

Sunfield Fast-track

Auckland Council Specialist Memo

Annexure 13:

Ecology and Streamworks

Jason Smith

4 August 2025

Ecology and Streamworks Memo

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Date: 4 August 2025

1. This memorandum addresses the ecology and streamworks aspects of the Sunfield proposal.

Qualifications and Relevant Experience

2. I hold the qualification(s) of Bachelor of Science in Geography and Bachelor of Science (Hons.) in Geography and have 12 years professional experience, with 10 years of experience in providing technical assessments and peer reviews in relation to ecology and freshwater ecology matters. I am a full member of both the New Zealand Freshwater Science Society and the Environment Institute of Australia and New Zealand Inc. I have prepared expert evidence and technical assessments for resource consent applications, plan changes, notices of requirement for designation and fast-track applications, and have appeared as an expert witness before consent authorities on multiple occasions, and the Environment Court once.

Code of Conduct

3. I confirm that I have read the Environment Court Practice Note 2023 – Code of Conduct for Expert Witnesses (**Code**), and have complied with it in the preparation of this memorandum. I also agree to follow the Code when participating in any subsequent processes, such as expert conferencing, directed by the Panel. I confirm that the opinions I have expressed are within my area of expertise and are my own, except where I have stated that I am relying on the work or evidence of others, which I have specified.

Specialist Assessment

4. I have reviewed the application for the Sunfield development from an ecology perspective, taking into account Auckland Unitary Plan chapters E3 and E15, as well as the National Environmental Standards for Freshwater.
5. I joined the Auckland Council facilitated site visit on 11 July 2025.
6. Of particular relevance to this assessment are:
 - *Sunfield Fast-track Approvals Act 2024 Substantive Application Planning report*, prepared by Tattico, dated 31 March 2025 (**AEE**).
 - *Sunfield Baseline Ecological Assessment*, report prepared by Bioresearches, dated 2 December 2024 (**EcIA**).

7. The EclA outlines the methods used in section 3. The EclA has adopted the Environment Institute of Australia and New Zealand Inc.'s *Ecological Impact Assessment (EclA) EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems* framework. I consider this guidance to be the industry standard for preparing EclAs. I consider that the methods used are aligned with best practice and are appropriate for the ecological attributes that could be present. The level of effort expended is generally consistent with what would be expected from an application of this nature, but I note below areas where I consider there are gaps in information.
8. I generally concur with the EclA's interpretation of the data presented. I accept the watercourse (stream and wetland) classifications, description of the terrestrial vegetation community, and the fauna communities (both terrestrial and freshwater) that are likely present. I consider that the applicant's ecologists have correctly applied the EIANZ methods to derive the current ecological value.
9. I note the survey points used to classify and delineate natural inland wetlands have not been presented. Given the information that has been presented, in the context of this application, I consider this a minor point for clarification only.
10. The EclA does not clearly describe the potential effects.
11. For terrestrial ecology effects it can be inferred that there is the potential for harm and disturbance, as well as a loss of habitat for native fauna. In section 7.1 paragraph 2, the EclA recommends a lizard survey and bat survey be carried out, or in that in the absence of a bat survey that the Department of Conservation's Bat Roost Protocols be followed. Surveys, by themselves, are not an appropriate measure to address the potential effects. Given the timing of the EclA (December 2024), the applicant has had sufficient time in which to conduct such surveys to establish what species are present across the site and their relative abundance and to have used this information to inform their effects assessment.
12. The application material includes a draft Ecological Management Plan (**EMP**).
13. Appended to the EMP is a Lizard Management Plan (**LMP**). However, that LMP is specific to the Takanini Stormwater Conveyance Chennel stage 2 & 3 works. The LMP would be generally suitable for application to the wider site, although further detail would be required on the areas where the search and salvage efforts would be focused. No equivalent detail is provided for Bats. Recommendations have been made below for the provision of such assessments and documents as conditions of consent as this is the best practicable means to address these potential effects.
14. For effects on freshwater ecology, the application material is less clear. Section 7.2 of the EclA, paragraph 2, recognises a wide range of rules that could apply to works in streams, including new reclamation, new structures, and diversions. The EclA does not

identify what if any of these activities are proposed, or any associated effects, other than potential harm to eels/fish. The EclA adopts a similar approach for vegetation removal in and around watercourses (both streams and wetlands) (see section 7.2 of the EclA, paragraph 3) and the potential impacts on natural inland wetlands (see section 7.2, paragraph 4). The EclA's discussion on impacts on the wetlands also references the National Environmental Standards: Freshwater (**NES:FW**).

15. For freshwater ecology, the AEE does not identify any reasons for consent under chapter E3 of the Auckland Unitary Plan. In terms of reasons for consent the AEE only notes reasons for consent under the NES:FW in relation to “[sic] *a small amount of earthworks and vegetation clearance may occur within this 10 m threshold*” (section 8.3 paragraph 3); and that this is for the construction of a wetland utility structure.
16. The application infers that there is the potential for harm and disturbance to any aquatic fish population in the watercourses.
17. Item 6.1.1 of the applicant's response to Council's s67 Matters, the applicant has noted reasons for consent for diversion of watercourses (streams 1 – 4) and a culvert greater than 30 m in length.
18. These activities should have been assessed in the EclA in terms of the ecological effects. In addition to the potential for harm and injury to aquatic fauna; I consider there also to be the modification of stream habitat. The Effects Management Hierarchy (**EMH**) of the NPS:FM would usually be anticipated for stream diversion activities and the modification of the stream bed. The residual effects of the stream diversion are a particularly relevant consideration in this application case as there would be a net loss of the stream extent and associated ecological values.
19. I cannot see the length of the proposed diversion quantified in the application material. Measuring from Auckland Council Geomaps and the maps provided in the EclA, I get the existing stream length within the site as approximately 2,855 m; whereas the diversion channel is measured as approximately 1,600 m to the same discharge point. This is a loss of 1,255 m of stream length.
20. Whilst the urban design reports and plans show this diversion with planted riparian margins, there has been no reporting on any ecological benefit. Based on professional experience, where the length of the diversion channel is shorter than the impacted reach, there is likely to be a loss in the stream ecological values as well. It is also not clear if that urban and landscape design plans and reports have been updated to reflect the Stage 2 Designation for Mill Road lodged by New Zealand Transport Agency which runs along the eastern boundary of the site, and possibly into the riparian margin of the diversion channel.

21. It may be, that by diverting the natural flows into the diversion channel, that the flows through the center of the site no longer contain natural surface water and therefore are not natural streams and would not require consent under Chapter E3 of the AUP:OP. However, there would still be a reason for consent for the diversion as well as for the activities proposed within this application that intersect with the diversion channel (such as the proposed culvert crossing).
22. Outside of the native freshwater fish and eel relocation, the EcIA does not comment on how effects would be managed. Rather any effects management proposed is anticipated to be provided through the applicant's proposed conditions of consent, which will require assessment at that time. Should any biodiversity offset be required, which would be anticipated for any new stream reclamation, the reduced stream length in the diversion and for the cumulative length of culvert(s) exceeding 30 m, then the expectation would be for the applicant to create and enhance new stream to achieve not-net-loss of ecological value and stream extent.
23. Such effects management would have to be separate from the stream enhancements proposed in this application. Enhancements are already proposed in this development to address other effects (landscape, urban design for example). Where already proposed, re-utilizing such enhancements would not be consistent with the principle of additionality (reinforced through Appendix 8(2) of the AUP:OP and principle from Appendix 6, point 4 of the NPS:FM as well as the application material's own statements). Similar provisions apply to aquatic compensation, see Appendix 7, point 4 of the NPS:FM.
24. Accordingly, I consider that there is potentially a level of residual effect that has not been quantified, or qualified, by the applicant in regard to freshwater ecology matters. I do not support the applicant's intention that this information and the subsequent assessment of the effects management being postponed to consent conditions. I do not have sufficient information from reading the application material to determine what the activities proposed are, what the level of effect would be, and what is proposed to address those effects.
25. Whilst some refinement of the proposal, and there for the exact quantum of stream diversion and modification, would be expected as design progresses the application material does not provided sufficient information to understand the level of the effect or if any or all of that effect can be addressed at the site, or if off-site actions are required or proposed to address residual effects.
26. I am also not sure that all of the earthworks and vegetation clearance within 10 m of a natural inland wetland is for the construction of a wetland utility structure. There is no clear description of what or where these wetland utility structures would be located.

From a review of the earthworks plans provided much of these earthworks would be consistent with bulk earthworks (see plan drawing no M-C213).

27. Overall, I consider that the potential terrestrial ecology effects can be appropriately addressed through conditions of consent. However, from a freshwater ecological perspective I am unable to support the application as I am unclear on the length of stream diverted, the residual adverse effects arising from the reduced stream length and area, and if this can be appropriately addressed within the site, or suitably addressed off-site.

Comment on Proposed Conditions

28. The applicant has provided consent conditions in Attachment 2 to the Sunfield Planning Report.
29. Ecology-related conditions can be found at conditions 90 - 95. Given the information gaps referred to above, I provide initial comments on the proposed conditions below, and consider that further comment may be required should further information be provided.

Applicant's numbering	Assessment
90	<p>The intention is supported however the wording used should follow Auckland Council's standard condition:</p> <p>Prior to the commencement of any vegetation removal works the consent holder must submit and have certified by Council, a Lizard Management Plan (LMP) prepared by a suitably qualified and experienced ecologist/herpetologist. The LMP must be designed to achieve the following two objectives:</p> <ol style="list-style-type: none"> i. The population of each species of native lizard present on the site at which vegetation clearance is to occur must be maintained or enhanced, either on the same site or at an appropriate alternative site; and ii. The habitat(s) that lizards are transferred to (either on site or at an alternative site, as the case may be) will support viable native lizard populations for all species present pre-development. <p>The LMP must address the following (as appropriate):</p> <ul style="list-style-type: none"> • Credentials and contact details of the ecologist/herpetologist who will implement the plan. • Timing of the implementation of the LMP. • A description of methodology for survey, trapping and relocation of lizards rescued, including but not limited to: salvage protocols, relocation protocols (including the method used to identify suitable relocation site(s)), nocturnal and diurnal capture protocols, supervised habitat clearance/transfer protocols, artificial cover object protocols, and opportunistic relocation protocols.

	<ul style="list-style-type: none"> • A description and map of the relocation site; including discussion of: <ul style="list-style-type: none"> ○ provision for additional refugia, if required e.g. depositing salvaged logs, wood or debris for newly released skinks that have been rescued; ○ any protection mechanisms (if required) to ensure the relocation site is maintained (e.g. covenants, consent notices etc); ○ any weed and pest animal management to ensure the relocation site is maintained as appropriate habitat. ○ a plan/map detailing the location of the salvage and relocation sites • Monitoring methods, including but not limited to: baseline surveying within the site, baseline surveys outside the site to identify potential release sites for salvaged lizard populations and lizard monitoring sites, ongoing annual surveys to evaluate translocation success, pre and post – translocation surveys, and monitoring of effectiveness of pest control and/or any potential adverse effects on lizards associated with pest control. • A post-vegetation clearance search for remaining lizards. <p><u>Advice Note:</u> Please note that it is recommended that the lizard rescue plan is undertaken in conjunction with the vegetation clearance operations (and contractor) for an integrated approach (on the same day), to enable the physical search for gecko's following felling of trees and shrubs, and to rescue any skinks from ground cover vegetation and terrestrial retreats.</p> <p>All native lizards are absolutely protected under the Wildlife Act 1953 under which it is an offence to disturb, harm, or remove them without a permit from the Minister of Conservation.</p> <p>For further information on lizards that are protected under the Wildlife Act and determination of a suitable new habitat please contact the council's Environmental Services team on ecologicaladvice@aucklandcouncil.govt.nz.</p>
91	<p>It is unclear what the purpose of this EMP is. The contents required are the same as the LMP (condition 90) and the Native Fish Management Plan (Condition 92).</p> <p>I would recommend the following wording:</p> <p>The objective of the EMP is to avoid or minimise potential adverse effects on the ecological and biodiversity values within the site associated with the proposed works. The EMP must include but not be limited to the following:</p>

	<ul style="list-style-type: none"> a. A Native Fish Relocation Plan, an Avifauna Management Plan, a Lizard Management Plan, a Bat Management Plan as well as a Stream Offset and Riparian Restoration Plan. b. State the timing for implementation of the programme that will be undertaken in suitable seasonal and climatic conditions; c. Describe the measures to reduce the effect on bats, birds and lizards (and a copy of the relevant permits, if required); d. Outline the responsibilities of who will be implementing the EMP; e. Monitoring and reporting requirements.
92	<p>The intention is supported however the wording used should follow Auckland Council's standard condition:</p> <p>Prior to the commencement of any streamworks, a Native Fish Capture and Relocation Plan must be submitted to the Council for certification. The Native Fish Capture and Relocation Plan must be prepared by a suitably qualified and experienced Freshwater Ecologist and must include the following detail;</p> <ul style="list-style-type: none"> a. Methodologies to capture fish within the impact stream habitat or justification there is no habitat for native fish present at the time of construction; b. Fishing effort; c. Details of the relocation site; d. Storage and transport measures including prevention of predation and death during capture; e. Euthanasia methods for diseased or pest species; and f. An assessment on the habitat availability of the relocation site to support fish at the time of streamworks.
93 - 95	<p>Conditions 93 – 95 call for a Stream Offset Riparian Planting Plan (SORPP). As discussed earlier, seeking this assessment post-consenting is not supported, and the relevant information should be provided now for assessment.</p> <p>Specific points that would need to be addressed with these conditions are if it is a biodiversity offset, compensation, or some other form of effects management (i.e. mitigation).</p> <p>This is significant as condition 94 outlines requirements that may not be able to be complied with in full or are otherwise open to interpretation. For example, 94(d) <i>preferably achieve biodiversity gains</i>.</p> <p>Should the panel be minded to grant consent my recommendation would be:</p> <p>Prior to the commencement of any works the Consent Holder must submit and have certified by Council an Ecological Management Plan (EMP). The</p>

	<p>EMP submitted with the application must be updated to reflect the limited scope of this consent.</p> <p>The EMP must contain sufficient detail to address:</p> <ol style="list-style-type: none"> 1. A detailed description of the impacts (such as length, width, area and ecological values). 2. A detailed breakdown of methodology used to calculate the effects management quantum based on industry recognised best practice methods. 3. A detailed breakdown of the effects management proposed. Including: <ul style="list-style-type: none"> • A finalised planting plan prepared in accordance with Te Haumanu Taiao and Appendix 16 of the Auckland Unitary Plan. • A programme of works such that planting and the associated maintenance must occur until 80% canopy closure has occurred and a minimum survival rate of the plants (being 90% of the original density through the entire planting area(s)) has been achieved. • A description of any physical works proposed (i.e creation of new stream length or in-stream enhancements). <p>Reporting back to Council.</p> <p>If remediation work is recommended, the consent holder must:</p> <ul style="list-style-type: none"> ○ Undertake the remediation work within six months from when it was recognised as being necessary. ○ Provide Council with a report confirming the remediation work has been undertaken. This report must be submitted to Council within 6 months after the remediation work has been undertaken. <ul style="list-style-type: none"> • Plans showing any riparian planting or in-stream works proposed to address the effects. • Confirmation the mitigation works will be protected in perpetuity and/or vested to Auckland Council; <p>Advice Note:</p> <p>In-stream works may require their own resource consents outside the scope of this assessment.</p>
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30. I would also recommend the panel impose the following standard conditions:

X1. Native fish capture and relocation as set out in the certified Native Fish Capture and Relocation Plan, must only be undertaken by a suitably qualified and experienced freshwater ecologist. The freshwater ecologist must also be onsite during the dewatering/reclamation process to ensure any remaining native fish not caught during de-fishing are salvaged.

X2. The consent holder must provide a Fish Salvage Report detailing the relocation

site, the species and number of freshwater fauna relocated prior to and during dewatering, to the Council within 10 days of completion of the native fish capture and relocation and upload the results into NIWA's New Zealand Native Freshwater Fish database.

31. The Panel may also need to consider mandatory conditions under the NES:FW.