

**BEFORE INDEPENDENT HEARING COMMISSIONERS
APPOINTED BY THAMES COROMANDEL DISTRICT COUNCIL**

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the hearing of submissions to Variation 3 to the
Proposed Thames Coromandel District Plan
(Taiwawe Catchment Structure Plan)

**STATEMENT OF REBUTTAL EVIDENCE OF
NICHOLAS PAUL GOLDWATER
ON BEHALF OF HOT WATER BEACH (NZ) LIMITED**

Dated 31 March 2021

Introduction

1. My name is Nicholas Goldwater. My qualifications and experience are outlined in my evidence in chief (EiC) dated 1 March 2021. In making this statement I refer to and agree to comply with the Code of Conduct for Expert Witnesses on the same basis stated at paragraph 7 of my EiC.
2. This evidence responds to the following matters raised in the letter prepared by Gerry Kessels of Bluewattle Ecology (dated 8 March 2021):
 - a) Ecological values of the Taiwawe catchment, including significant indigenous vegetation and significant habitat of indigenous fauna.
 - b) Review of ecological effects assessment.
 - c) Assessment of effects on wetlands at the site.
 - d) Lack of targeted baseline fauna surveys and clarity on extent of mitigation and enhancement required to address adverse effects.
3. I note that Mr Kessels has prepared his statement without the benefit of having visited the site, nor it seems of having been provided with the evidence of Mr Michael Chapman and the report by Te Miro Limited regarding stormwater management.
4. Before I address the matters raised by Mr Kessels, I make the following general observation. Much of Mr Kessel's commentary would be more relevant to an activity adversely affecting an SNA, whereby a more detailed baseline understanding of the specific resources affected would be needed to determine and quantify necessary mitigation, or ensure 'no net loss' through offsetting. By contrast, the Taiwawe Catchment Structure Plan essentially embodies an ecological enhancement proposal rather than an activity affecting significant existing habitat or fauna, such as a resource consent for indigenous vegetation removal. Very little vegetation clearance is proposed and there will be a net gain of indigenous vegetation of c.13.7 hectares, together with a permanent programme of pest animal and plant control. In my respectful opinion, this context needs to be borne in mind in considering the detail of the comments made by Mr Kessels, and the response I make below on specific points raised.

Ecological values of the Taiwawe catchment, including significant indigenous vegetation and significant habitat of indigenous fauna

5. Mr Kessels notes that the Ecological Assessment (EA) maps the flora features of the site well. However, he goes on to state that no specific surveys for indigenous fauna were undertaken, apart from spotlighting for fish. As I have mentioned in the EA and my EiC, targeted surveys for terrestrial species were not in the scope of my initial project brief. If the proposed development would result in the loss of indigenous vegetation, then targeted surveys would have been recommended in the EA. In saying that, given mature pines are likely to be removed as part of the development, targeted surveys for long-tailed bats will be undertaken, as proposed under rule 1.1 i), with the results informing the Ecological Management Plan response for this species.

6. I accept Mr Kessels' statement that some reports were not referred to in the EA with regards to local kiwi surveys, although I have since addressed this in paragraph 21 of my EiC. I would reiterate that strict controls on pet ownership and a sustained programme of intensive predator control have been incorporated into the latest version of the Taiwawe Catchment Structure Plan, and will appropriately address potential adverse effects on kiwi and other vulnerable indigenous fauna in the Taiwawe catchment.
7. Mr Kessels suggests that a number of key threatened species could occur at the site, including kiwi and long-tailed bats, and that without targeted surveys *"it is not possible to determine if the site is being used, either on a regular basis, or as an important habitat for sustaining a population on a seasonal basis for key components of the life cycles, of At Risk or Threatened fauna species"*.
8. I agree with Mr Kessels that At Risk and/or Threatened fauna species could occur at the site, and indeed it was my assumption that threatened fauna species are highly likely to occur at the site (refer to Section 7 of the EA and paragraphs 21 to 29 of my EiC). This assumption also informed my assessment of significance against the Waikato RPS criteria, including as to aquatic habitat for banded kōkopu, īnanga and eels (see table at paragraph 19 of my EiC). However, targeted surveys for other fauna such as lizards, bats, and cryptic birds were not in the scope of my assessment, given that any vegetation proposed for removal mainly comprises exotic species (with absolutely no removal of vegetation from the SNAs).
9. Mr Kessels states that due to the proximity of the site to Hot Water Beach, a wider review of the coastal habitats is warranted, with regards to downstream coastal ecosystems and threatened fauna such as New Zealand dotterel. I consider this beyond the scope of what is required for the Structure Plan, and not particularly relevant anyway given the large numbers of visitors (and dogs) that already frequent the southern end of Hot Water Beach during the summer, which would not be increased to any noticeable extent by owners and occupiers of the 25 houses proposed.
10. Overall, the whole premise of the Taiwawe Catchment Structure Plan is to assume significance (habitat and fauna) and protect and enhance accordingly. A finer grained or detailed survey of every species present would not change the assumption of significance or add any greater protection than already achieved. I return to this point below regarding mitigation and enhancement.

Review of ecological effects assessment

11. Mr Kessels lists a number of potential adverse ecological effects associated with a rural-residential type subdivision. For simplicity, I have included these in a table below, together with my responses which show these effects have been considered and will be addressed in the proposed Structure Plan. Aspects of the response draw on Mr Chapman's evidence and opinion, which is not referred to as having been sighted or read by Mr Kessels.

Potential adverse effects raised by Mr Kessels	Response
Construction effects	
Sediment erosion and surface erosion during construction.	<ul style="list-style-type: none"> • A Council-approved sediment and erosion control plan will be implemented during the earthworks in the subdivision phase. • Swales and filter strips, as described in the EiC of Mr Chapman, will assist in attenuating and trapping sediment. • No dwellings will be located within 20 metres of a stream or wetland.
Introduction of weeds and animal pests via construction equipment and materials.	<ul style="list-style-type: none"> • Any novel weed species will be controlled as part of an ongoing weed control programme. • Any mammalian pests will be controlled as part of an ongoing pest control programme. • It is considered unlikely that pest animal species not already present in the catchment, including as a result of past and current farming, will be inadvertently introduced during construction. For example, plague skinks can easily be transported via building material, although they are highly likely to be present in the area already.
Removal of indigenous forest and drainage of wetlands.	<ul style="list-style-type: none"> • Not applicable.
Indirect and operational effects	
Modification of adjacent SNA areas.	<ul style="list-style-type: none"> • Modification of adjacent SNAs will not occur. Conversely, the extensive revegetation proposed for the site will link adjacent SNAs with SNAs within the project area, i.e., creating a positive ecological outcome.
Wildlife disturbance and reduced breeding success of individual birds.	<ul style="list-style-type: none"> • Given that dwellings will not be built within vegetated areas (noting there will be no encroachment into the SNAs), habitat for birds will not be directly affected. I would expect that birds utilising nearby habitat (as will be restored/ expanded as part of the development) would habituate to human activities such as vehicular movements and noises from dwellings. • Location, style and management of use of pathways within SNAs will be recommended in the Ecological Management Plan. • Dogs will be required to be kept on leashes when outside their dwellings. • If bats are confirmed as present at the site, a bat ecologist will be consulted in order to minimise the potential adverse effects of road

Potential adverse effects raised by Mr Kessels	Response
	<p>lighting on foraging/commuting bats (will be addressed in the Ecological Management Plan).</p> <ul style="list-style-type: none"> Over time, there will be a substantial increase in indigenous habitat, which will provide ongoing benefits for resident fauna to mitigate any disturbance caused by human activity.
Effects of wastewater discharges, stormwater runoff, human disturbance and litter.	<ul style="list-style-type: none"> Effects of wastewater discharges have been addressed in the EiC of Mr Philip Kelsey. Effects of stormwater runoff discharges have been addressed in the EIC of Mr Chapman. Effects of human disturbance are addressed above. Rubbish will be removed from each dwelling as part of the weekly Council collection. Given the site will not be publicly accessible, I do not expect large volumes of litter to be generated.
Increased spread of weeds and animal pests (domestic and feral) and diseases into adjacent natural areas.	<ul style="list-style-type: none"> Ban on plants listed on the National Plant Pest Accord and Waikato Regional Pest Management Strategy. Ongoing weed control and monitoring should address any new incursions. Total cat ban and strict dog ownership controls. No farming of goats. All kauri to be planted will be sourced from a nursery that is certified to be free of kauri dieback disease.
Decreased water quality and changes to stream and wetland hydrology as a result of the newly established roads and dwellings.	<ul style="list-style-type: none"> Such effects have already been addressed in the EiC of Mr Chapman.
Potential increased fire risk.	<ul style="list-style-type: none"> Not applicable to the Ecological Assessment, although I acknowledge that the risk of fire is likely to be commensurate with the number of dwellings in a particular locality.
Bird strike and roadkill of native fauna associated with traffic and housing.	<ul style="list-style-type: none"> Potential effects of birds hitting windows are addressed under Rule 1(f)(iii) and Rule 2.1(d) of the TCSP. Potential effects of roadkill of native fauna are addressed under Rule 1(m)(v) of the TCSP.

12. I would reiterate here the positive ecological effects associated with the Structure Plan:

- Removal of stock and the subsequent improvement in terrestrial and aquatic habitats.
- Retention of all SNA vegetation, particularly along riparian margins, and provision of additional buffering and enrichment planting.
- Connection of isolated forest fragments through large-scale ecological and landscape planting.
- Planting of steep eroding land.
- Sustained control of pest plants and animals.
- Total cat ban and strict dog ownership controls.
- Remediation of fish barriers.

13. Mr Kessels correctly states that the EcIA guidelines have not been applied in the ecological assessment process. I note that these guidelines are not mandatory for undertaking ecological assessments in New Zealand, and that they were not generally used in the industry at the time I did my original assessment in 2018. However, for the purposes of illustration and completeness I have summarised my findings with respect to the EcIA guidelines in the table below.

Potential Adverse Effect	Ecological Feature Affected	Timescale of Effect	Ecological Value	Magnitude of Effect	Level of Effect ¹	Measure to Address Effect	Final Level of Effect
Sedimentation of aquatic and marine habitats	Streams and estuary	Temporary	High	Low	Low	Best practice sediment and erosion control	Very low
Effects of stormwater and wastewater on aquatic and marine habitats	Streams and estuary	Permanent	High	Low	Low	Filter strips and swales, detention tanks, large-scale revegetation, on-site treatment of wastewater	Very low
Predation of indigenous fauna by domestic pests (cats and dogs)	Indigenous fauna, including threatened bird and lizard species	Permanent	High to Very High	Moderate	High	Ban on cats, strict control on dog ownership as per Rule 1 of the TCSP.	Low
Bird mortality/injury from window strike	Indigenous avifauna	Permanent	Moderate	Moderate	Moderate	Use of UV window stickers, not planting near windows.	Low
Introduction of pest plants	Indigenous forest	Permanent	High	Low	Low	Ban on plants listed on the National Plant Pest Accord and WRPMS. Ongoing weed control and monitoring should address any new incursions.	Very low
Lizard mortality/injury during earthworks	Indigenous skinks	Temporary	High	Low	Low	Pre-earthworks survey to capture and relocate any indigenous skinks within the construction footprint.	Very low

¹ Based on a combination of assigned ecological value and magnitude, as per Table 10 of EIANZ (2018) guidelines.

Assessment of effects on wetlands at the site

14. Mr Kessels claims that no assessment of natural freshwater wetlands in accordance with National Environmental Standards for Freshwater 2020 (NES-FW) has been carried out at the site. I respond to this comment as follows:

- The NES-FW was not operative when I undertook the ecological assessment.
- All wetland areas that would qualify as natural wetland for the purposes of the NES-FW will be protected and restored as part of the overall ecological management package.
- No earthworks will be undertaken within 20 metres of any wetland, noting that under Regulation 54 of the NES-FW it is a non-complying activity for earthworks to be carried out within ten metres of a natural wetland. In addition, Table 3 (Standards for Buildings) of the Taiwawe Catchment Structure Plan specifies a minimum setback for dwellings of 20 metres from all wetlands and streams.
- None of the wetlands will be completely or partially drained.

15. Mr Kessels suggests that the two hectares of impermeable surfaces resulting from the proposed development could adversely affect natural wetlands and streams in the catchment. Such effects have already been addressed in the EiC of Mr Michael Chapman.

Lack of targeted baseline fauna surveys and clarity on extent of mitigation and enhancement required to address adverse effects

16. Mr Kessels suggests that the extent of effects on biodiversity values is hampered by a lack of targeted surveys of nationally At Risk or Threatened species, and gives the opinion that delaying such surveys would be 'problematic' (page 5).

17. Mr Kessels then suggests that baseline fauna surveys should have been undertaken as part of the ecological assessment and goes on to say *"the findings of these surveys would then be used to determine an appropriate scale of subdivision of the site, and to define the spatial and temporal extent of the proposed ecological protection, restoration and enhancement measures, which would in turn be implemented through the EMP."*

18. For the reasons covered above, I do not consider that targeted baseline surveys are necessary or of assistance in this case. This is not a situation where a detailed survey of numbers of individuals within every threatened species present is needed to quantify mitigation and offsetting (as also suggested by Mr Kessels), for example, as might be needed to achieve an outcome such as no net loss, or ensure that species on which effects must be avoided are not present.

19. I also do not think that the use of baseline surveys is particularly useful for determining the presence and/or abundance of highly mobile species (e.g., kiwi and long-tailed bats) and cryptic species (e.g., arboreal geckos). There is every chance that surveys will not detect the species at a certain point in time, even if they are present. I know from my own experience that many hours can be spent spotlighting for nocturnal geckos without finding any, only to return to the same location a year later and find several animals. Conversely, one kiwi call that is recorded may be a resident bird or a bird moving through the site. Similarly, one or a few bats echolocating may or may not indicate the presence of bat roost at the site.
20. This is why my approach to this project is instead, as I cover above, to assume that threatened animals are already present and incorporate into the Ecological Management Plan the objectives and desired outcomes around the type and size of habitat restoration and enhancement activities needed to address the ecological effects of the proposed development, noting first that all direct effects on the SNAs are avoided. In this respect, I consider the mitigation and enhancement package being offered for what indirect effects might arise (as covered in the EA and table above) would far outweigh any potential adverse effects of the Structure Plan, and would be a significant improvement on the current situation (i.e., pastoral farming). Quantification and 'no net loss' type calculations are not needed to reach that conclusion in this case.
21. I think the true value of the baseline surveys proposed under rule 1.1 i) will be realised by undertaking the following:
- five-minute bird counts throughout the site, as well as playbacks for wetland birds;
 - establishing photopoints in the forest understorey (in relation to removal of stock and weed control); and
 - pre-control pest animal monitoring using chew cards.
22. These monitoring components will provide a robust set of baseline data against which the efficacy of pest plant and animal control can be measured, as well as the positive effects of removing stock. It is also noted that the revised Structure Plan (Version 12) includes a clear target for managing pest animal densities (i.e., tracking indices for rodents and possums of no more than 5%).
23. In saying this and while on this topic, I note that I have also read the statement from Mr Vare for the Regional Council. In response to that I have recommended amendments to the Structure Plan (Version 12) to record and express an overarching objective for the Ecological Management Plan, and to include these specific performance targets for rodent and possum trapping. Beyond that, I do not consider subdivision staging as a form of 'adaptive management' as suggested by Mr Vare is required. Again, the Structure Plan would lead to the enhancement of ecological values over the existing situation rather than result in adverse effects on the SNAs. I am confident the objective and targets set out in the Ecological Management Plan can be achieved.

24. Finally, regarding Mr Kessels' letter, he mentions that he does *“not have information on the type, extent and duration of animal pest control measures, so cannot comment on the potential biodiversity gains of these measures against the potential adverse effects associated with an increase in urbanisation in this locality”*. I respond by saying that measures to control pest animal and plant species will be detailed in a comprehensive Ecological Management Plan, as alluded to in the latest version of the Structure Plan. All control techniques will follow industry best practice and will be implemented by a professional contractor in perpetuity.

Conclusion

25. I have considered in detail the nature and range of comments made by Mr Kessels. For the reasons set out above, I remain of the opinions stated in my EiC. In essence, the Structure Plan would lead to the enhancement of ecological values over the existing situation rather than result in adverse effects on the SNAs.

Nick Goldwater

31 March 2021