

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of a Hearing for Variation 3 to the Proposed
Thames Coromandel District Plan (Taiwawe
Catchment Structure Plan)

TABLED STATEMENT OF EVIDENCE OF MATTHEW JOHN VARE

For the Waikato Regional Council

DATED 8 March 2021

1. Introduction

- 1.1 My name is Matthew Vare. I am a Senior Policy Advisor in the Integration and Infrastructure Section at the Waikato Regional Council (WRC). I have been in this role since June 2008.
- 1.2 I hold a Masters in Social Science and a Post Graduate Diploma in Resource and Environmental Planning.
- 1.3 My evidence is given on behalf of Waikato Regional Council (Science and Strategy Directorate). My role within that Directorate has been as a member of the Policy Implementation Team which involves working with the territorial authorities of the Waikato Region and with neighbouring regional councils to assist in the development of consistent integrated regional policy and to ensure that the Waikato Regional Policy Statement (WRPS) is given effect to.
- 1.4 I have 26 years planning experience in local, regional, and central government. In all of these roles I have been involved in the development of, and submissions to, plan provisions and resource consents in relation to biodiversity management. I prepared the biodiversity provisions of the WRPS which became operative in 2016.
- 1.5 I confirm that I am familiar with the Code of Conduct for Expert Witnesses as set out in the Environment Court Practice Note 2014. I have read and agree to comply with the Code. Except where I state that I am relying upon the specified evidence or advice of another person, my 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.

2. WRC Submission

- 2.1 Waikato Regional Council made submissions to Variation 3 Taiwawe Catchment Structure Plan (TSCP), 'the Variation,' on 28 August, 2020.
- 2.2 Waikato Regional Council's submission highlighted concern that the ecological assessment supporting the Variation did not provide enough detail (especially around presence of key threatened species and their habitat requirements) to justify the scale and intensity of development sought by the proposal (45 lots).
- 2.3 As a result, WRC opposed the proposal.

3. The Site and Ecological Context

- 3.1 The 38.12 hectare site is at 104 Taiwawe Lane, Hot Water Beach (see Appendix 1). The site contains part of Significant Natural Area (SNA) TC364 Hot Water Beach Bush (4.6ha) and part

of SNA TC363 Taiwawe Forest Fragments (3.8ha). A total of 8.4ha of SNA is located on the site. The site descriptions and SNA criteria triggered for the site based on WRC provisional data are provided in Appendix 2.

- 3.2 Taiwawe forest fragments (TC363) site is described in the SNA database as “coastal secondary broadleaved forest. Fauna classified in the NZ Threat Classification Lists as nationally vulnerable North Island (NI Brown Kiwi) are present nearby. The coastal forest provides stepping-stone habitat for mobile fauna between surrounding natural features”.
- 3.3 Hot Water Beach Bush (TC364) is a large (254ha) SNA and contains a mix of coastal and lowland secondary forest with elements of Pohutukawa on faces and spurs. North Island Brown Kiwi is indicated as present and animal threats are managed in the south of this SNA.
- 3.4 WRC ecologists¹ have also noted that due to proximity of this site to the Whenuakite Kiwi Care project area, that kiwi are very likely to utilise this area as part of their habitat. Accordingly, impacts on kiwi will need to be considered at some level regardless of whether they are detected in surveys as it is well within the dispersal range of juvenile kiwi from Whenuakite. Adverse effects on kiwi are most likely to arise from disturbance by domestic dogs, and vehicles. The traffic assessment needs to be re-visited looking at the issue of impact on Kiwi. Pest control targeting kiwi (focused on mustelids) would be of value.
- 3.5 In addition, the following avian species are known to be present on neighbouring properties² and are likely to be present in the area:
 - Kaka
 - Kereru
 - Banded Rail
 - Australasian Bittern
 - Fernbird

The ecological assessment supporting the proposed Variation has not surveyed for presence of any of these listed species and has not provided any guidance how subsequent development can manage adverse impacts on them.

¹ I have relied here and in other parts of this evidence on the advice of Dr Paul Dutton, ecologist in WRC Science Team and from Kate Richardson and Monique Nelson-Tunley, ecologists within the WRC Natural Heritage Team.

² WRC Hauraki-Coromandel field staff – pers. Comm.

- 3.6 Other species assessed by WRC ecologists as being potentially present include long-tailed bats and lizards. In terms of bats, a nationally critical threatened species, the ecological assessment supporting the variation noted that “mature trees - both indigenous (e.g. large kānuka) and exotic (large pines) - are plentiful at the site and have the potential to contain bat roosts. A targeted bat survey was beyond this scope of this report”.
- 3.7 If bats are present then several aspects of the development will need to be reassessed and a bat management plan should be prepared. This plan should take into account how bats may be using the habitat and how potential adverse effects of the development such as loss of foraging habitat, disruption of commuting corridors, and impacts of lighting can be mitigated.
- 3.8 In terms of lizards, WRC ecologists note the present grazed understories of the riparian margins make it a poor habitat for all but Elegant geckos (*Naultinus elegans*). If these riparian areas remain intact and are no-longer grazed, there will be an increase in habitat richness. Furthermore, in its current state the pasture is a dispersal barrier for lizards, but backyard gardens from development are likely to create a mosaic suitable for lizard dispersal.

4. Waikato Regional Policy Statement (WRPS) Biodiversity Policies

- 4.1 WRPS Policy 11.1 (Appendix 3a) seeks to maintain or enhance indigenous biodiversity. It does this by promoting positive indigenous biodiversity outcomes. One of the elements that this policy has a particular focus on is part i) managing the density, range and viability of indigenous flora and fauna.
- 4.2 WRPS Policy 11.2 (Appendix 3b) seeks to protect significant indigenous vegetation and significant habitats of indigenous fauna. The policy does this by ensuring that the characteristics that contribute to an areas significance are not adversely affected.
- 4.3 Criteria for determining ecological significance are identified in table 11-1 of the WRPS (Appendix 4). Of the 11 criteria, one of these (criterion 3) focuses specifically on vegetation or habitat that is currently habitat for indigenous species or associations of indigenous species that are:
- Classed as threatened or at risk, or
 - Endemic to the Waikato Region, or
 - At the limit of their natural range
- 4.4 In order to give effect to the WRPS biodiversity policies, Variation 3 needs to have provided for these matters. Of the species identified as highly likely or likely present in paragraphs 3.4-

3.6 above, four are classified as threatened or at risk and so would trigger criterion 3 for significance. These species, if present, would constitute some of the key characteristics that this policy seeks to protect. Understanding what those characteristics are and how the activities proposed will impact on them (including through cumulative adverse effects) is critical to give effect to this policy direction.

5. TCDC Proposed District Plan

- 5.1 WRC made submissions and further submissions to the TCDC Proposed District Plan during 2014, including to the indigenous biodiversity policy and rules and related sections. WRC filed an appeal to some of the biodiversity provisions in the Plan in June 2016, and also lodged s274 notices to 11 appeals that related to biodiversity provisions in the Plan.
- 5.2 In August 2020 these appeals were resolved (exclusive of Rule 2.1 in relation to plantation forestry) via a consent order from the Environment Court. Therefore, in WRC's view the biodiversity-related provisions give effect to the WRPS chapter 11 – Indigenous biodiversity.

6. The S42a Report

- 6.1 I have read the S42a report prepared by TCDC. This report recommends that the Variation be rejected, in part because "the ecological benefits suggested in the proponent's planning assessment are not replicated in the TCSP provisions, which allow for an extensive scope of residential and farming activities but do not offer a specific and enforceable rules framework."
- 6.2 Further, the s42a report questions the adequacy of the supporting AEEs and questions whether there is sufficient information to enable adverse effects, including cumulative adverse effects, to be appropriately managed. This aligns with concerns raised in the WRC submission where we noted that "the current ecological assessments supporting the Variation does not provide enough detail to justify the scale and intensity of development sought by the proposal."
- 6.3 This report is also helpful in clarifying that its purpose is to "recommend to the Commissioners whether Variation 3 as applied for or amended by submissions will better meet the objectives and policies of the Plan and the purpose of the RMA, compared to the existing provisions." As noted above, WRC has recently signed-off on the Proposed Plan biodiversity provisions as giving effect to the WRPS after a lengthy planning process.

- 6.4 The subject site is zoned “rural” in the Proposed District Plan. Subdivision in this zone is a discretionary activity subject to standards. The minimum average lot area for all lots is 20ha. Subdivision that does not meet the standards is a non-complying activity.
- 6.5 The subdivision rules in Section 38 of the Plan also provide for conservation lots. As the s42a report notes “in order to qualify for a Conservation Lot Subdivision such an area not only needs to meet criteria for significance in the WRPS but also a number of specific standards”. I will come back to these standards in more detail later-on in my evidence. In terms of meeting the SNA criteria we have already confirmed that this is the case in section 3 of my evidence above and in Appendix 2.
- 6.6 The TCSP includes an issues statement, two objectives and subservient policies, with Objective 1 dealing with the protection and enhancement of the ‘Conservation Area’. This would mean that the newly introduced Objective 1 and Policies 1a and 1b replace the much more complex and targeted framework of Section 6 ‘Biodiversity’.
- 6.7 The s42a report goes onto suggest that the TCSP objective and policies in relation to biodiversity are inadequate to manage biodiversity values of the site, noting that important matters such as viability, integrity and sustainability and whether the ecosystem can be maintained in a healthy and functional state will not be able to be considered.
- 6.8 I concur with this statement and also add that other important matters contained in some of the other Proposed Plan policies such as section 6.3 Policy 1a part c) relating to preventing the spread of kauri dieback disease would also not be able to be considered.
- 6.9 The s42a report also suggests that the same applies to the proposed rules framework of the TCSP which, while mentioning an Ecological Management Plan (of unknown scope and scale) are no substitute for the rules framework that Section 29 of the Proposed District Plan offers.
- 6.10 Again, I concur with that statement as it is consistent with WRC comments in our submission relating to the lack of detail around ecological management, particularly around possible presence of threatened fauna species and management requirements to protect their habitat.

7. The Proposed TCDC District Plan – Biodiversity Provisions

- 7.1 The package of provisions to manage indigenous biodiversity within the Plan are largely provided by Section 6 (Issues, Objectives and Policies), Section 29 (Rules), and Section 38.2.3 (Conservation Lots and Environmental Benefit Lots). As noted above in paragraph 5.2 these

provisions have been accepted by WRC as giving effect to the WRPS Chapter 11 Indigenous Biodiversity.

- 7.2 Of particular relevance to this proposal is Policy 1d in that it provides an incentive for subdivision in the rural area if a range of active management measures for biodiversity are implemented. This links to the provisions contained in Section 38 (Rule 8).
- 7.3 Active management is important for SNAs such as those on the applicant's site. Without such management, the values of the SNAs are likely to be slowly declining due to the impacts of pests, weeds, and stock access amongst other things. To undertake active management requires time and effort (and money) from the landowner and so the provisions in Section 6 and 38 of the Proposed Plan provide for an incentive for that active management to be achieved and balances use with protection at an appropriate development intensity or scale.
- 7.4 The applicant's site is within the 'Rural Zone' outside the 'Coastal Environment Overlay' with an orange mapped notation for 'Conservation Lot Subdivision' under Table 1. 'Orange' in Table 1 represents 'internationally to regionally significant of high to medium priority' and would yield 1 additional conservation lot per 4 ha of priority area to be restored or enhanced and protected.
- 7.5 As noted in paragraph 3.1, a total of 8.4ha of SNA is located on the site. Based on Table 1 and Figure 1B, it would seem³ that a yield of two additional lots could be considered as part of this rule. Though I note that priority areas mapped in Figure 1 A-D (Section 38 Subdivision) are indicative only. An ecologist 'will be required to determine the full extent of the area'.
- 7.6 In order to qualify for these extra lots under Rule 8, a number of specific standards also need to be met, for example, a management plan to achieve long-term ecological functioning of the area, monitoring, pest-management, identification of proposed building platforms and access areas, etc (these are provided in detail in Appendix 1 of the s42a report).
- 7.7 Of most interest to WRC and to the scope of our original submission relating to lack of information on fauna, including potential threatened fauna species, to justify the scale and intensity of development sought through TCSP, is part 1d) xiii) which requires a management plan specifying:

³ I note here an inconsistency with S42a report para 133 due to part of SNA TC363 not being identified as "internationally to regionally significant of high to medium priority".

1. the key biodiversity and ecological enhancement objectives to be met, including successful ecological functioning of the natural area/feature and its ability to be self-sustaining;
2. the ongoing management measures required to achieve these objectives, including any ongoing plant/animal pest control and domestic animal restrictions;
3. the ongoing monitoring methods to measure the success or otherwise of implementation of the management methods; and the measures to be taken should the objectives not be fulfilled.

7.8 These components are critical to ensure that the ecological management actions required are being undertaken and that they are achieving the ecological outcomes sought. It also provides for adaptive management if ecological outcomes are not being achieved. Adaptive management may result in changes to the form of development as well as its scale and intensity. In the case of 1 or 2 conservation lots this is likely to be easier to accommodate than it is to the proposal for up to 25 lots.

7.9 I therefore concur with the s42a report that utilising the subdivision rules (Rule 8) in the Proposed District Plan would secure a satisfactory environmental outcome because assessment criteria of this kind of subdivision are rigorous and effective conditions could be imposed to secure environmental outcomes. Given the imprecise nature of the proposed TCSP and lack of information on expected environmental effects this option would more efficiently and effectively achieve the objectives of the Plan and the WRPS.

8. Taiwawe Catchment Structure Plan Amended Proposal (Version 11 March 2021)

8.1 WRC staff met with the applicant on 23 November 2020 to discuss WRC concerns with the proposal. Discussions covered issues around lack of baseline ecological information and the need for surveys to ascertain the presence of fauna, and the provision of measures to manage adverse effects from the proposal, for example through pest control, pet control and traffic management (especially for kiwi).

8.2 It was noted that ecological assessments could be updated to include the results of fauna surveys, which would then inform the development of the Ecological Management Plan. I note that baseline surveys for bats⁴ (prior to removal of any large trees such as pines), indigenous lizards, kiwi and wetland birds shall be completed, and management requirements addressed

⁴ Long-tailed bats are known to roost in trees >15cm DBH, therefore this statement should apply to any tree meeting this criteria, not just “large trees such as pines” – Kate Richardson pers. comm, 5 March 2021.

as part of amended Rule 1h). This satisfies part of the WRC relief sought through our submission.

8.3 The other key matter discussed with the applicant concerned monitoring within the context of the proposed scale of the development. WRC is seeking is greater certainty of outcome for ecology at the site and that the range of management actions proposed are undertaken and are effective in achieving stated ecological outcomes. This is important as evidence⁵ shows that just because biodiversity restoration actions are required, doesn't mean they will be implemented or enforced to achieve ecological outcomes. The initial 2013 report by Brown et al identified:

- Overall, fencing, planting maintenance and pest management conditions were only met in 50% of cases,
- Monitoring conditions were met 64% of the time,
- Higher levels of compliance are achieved where actions are required before or concurrent with an activity being undertaken,
- Success in securing ecological outcomes through conditions is reliant on sufficiently resourced and robust compliance monitoring systems and clear, enforceable wording.

8.4 If outcomes are not achieved, the ability of monitoring information to be able to inform adaptive management is critical prior to "locking in" a scale of development (45 lots in the original proposal and 25 lots in the amended March 2021 version) that could undermine the ecological approach and range of management actions that the applicant is proposing.

8.5 This monitoring requirement is consistent with Rule 8 Conservation Lot Subdivision of the TCDC Proposed Plan as I discuss in paragraph 7.7 above. Although the amended proposal by the applicant covers a range of management actions (under section 27.9.5 Rule 1) it does not outline the key ecological outcomes (objectives) to be met, nor the ongoing monitoring methods to measure success or otherwise of management actions proposed, or the measures to be taken should the objectives (outcomes) not be fulfilled.

8.6 In my view, one of the measures to be taken in this case is the ability to limit the scale and intensity of the development and the range of adverse effects, particularly cumulative adverse effects on threatened indigenous fauna. This needs to include direct effects (such as

⁵ Marie Brown (2017): Last line of defence: compliance, monitoring and enforcement of New Zealand's environmental law. Marie A. Brown, Bruce D. Clarkson, Barry J. Barton & Chaitanya Joshi (2013): Ecological compensation: an evaluation of regulatory compliance in New Zealand, Impact Assessment and Project Appraisal.

earthworks during construction) and indirect effects from ongoing use of the site (traffic impacts, noise, lighting) and how these effects can become cumulative based on the scale and intensity of the development allowed and the habitat requirements of any fauna present. The S42a report provides one solution at para 73, namely that a clause be added to Rule 1 of the TCSP as follows: 'The provisions of the Ecological Management Plan and Landscape Management Plan shall be implemented prior to the Council approval of the subdivision completion certificate pursuant to section 224 of the Resource Management Act 1991.'

- 8.7 Another solution may be to look at the concept of staging or sequencing development according to baseline survey and monitoring data as it becomes available. In a recent Environment Court decision⁶ relating to subdivision at Peacocke in Hamilton City and the presence of long-tailed bat populations, the court amended consent conditions to better protect the known bat population during and after development.
- 8.8 This decision included sequencing development of lots, particularly those adjacent to the Bat Protection Area. The buffering distances required led to a loss of between 3-6 lots. Until requirements of conditions are met, development in these areas is deferred. The applicant had to satisfy the Council at the time of certificate that requirements can be met, including matters such as:
- No construction works after dusk or before dawn
 - Screening and light protection measures in place
 - Sufficient buffering distances
 - Fencing off Bat Protection Area prior to construction
 - Management plans
- 8.9 Monitoring outcomes were also identified, and these were to focus on bat disturbance, bat protection and habitat maintenance.
- 8.10 I have met with WRC ecologists and they have provided the following preliminary advice around developing appropriate ecological outcomes to be included in the monitoring plan for proposed Variation 3. The first critical outcome is knowledge of fauna presence, including threatened fauna – that is their presence, population, and distribution. This outcome should also include understanding pest abundance which can then be used as a baseline against which to assess success of ongoing pest control actions. The success or effectiveness of the proposed pest and weed control programme should be measured using Residual Trap Catch

⁶ Weston Lea Ltd v Hamilton City Council [2020] NZEnvC 189; paras [7], [59-62], [79], [86], [89], [98], [113-114].

(RTC) of less than or equal to 5% for possums, Residual Trap Index (RTI) of less than or equal to 5% for rodents. There is no equivalent effective measure for mustelids, but a combination of trap catch data and outcome monitoring could be used as an indication that mustelid control is underway and effective. These outcomes directly relate to delivery of other key ecological outcomes on site such as fauna and flora abundances and diversity, establishment of key ecological functions such as pollination, seed dispersal, natural regeneration, and emergence of understory species, and canopy closure. Requirement for annual review of the Ecological Management Plan (including monitoring plan) by an independent and qualified ecologist is also considered necessary, including identification of any adaptive measures required based on monitoring results.

- 8.11 If the hearing panel were of a mind to accept a level of development at this site beyond that provided by the Proposed TCDC District Plan provisions then a staging and sequencing approach to the Structure Plan may allow for a better balance between development certainty and certainty of ecological outcome to be achieved. Importantly such an approach could recognise and respond to achievement (or otherwise) of stated ecological outcomes and adapt management accordingly, including limiting some potential future development if necessary, prior to sign off of S224 RMA. For the applicant, it would allow a level of development (possibly as stage 1) to enable funding and resourcing of the “conservation framework” and range of management actions to improve indigenous flora and fauna.

9. Other matters - Dog ban and bat presence

- 9.1 I note that the S42a report references the Hot Water Beach Road Structure Plan at paras 141-142, which was part of the Operative District Plan. This site is adjacent to the applicant’s site. The detail of this Structure Plan is provided as Appendix 2 to that report. As part of the Ecological Management Plan as part i) the Structure Plan prohibits the keeping of any cats or dogs.
- 9.2 Given the proximity of this site to the applicant’s site and the very high likelihood of kiwi being present I would suggest that the Taiwawe Catchment Structure Plan should also ban cats and dogs and Rule 1 k) of the structure plan (March 2021 version) should be amended accordingly.
- 9.3 I also refer to the ecological evidence of Nicholas Goldwater paragraph 28 where he states that “There is one record of long-tailed bat activity approximately 18 km to the west of the subject site, which is within the standard home range of this species”. The absence of closer records is largely due to the absence of any survey effort in this area. WRC is aware that there

are recent records of long-tailed bat presence from February 2021 within 7km of Taiwawe (WRC, unpubl. data), further emphasising the importance of carrying out survey work to inform the assessment of effects.

10. Conclusion

- 10.1 I concur with the TCDC S42a Report recommendation that Variation 3 be rejected. The Proposed TCDC District Plan provisions for biodiversity give effect to the WRPS chapter 11 and specifically to policy 11.2 which seeks to protect significant habitat of indigenous fauna consistent with S6c) RMA. Those provisions, including Rule 8 which provide for Conservation Lots, provide a more effective and appropriate framework for balancing ecological outcomes through active management with development outcomes at a scale and intensity appropriate to the site and its actual and potential values.

Matthew Vare

Senior policy Advisor

8 March 2021

Appendix 1: Site Map with SNA Locations



104 Taiwawe Lane
Hot Water Beach Coromandel

Key
 Property Boundaries
 SNA with Site no.

Created by: CB - WRC
 Date: 30/07/2020
 Job No.: REG163092

Waikato
 REGIONAL COUNCIL
 Te Kaitiaki Take Kōwhiri
 Te Kaitiaki Take Kōwhiri

Appendix 2: SNA assessment and description

	A	B	C
1	SITE_NUMBER	TC364	TC363
2	SITE_NAME	Hot Water Beach Bush	Taiwawe forest fragments
3	HISTORICAL_ID	BA35UP364	BA35UP363
4	SITE_DESCRIPTION	The Hot Water Beach Bush site (254.35ha) is a steep forested outlier on a volcanic remnant with bluffs and deep gullies about its margins. Ownership comprises seven private titles and it is mostly designated as a KES (T11/11) with the addition of some coastal forest in the northeast near Hot Water Beach. Streams flow into the Hot Water Beach and Whitianga Catchments. This area links to the large nationally significant coastal SNA's to the south and east which are also a RAP. There are several other smaller KES sites in the near vicinity. Vegetation is a mix of coastal and lowland secondary forest with elements of pohutukawa on faces and spurs. Most of the area is a mosaic of kanuka, towai and tree ferns with emergent rewarewa and wilding pines. There are also some small elements of kauri forest present. Animal threats are managed in the south of the area but inputs in the north are not known. Chinese privet is common about forest margins throughout the area. Fauna classified in the NZ Threat Classification Lists as nationally vulnerable are present.	Coastal secondary broadleaved forest. Fauna classified in the NZ Threat Classification Lists as nationally vulnerable are present nearby.
5	AREA_HA	4.62831069	3.844223323
6	ECOSYSTEM_TYPE	Terrestrial Vegetation	Terrestrial Vegetation
7	CRITERION_1	no	no
8	CRITERION_2	no	no
9	CRITERION_3	yes	likely
10	CRITERION_4	no	no
11	CRITERION_5	no	no
12	CRITERION_6	no	no
13	CRITERION_7	likely	no
14	CRITERION_8	likely	no
15	CRITERION_9	no	no
16	CRITERION_10	no	no
17	CRITERION_11	yes	yes
18	CRITERIA_YES	3,11,	11,
19	CRITERIA_LIKELY	7,8,	3,
20	CRITERIA_INDETERMINATE		
21	SIGNIFICANCE	National	Local
22	SIGNIFICANCE_JUSTIFICATION	Regenerating forest in the coastal zone, including two streams to their headwaters. Mature forest is under-represented in the Tairua ED. Several nationally vulnerable threatened fauna are present.	Secondary coastal forest providing stepping stone habitat for mobile wildlife between the surrounding natural features, in particular nationally threatened fauna species.
23	SIGNIFICANT_FAUNA	NI brown kiwi	NI brown kiwi nearby
24	SIGNIFICANT_FLORA		
25	LIKELY_FAUNA		
26	LIKELY_FLORA		
27	OTHER_FEATURES	Pa site.	
28	CONFIDENCE_LEVEL	High	Medium
29	PEST_ANIMAL_ISSUE	Yes	Likely
30	PEST_PLANT_ISSUE	Yes	Yes
31	STOCK_ISSUE	Yes	No
32	DEVELOPMENT_ISSUE	Not Known	Not Known
33	OTHER_ISSUE	Not Known	Not Known
34	ISSUE_JUSTIFICATION	Possums likely, and predators an issue for kiwi. Pines dominant in areas, privet prevalent. Stock have access to areas of the forest.	Possums likely, and predators an issue for kiwi. Occasional wilding pines appear to be present on aerial photo. Fragments are fenced.
35	REFERENCES_1	Stanway et al. (2000)	
36	BOUNDARY_SOURCE	BIOVEG (2002), WRAPS (2007)	BIOVEG (2002), WRAPS (2007)
37	ASSESSMENT_NOTES		
38	DATA_SET_STATUS		
39	GEOMETRY_Length	2347.297399	1420.298894
40	GEOMETRY_Area	46317.85276	38471.16863

Note that the area in hectares (yellow highlight) is for that part of the SNA contained within the subject site. The full area of SNA TC364 is 254 hectares and the full area of SNA TC363 is 11.5 hectares.

Appendix 3a: WRPS Policy 11.1 Maintain or enhance indigenous biodiversity

Promote positive indigenous biodiversity outcomes to maintain the full range of ecosystem types and maintain or enhance their spatial extent as necessary to achieve healthy ecological functioning of ecosystems, with a particular focus on:

- a) working towards achieving no net loss of indigenous biodiversity at a regional scale;
- b) the continued functioning of ecological processes;
- c) the re-creation and restoration of habitats and connectivity between habitats;
- d) supporting (buffering and/or linking) ecosystems, habitats and areas identified as significant indigenous vegetation and significant habitats of indigenous fauna;
- e) providing ecosystem services;
- f) the health and wellbeing of the Waikato River and its catchment;
- g) contribution to natural character and amenity values;
- h) tāngata whenua relationships with indigenous biodiversity including their holistic view of ecosystems and the environment;
- i) managing the density, range and viability of indigenous flora and fauna; and
- j) the consideration and application of biodiversity offsets.

Appendix 3b: WRPS Policy 11.2 Protect significant indigenous vegetation and significant habitats of indigenous fauna

Significant indigenous vegetation and the significant habitats of indigenous fauna shall be protected by ensuring the characteristics that contribute to its significance are not adversely affected to the extent that the significance of the vegetation or habitat is reduced.

Appendix 4: Table 11-1 Criteria for determining significance of indigenous biodiversity

Previously assessed site	
1.	It is indigenous vegetation or habitat for indigenous fauna that is currently, or is recommended to be, set aside by statute or covenant or by the Nature Heritage Fund, or Ngā Whenua Rāhui committees, or the Queen Elizabeth the Second National Trust Board of Directors, specifically for the protection of biodiversity, and meets at least one of criteria 3-11.
Ecological values	
2.	In the Coastal Marine Area, it is indigenous vegetation or habitat for indigenous fauna that has reduced in extent or degraded due to historic or present anthropogenic activity to a level where the ecological sustainability of the ecosystem is threatened.
3.	It is vegetation or habitat that is currently habitat for indigenous species or associations of indigenous species that are: <ul style="list-style-type: none"> • classed as threatened or at risk, or • endemic to the Waikato region, or • at the limit of their natural range.
4.	It is indigenous vegetation, habitat or ecosystem type that is under-represented (20% or less of its known or likely original extent remaining) in an Ecological District, or Ecological Region, or nationally.
5.	It is indigenous vegetation or habitat that is, and prior to human settlement was, nationally uncommon such as geothermal, chenier plain, or karst ecosystems, hydrothermal vents or cold seeps.
6.	It is wetland habitat for indigenous plant communities and/or indigenous fauna communities (excluding exotic rush/pasture communities) that has not been created and subsequently maintained for or in connection with: <ul style="list-style-type: none"> • waste treatment; • wastewater renovation; • hydro electric power lakes (excluding Lake Taupō); • water storage for irrigation; or • water supply storage; unless in those instances they meet the criteria in Whaley et al. (1995).
7.	It is an area of indigenous vegetation or naturally occurring habitat that is large relative to other examples in the Waikato region of similar habitat types, and which contains all or almost all indigenous species typical of that habitat type. Note this criterion is not intended to select the largest example only in the Waikato region of any habitat type.
8.	It is aquatic habitat (excluding artificial water bodies, except for those created for the maintenance and enhancement of biodiversity or as mitigation as part of a consented activity) that is within a stream, river, lake, groundwater system, wetland, intertidal mudflat or estuary, or any other part of the coastal marine area and their margins, that is critical to the self sustainability of an indigenous species within a catchment of the Waikato region, or within the coastal marine area. In this context "critical" means essential for a specific component of the life cycle and includes breeding and spawning grounds, juvenile nursery areas, important feeding areas and migratory and dispersal pathways of an indigenous species. This includes areas that maintain connectivity between habitats.
9.	It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because: <ul style="list-style-type: none"> • its structure, composition, and ecological processes are largely intact; and • if protected from the adverse effects of plant and animal pests and of adjacent land and water use (e.g. stock, discharges, erosion, sediment disturbance), can maintain its ecological sustainability over time.
10.	It is an area of indigenous vegetation or habitat that forms part of an ecological sequence , that is either not common in the Waikato region or an ecological district, or is an exceptional, representative example of its type.
Role in protecting ecologically significant area	
11.	It is an area of indigenous vegetation or habitat for indigenous species (which habitat is either naturally occurring or has been established as a mitigation measure) that forms, either on its own or in combination with other similar areas, an ecological buffer, linkage or corridor and which is necessary to protect any site identified as significant under criteria 1-10 from external adverse effects.