.5g are included in the updated PC17 provisions attached to Mr Grala's evidence.

6.5 The Section 42A Report includes one recommendation with regard to ecology, that the information requirements could be strengthened through the required Ecological Management Plan and the recommended Infrastructure Plan (which would cover stormwater management systems) and inclusion of Landscape Concept Plan as an information requirement. Updated provisions addressing these matters are attached in Mr Grala's evidence[9] and discussed in the evidence of Messrs Kessels, King, and Kensington.[10] I support these amendments.

7. RESPONSE TO SUBMISSIONS

7.1 I have read the submissions received on PC17 that raise concerns relating to terrestrial and freshwater ecology matters. I address the matters raised in submissions below.

7.2 Submitters that raised concerns with ecology matters include:

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7 Statement of evidence of Gerardus Kessels dated 7 October 2025 at [6.7] – [6.8].
8 Information Requirement 1.2.2.30 (a).
9 Attachment 1.
10 Statement of evidence of Gerardus Kessels dated 7 October 2025 at [7.10] – [7.11], statement of evidence of Scott King dated 7 October 2025 at [8.1-8.7] and statement of evidence of Peter Kensington dated 7 October 2025 at [7.1-7.4].

(a) Waikato District Council[11] ("**WDC**"), regarding Significant Natural Areas ("**SNA**") protection, riparian margin restoration, stormwater management systems, and native fish passage design for culverts and bridges. If unavoidable adverse effects on ecology values arise, WDC seeks that appropriate ecological offsets are provided for.

(b) Waikato Regional Council[12] ("**WRC**"):

(i) Seeks an updated Bat Survey and Effects Assessment that addresses the proposed departure from the recommended artificial lighting controls and whether any alternative mitigation measures are recommended;

(ii) Seeks Objective 12.2.5 and the associated policies are retained but seeks an additional policy relating to avoiding, remedying, mitigating, offsetting or compensating for adverse effects on indigenous fauna and their habitats, including long-tailed bats.

(iii) Seeks updates to the requirements for assessment of potential bat roost trees to refer to the latest version of the DOC "Protocols for Minimising the Risk of Felling Bat Roosts".

(iv) Seeks Rule 1.3.3 Assessment Criteria Q is amended to include assessment criterion to enable assessment of the extent to which PC17 avoids, remedies, mitigates, offsets or compensates for adverse effects on indigenous fauna and their habitats.

7.3 With regard to the comments made by submitters:

(a) WDC:

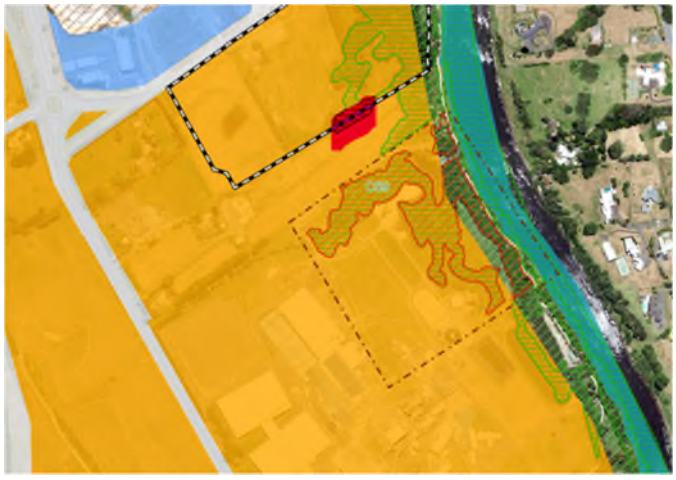
(i) I support the comments made by the WDC and note that the Structure Plan as proposed provides for a considerable south-north blue-green link that will provide an ecological corridor and protect the Te Rapa Stream and most of its tributaries.

10 Submission 10.4.
11 Submitter 13.

(ii) I also support the protection and restoration of the small SNA included in PC17 along the Waikato River margins, and note that the existing policies and objectives of the WRPS already promote the protection of SNAs.

(iii) I agree with Mr Grala regarding the removal of the small orphaned area of SNA at the northern part of the Plan Change Area. This is not the SNA adjoining the Waikato River, but a small area where the balance of the previous much larger SNA on Te Awa Lakes land has all been removed through the resolution of its appeal on PC9.

(iv) I set out below a snip showing in red highlight the small area of SNA. The SNA north of the black and white property boundary has been removed so the SNA indicated in red highlight sits by itself in the middle of a paddock.



(v) The NPS-FM requires that any culvert, bridge or other crossing over a stream or river must be designed to take into account the provision of native fish passage. The preference of Fonterra to use arch bridges for crossings within the Plan Change Area reflects Fonterra's commitment to providing native freshwater fish passage.[13]

(b) WRC:

(i) Mr Kessels and Mr Grala address the artificial lighting control standard in their evidence.[14] With respect to

13 Chapter 3.9, which guides the implementation of the Structure Plan, includes a clause preferencing arch culverts or bridge designs to cross Te Rapa Stream.

14 Statement of evidence of Gerardus Kessels dated 7 October 2025 at [7.6], and statement of evidence of Nicholas Grala dated 7 October 2025 at [10.34] – [10.35],

Objective 12.2.5, I support the inclusion of an additional policy relating to avoiding, remedying, mitigating, offsetting or compensating for adverse effects on indigenous fauna and their habitats, including long-tailed bats. New policies 12.2.5f and 12.2.5g are set out in the updated provisions attached to Mr Grala's evidence:

> (f) Avoid, remedy, or mitigate adverse effects on indigenous fauna and habitats, including those of long-tailed bats. Where residual effects remain, offset or compensate in accordance with best-practice ecological principles and the effects management hierarchy.
>
> (g) Subdivision, use, and development shall require an assessment of potential effects on long-tailed bats and their habitats. This assessment should apply the mitigation hierarchy in general accordance with Appendix 3 and Appendix 4 of the National Policy Statement for Indigenous Biodiversity (NPSIB), which outline principles for biodiversity offsetting and compensation.

(ii) I support the revisions made to Policy 25.2.4 (A) that requires that the latest version of the DOC 'Protocols for Minimising the Risk of Felling Bat Roosts' be applied.

(iii) I support an amendment to assessment criterion 3.9.3.7 to enable assessment of the extent to which PC17 avoids, remedies, mitigates, offsets or compensates for adverse effects on indigenous fauna and their habitats (new policy 12.2.5g).

8. CONCLUSION

8.1 Overall, PC17 provides for significant enhancements to the condition and connectivity of waterways, riparian margins, wetlands, and habitats for wildlife.

8.2 The overall outcome from PC17 will be a clear, positive, net-benefit for indigenous biodiversity values and ecological services. This net-gain will be most evident through the wide setbacks required along the riparian margins of Te Rapa Stream and its tributaries, which will incorporate extensive native revegetation, together with the restoration and integration of natural wetlands.

Dr Graham Ussher

7 October 2025