

Waikato District Council

WAIKATO DISTRICT PLAN REVIEW

SIGNIFICANT NATURAL AREAS ASSESSMENTS

17 OCTOBER 2020



Question today *Imagine tomorrow* Create for the future

WAIKATO DISTRICT PLAN REVIEW SIGNIFICANT NATURAL AREAS ASSESSMENTS

Waikato District Council

WSP
Hamilton
Opus House, Princes Street, Hamilton 3204
Private Bag 3057, Waikato Mail Centre, Hamilton 3240

+64 7 838 9344
wsp.com/NZ

REV	DATE	DETAILS
1	14/10/2020	Significant Natural Areas Assessments - Final Report

	NAME	DATE	SIGNATURE
Prepared by:	John Turner	14/10/2020	
Reviewed by:	Claire Cunningham	14/10/2020	

This report ('Report') has been prepared by WSP exclusively for Waikato District Council ('Client') in relation to submissions received in connection with the Waikato District Plan review relating to Significant Natural Areas ('Purpose') and in accordance with the purchase order PSP000088 under the LASS Contract. The findings in this Report are based on and are subject to the assumptions specified in the Report and property mapping and details provided by the Client. WSP accepts no liability whatsoever for any reliance on or use of this Report, in whole or in part, for any use or purpose other than the Purpose or any use or reliance on the Report by any third party.



TABLE OF CONTENTS

1	INTRODUCTION.....	1
2	METHODOLOGY	2
2.1	GENERAL APPROACH	2
2.2	SURVEY METHODOLOGY	2
3	RESULTS.....	3
4	DISCUSSION	6
5	CONCLUSIONS.....	7
6	LIMITATIONS.....	8
APPENDIX A: SIGNIFICANT NATURAL AREAS		
	GROUND TRUTHING SURVEYS.....	10
13	TE AWA LANE.....	11
17	CALVERT ROAD.....	19
31	BIRCHWOOD LANE	28
35	KARAKARIKI ROAD	36
49	SWALLOW LANE.....	43
52B	MILL ROAD.....	51
60	YUMELODY LANE.....	60
63	PARKER LANE.....	67
65	KARIOI ROAD.....	75
70	DUNCAN ROAD.....	84
72	JAMES ROAD.....	91
102	HOOKER ROAD	99
117	WINDMILL ROAD.....	106
126 B	WOODCOCK ROAD	114
126C	WOODCOCK ROAD.....	122
140B	WOODCOCK ROAD	129
142	WOODCOCK ROAD	137
154	ORINI ROAD.....	145

156 PADDY ROAD.....	153
185B HAKARIMATA ROAD.....	160
260 RALPH ROAD.....	168
274 OKETE ROAD.....	175
368 RIVERVIEW ROAD.....	189
383 KARAKARIKI ROAD.....	196
384A KARAKARIKI ROAD.....	203
399 BEDFORD ROAD.....	210
511 TE AKAU WHARF ROAD.....	218
523 WAINGARO ROAD.....	225
524 SH1, TAMAHERE.....	234
538 TE PAPATAPU ROAD.....	241
567 KARAKARIKI ROAD.....	249
607 PENCARROW ROAD.....	256
656 WAINUI ROAD.....	263
658 TE AKAU WHARF ROAD.....	271
703B TE KOWHAI ROAD.....	278
759 WAINUI ROAD.....	285
996 PAPATAPU ROAD.....	292
1109 WHAANGA ROAD.....	301
1384 WHAANGA ROAD.....	308
1665 WHAANGA ROAD.....	317

1 INTRODUCTION

The notified Proposed Waikato District Plan (PWDP) identified Significant Natural Areas (SNA's) on District Planning maps. The SNA boundaries shown on the Planning Maps within the PWDP are based on data provided to Waikato District Council (WDC) by Waikato Regional Council (WRC). It is understood from subsequent discussions held with WRC personnel on 10th September 2020 that the SNA boundaries were largely based on a desktop assessment of aerial images with very limited ground truth survey.

Many of the property owners that had SNA's identified on their property made submissions during the notification period. These included property owners contesting the quality of the vegetation and habitats within their property and the accuracy of the district planning maps in terms of the definition of valuable vegetation/habitat versus vegetation/habitat of minimal value that should not have been included. In some cases, property owners identified both vegetation/habitat that should be excluded from the SNA and other vegetation/habitat that was of high value that had not been included and which they considered should have been included.

The purpose of this report is to document the results of ground truth surveys that have been undertaken in response to submissions received from property owners with respect to Significant Natural Areas (SNA's) that have been identified on their property as part of the District Plan Review.

The scope of this report covers the following:

- survey methodology in Section 2;
- survey results presented as a summary in Section 3, with site specific reports provided in Appendix A; and
- a brief discussion the results in Section 4 and conclusions in Section 5.

2 METHODOLOGY

2.1 GENERAL APPROACH

Site visits were made to selected properties where owners had made submissions in response to the PWDP, as directed by Waikato District Council. A total of 40 properties were visited. The visits were undertaken by John Turner, Ecologist (Technical Principal – Ecology) and Susan Chibnall, Policy Planner (Waikato District Council). In most cases site visits were undertaken with the property owner.

Within the Waikato District those areas of vegetation or habitat worthy of meeting a recognisable level of value are those meeting the criteria listed in Section 11A of the Waikato Regional Policy Statement (WRPS), as included in Appendix 2 of the Proposed District Plan as “Criteria for determining Significance of Indigenous Biodiversity”. The aim of the site visit was to determine if the areas of land within the property identified on the planning maps within the PWDP (either in part or in their entirety) met the criteria in Section 11A of WRPS. In undertaking the site assessments, the recording methodology used broadly followed that used in other SNA surveys previously undertaken within the district. However, some modifications to the assessment methodology have been made to reflect the specific objectives of the site visit in the context of the District Plan Review process as described below.

It is important to note that the purpose of the site visits in the context of the District plan review process was to determine whether the vegetation or habitats within the specific properties that were the subject of the submission met the criteria in Section 11A of the WRPS. The intent was not to undertake a full and detailed assessment of the entire SNA which in many cases extended well beyond the property boundary. Only the ecological information and data that was required to determine if the vegetation and habitats within the specific property met the criteria of Section 11A of the WRPS and make adjustment to the boundary of the SNA where appropriate, was gathered. Consequently, this assessment does not necessarily provide a comprehensive assessment of the entire SNA that could encompass a given property, and it does not provide an assessment of the validity and extent of the SNA beyond the property boundary.

2.2 SURVEY METHODOLOGY

Appendix A provides a record of the detailed site assessments that were undertaken on selected properties where submissions concerning SNA's were made. A total of 40 sites were surveyed. It contains details of the ecosystems found within the property, the vegetation and fauna, as well as site management detailed. It provides an assessment of the vegetation and habitats against the criteria in Section 11A of WRPS and determination of whether the vegetation or habitat within the property meets the criteria. Each site report includes a property map showing the property boundary and the extent of the SNA within the property. Where a recommendation is made to remove or alter the boundary of the SNA, a second map is provided showing the recommended SNA boundary, including sites where entire removal of the SNA is recommended.

3 RESULTS

The results of the ground truth surveys are summarised in Table 3.1 below.

Table 3.1 Summary of findings of the ground truth surveys

Property	Recommendation	Reason
13 Te Awa Lane	Amend SNA boundary to align with lake edge.	Current boundary extends over garden area comprising mown grassland with mature trees.
17 Calvert Road	Remove SNA from property.	While property supports native vegetation, this is essentially a garden environment and should not be classified as an SNA.
31 Birchwood Lane	Maintain SNA boundary.	Gully environment that is known to be important long-tailed bat habitat. Excellent native revegetation work being undertaken by the property owner.
35 Karakariki Road	Remove SNA from property.	Pasture. No vegetation or habitats of significance present.
49 Swallow Lane	Amend SNA boundary to align with edge of kahikatea stands and to the property boundary between the two kahikatea stands.	Kahikatea stands meet SNA criteria. Some boundary realignment is appropriate to remove pasture from the SNA.
52B Mill Road	Amend SNA boundary to align with boundary of covenanted land.	Vegetation outside the covenanted area of native forest is of marginal quality.
60 Yumelody Lane	Include as SNA.	The vegetation within the gully is of low ecological value. However, this is part of a gully known to provide important habitat for long-tailed bats.
63 Parker Lane	Remove SNA from property.	Vegetation dominated by exotic trees and shrubs.
65 Karioi Road	Amend SNA boundary.	SNA to be adjusted to encompass the high value vegetation and exclude regenerating manuka/kanuka over pasture.
70 Duncan Road	Does not meet SNA criteria.	The mature native trees are of high value as examples of historic vegetation cover, but this is not a functioning ecosystem i.e. mature trees over pasture.
72 James Road	Amend SNA boundary.	Amend to exclude areas of dry pasture.

102 Hooker Road	Maintain SNA boundary.	Meets SNA criteria. The SNA is part of the Waikato riparian corridor which is important for long-tailed bats.
117 Windmill Road	Maintain SNA boundary.	Meets SNA criteria. Part of a gully system that is important bat habitat.
126B Woodcock Road	Maintain SNA boundary.	Meets SNA criteria. Part of a gully system that is important bat habitat.
126C Woodcock Road	Maintain SNA boundary.	Meets SNA criteria. Part of a gully system that is important bat habitat. Has already been amended to follow the gully edge.
140B Woodcock Road	Maintain SNA boundary.	Meets SNA criteria. Part of a gully system that is important bat habitat.
142 Woodcock Road	Maintain SNA boundary.	Meets SNA criteria. Part of a gully system that is important bat habitat.
154 Orini Road	Amend SNA boundary.	Some areas do not meet SNA criteria. Remainder has values as wetland.
156 Paddy Road	Remove SNA from property.	Wetland is now dry due to pump scheme that is draining farmland. Low ecological value.
185B Hakarimata Road	Amend SNA boundary.	Amend to exclude lower value degraded habitats.
260 Ralph Road	Remove SNA from property.	This is willow over pasture. Not wetland.
274 Okete Road	Amend SNA boundary to exclude areas of pasture. Amend SNA to exclude mature trees within pasture.	Most of vegetation meet SNA criteria as high value secondary forest, however areas of well-established pasture do not meet criteria. Mature trees within pasture are not a functioning ecosystem, remove from SNA.
368 Riverview Road	Maintain SNA boundary.	Meets SNA criteria. High value native forest.
383 Karakariki Road	Remove SNA from property.	Garden environment. Does not meet criteria.
384A Karakariki Road	Remove SNA from property.	Mown grassland and plum trees. Does not meet SNA criteria.
399 Bedford Road	Amend SNA boundary.	Amend to exclude willow over grazed damp grassland. Remaining riparian habitat has higher native element.

511 Te Akau Wharf Road	Amend SNA boundary.	Amend SNA boundary to exclude area immediately around second property that is garden.
523 Waingaro Road	Amend SNA boundary.	Amend to exclude low value vegetation and pasture.
524B SH1	Amend SNA boundary.	Amend to follow the gully edge and exclude garden.
538 Papatapu Road	Amend SNA boundaries.	Area of hawthorn does not meet SNA criteria and to be excluded. Area of high value native bush to be included within the SNA.
567 Karakariki Road	Amend SNA boundaries.	Maintain areas of native bush within SNA. Remove area of wet pasture.
607 Pencarrow Road	Include as SNA.	Stand of mature kahikatea while being a grove of remnant forest trees within a garden environment has been proved to be habitat for long-tailed bats.
656 Wainui Road	Amend SNA boundaries.	Adjust boundaries to exclude areas that are being managed as garden and functional areas within the property.
658 Te Akau Wharf Road	Confirm amendment of SNA boundary.	Parts of the SNA meet criteria. Area of low value weeds identified in notified Planning Map has already been excluded.
703B Te Kowhai Road	Remove SNA from property.	Garden environment.
759 Wainui Road	Remove SNA from property.	Garden environment.
996 Papatapu Road	Amend SNA boundary to the riparian zone of the stream.	Most of the site comprises a building platform and exotic vegetation that does not meet SNA criteria.
1109 Whaanga Road	Amend SNA boundaries to exclude low value vegetation.	Some of the vegetation includes manuka/kanuka scrub regeneration over pasture. Amend SNA to include only remnants of native forest.
1384 Whaanga Road	Amend SNA boundaries to exclude low value vegetation.	Some of the vegetation includes manuka/kanuka scrub regeneration over pasture. Amend SNA to include only remnants of native forest.
1665 Whaanga Road	Amend SNA boundaries to exclude low value vegetation.	Some of the vegetation includes manuka/kanuka scrub regeneration over pasture. Amend SNA to include only remnants of native forest.

4 DISCUSSION

The following is a summary of the recommendations concerning the SNA boundaries within the selected properties visited as a result of the submissions received concerning the PWDP:

- 8 boundaries to remain as proposed;
- 20 boundaries to be amended to reflect a revised assessment of ecological values within the property;
- 9 SNA's to be removed in their entirety from properties;
- 2 sites recommended for inclusion as an SNA in response to submissions to be included due to the presence of long-tailed bats; and
- 1 site recommended for inclusion as an SNA in response to a submission received to be rejected on the basis of the absence of a functioning ecosystem.

The high degree of variability between sites surveyed in terms of the validity of the SNA boundaries when assessed against the Section 11A criteria confirms that the accuracy of data provided to WDC by WRC cannot be relied upon to accurately reflect the boundaries of SNA's within the District. Less than 25% of the SNA boundaries surveyed remained as per the District Planning Maps following ground truth survey conducted in preparing this report. In effect the SNA boundaries provided by WRC represent "potential" SNA's until detailed ground truth surveys are undertaken. Consequently, SNA boundaries shown on the Proposed District Planning Maps cannot be relied upon for planning purposes until ground truth surveys have been undertaken.

5 CONCLUSIONS

The selected sites surveyed in response to submissions received relating to SNA boundaries as part of the District Plan Review showed a high degree a variability in terms of the accuracy of the SNA boundaries shown on the Proposed District Planning Maps. The results of the site visits undertaken during the preparation of this report indicate that SNA boundaries shown on the Proposed District Planning Maps cannot be relied upon for planning purposes until comprehensive ground truth surveys have been undertaken.

6 LIMITATIONS

This report ('Report') has been prepared by WSP New Zealand Limited ('WSP') exclusively for Waikato District Council ('Client') in accordance with the purchase order Waikato District Council purchase order PSP000088 under the LASS Contract ('Agreement').

Permitted Purpose

This Report has been prepared expressly for the purpose of detailing the results of site specific surveys of Significant Natural Areas with selected properties that made submissions connected in response to the notified Proposed Waikato District Plan ('Permitted Purpose'). WSP accepts no liability whatsoever for the use of the Report, in whole or in part, for any purpose other than the Permitted Purpose. Unless expressly stated otherwise, this Report has been prepared without regard to any special interest of any party other than the Client.

WSP accepts no liability whatsoever for any use of this Report, in whole or in part, by any party other than the Client. Unless WSP agrees otherwise in writing, any use or any reliance on this Report by a third party is at its sole risk without recourse to WSP. Third parties must make their own enquiries and obtain independent advice in relation to any matter dealt with or any conclusion expressed in this Report.

Qualifications and Assumptions

The services undertaken by WSP in preparing this Report were limited to those specifically detailed in the Agreement and the Report and are subject to the scope, qualifications, assumptions and limitations set out in the Report and/or otherwise communicated to the Client. Except as otherwise stated in the Report and to the extent that statements, opinions, facts, conclusion and/or recommendations in the Report ('Conclusions') are based in whole or in part on information provided by the Client and other parties ('Information'). The Information has not been and have not been verified by WSP and WSP accepts no liability for the reliability, adequacy, accuracy and completeness of the Information.

The data reported and Conclusions drawn by WSP in this Report are based solely on information made available to WSP at the time of preparing the Report. The passage of time; unexpected variations in ground conditions; manifestations of latent conditions; or the impact of future events (including (without limitation) changes in policy, legislation, guidelines, scientific knowledge; and changes in interpretation of policy by statutory authorities); may require further investigation or subsequent re-evaluation of the Conclusions.

Use and Reliance

This Report should be read in its entirety and must not be copied, distributed or referred to in part only. The Report must not be reproduced without WSP's prior approval in writing. WSP will not be responsible for interpretations or conclusions drawn by the reader of the Report. This Report (or sections of the Report) must not be used as part of a specification for a project or for incorporation into any other document without WSP's agreement in writing.

Disclaimer

No warranty, undertaking or guarantee whether expressed or implied, is made with respect to the data reported or the Conclusions drawn. To the fullest extent permitted at law, WSP, its related bodies corporate and its officers, employees and agents assumes no liability and will not be liable to any third party for, or in relation to any losses, damages or expenses (including any indirect, consequential or punitive losses or damages or any amounts for loss of profit, loss of revenue, loss of opportunity to earn profit, loss of production, loss of contract, increased operational costs, loss of business opportunity, site depredation costs, business interruption or economic loss) of any kind whatsoever, suffered on incurred by a third party.

APPENDIX A: SIGNIFICANT NATURAL AREAS GROUND TRUTHING SURVEYS

This appendix provides ground truth survey reports for each property visited in response to submissions made regarding Significant Natural Areas as part of the Waikato District Plan Review.

13 TE AWA LANE

Visit date	Owner and property address
16 th June 2020	Martin Bloxam 13 Te Awa Lane, Tamahere
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Lake Garden	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundary extends into garden comprising mainly mown grassland.

Vegetation types, key species and species of note

Mown grassland almost to the lake edge with swamp cypress (*Taxodium distichum*) and pin oak (*Quercus palustris*) along the lake edge.

Fauna & habitat types observed

Mallard, Pukeko, Tui.

Fish fauna not assessed.

Landowner feedback during site visit

Property owner indicated that the lake has no outlet. This is likely to limit fish fauna. Landowner happy for the lake to be within the SNA but wishes to have the garden excluded.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input checked="" type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input checked="" type="checkbox"/> No damage.	N/A
Fencing	1 2 3 4	<input checked="" type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	Not necessary. Garden environment. No stock.
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	N/A
Ground cover	1 2 3	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor. <input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	N/A

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1 2 3 4	<input type="checkbox"/> Very common, >50% canopy cover. <input type="checkbox"/> Common, 10%50% canopy cover. <input type="checkbox"/> Occasional, up to 10% canopy cover. <input type="checkbox"/> None present.	N/A
Shrub/Tree Weeds	1 2 3 4	<input type="checkbox"/> Very common, <50% understorey or canopy cover. <input type="checkbox"/> Common, 10%-50% understorey or canopy cover. <input type="checkbox"/> Occasional, up to 10% understorey or canopy cover. <input type="checkbox"/> None present.	N/A

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Value of the lake for Threatened or At-Risk fish species not assessed. Potential long-tailed bat habitat.
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.	No

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No
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.	Not determined. Potentially supports native fish. Will support native water-birds. None observed during the site visit.
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

Within the property the SNA boundary extends over garden environment

SNA Assessment

The section of the lake within the property is a potential SNA. Requires more detailed assessment of the entire SNA to confirm status. However, garden should be excluded from the SNA. Recommend SNA boundary adjustment.

SECTION D MAPS AND PHOTOGRAPHS

Property map - 13 Te Awa Lane (Property boundary in red, SNA boundary in green)



Recommended area for removal from SNA (shown in blue)



Photographs

Photo 1: Lake edge with swamp cypress.



Photo 2: Mown grassland currently within SNA.



Photo 3: Lake edge environment



Photo 4: Wider view of lake beyond property boundary.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The SNA boundary extends into a garden environment along a lake edge comprising mown grassland and mature trees. Adjust SNA boundary to lake edge and exclude garden environment.

Note that only a small part of the SNA was assessed during the site visit. Requires comprehensive assessment to confirm status.

17 CALVERT ROAD

18 th June 2020	Lizbeth Hughes 17 Calvert Lane, Raglan
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Garden environment Stream crossing garden	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

The SNA boundary extends over garden to rear of the property.

Vegetation types, key species and species of note

Garden environment with native elements. Large mature native trees present including totara (*Podocarpus totara* var. *totara*), puriri (*Vitex lucens*) and Northern rata (*Metrosideros robusta*). Exotic trees include eucalyptus. Other native species include kohekohe (*Dysoxylum spectabile*), nikau palm (*Rhopalostylis sapida*), kawakawa (*Piper excelsum* subsp. *excelsum*), cabbage tree (*Cordyline australis*) and manuka (*Leptospermum scoparium* var. *scoparium*).

Weed species occurring locally include *Tradescantia fluminensis* and climbing asparagus (*Asparagus scandens*).

Garden comprises large mature tree species, patches of shrubs and cleared areas of mown grass and patches of garden species including Agapanthus (*Agapanthus praecox* subsp. *orientalis*).

Fauna & habitat types observed

Tui, fantail, goldfinch and blackbird recorded. Will support a range of common native and exotic bird species that are typical of suburban gardens.

Landowner feedback during site visit

The rear of the property is managed as a garden environment. Many of the large mature native trees were planted in 1969.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	N/A
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	N/A
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	Garden is fenced from neighbouring properties.
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	N/A
Ground cover	1 2	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	N/A

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	N/A
	2	<input type="checkbox"/> Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/> None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	N/A
	2	<input type="checkbox"/> Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Northern rata is classified as Nationally Vulnerable. Manuka is classified as At Risk. Both species have been reclassified from Not Threatened due to the threat from myrtle rust.
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.	No

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

SNA boundary extends over a garden environment.

SNA Assessment

Garden environment, including native vegetation and mature native trees. However, essentially a managed garden environment and not appropriate to classify as SNA based only on the presence of Threatened and At-Risk plant species. Exclude property from SNA on the basis that it is a managed garden environment.

SECTION D MAPS AND PHOTOGRAPHS

Property map 17 Calvert Lane, (Property boundary in red, SNA boundary in green)



Recommended area for removal from SNA (shown in blue)



Photographs

Photo 1: Open garden area to rear of property



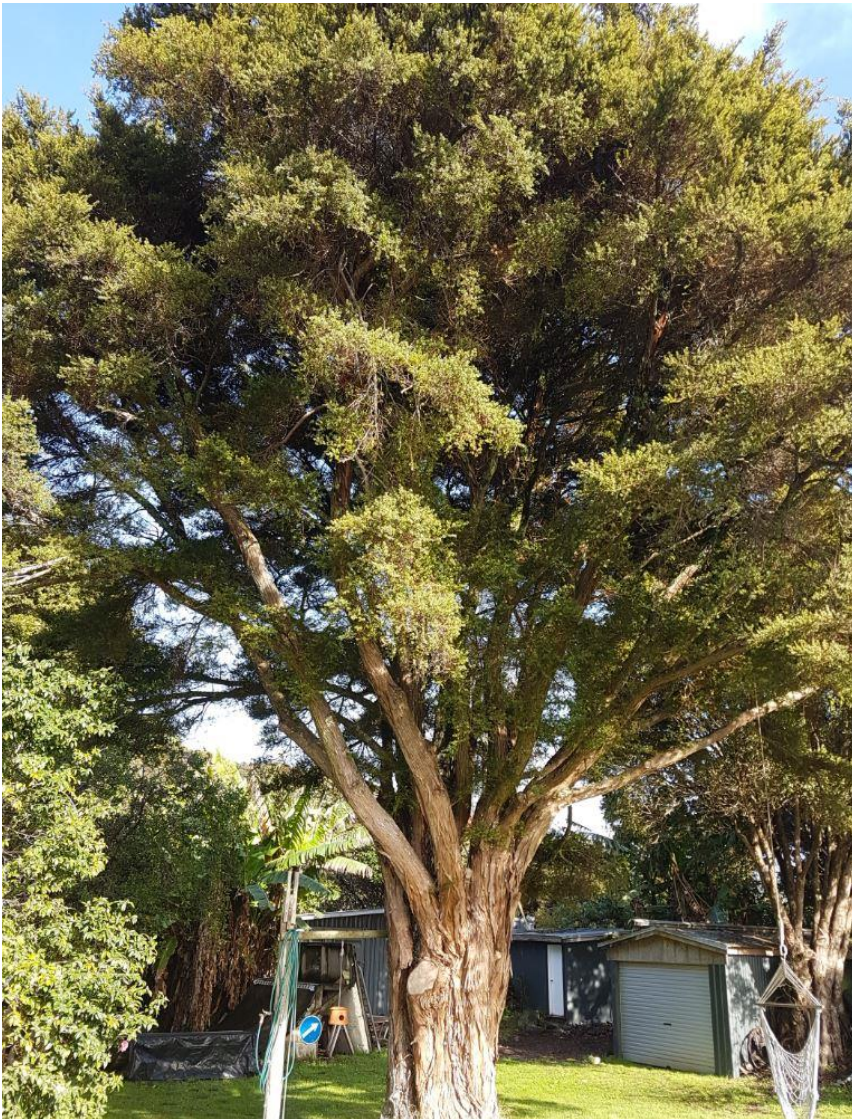
Photo 2: Middle property area



Photo 3: Stream within the property



Photo 4: Mature totara within garden environment.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

This part of the SNA, while supporting mature native trees and native vegetation, is a garden environment and managed as such. Not appropriate to classify as SNA based despite the presence of Threatened and At-Risk plant species. Recommend removal of the SNA from the entire property.

31 BIRCHWOOD LANE

Visit date	Owner and property address
10 th June 2020	Medihah Bardsley on behalf of the Bardsley No. 1 Family Trust 31 Birchwood Lane, Tamahere.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem Type	Existing ecological data
Gully Regenerating/replanted native forest.	Part of a gully system that is known to provide important habitat for long-tailed bats.

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundary follows the edge of the gully.

Vegetation types, key species and species of note

Native gully vegetation in various stages of regeneration and restoration. Property owner has undertaken extensive weeding and planting. Excellent example of gully restoration. Planted tree species include kahikatea (*Dacrycarpus dacrydioides*), rimu (*Dacrydium cupressinum*), totara (*Podocarpus totara*), kauri (*Agathis australis*) and lemonwood (*Pittosporum eugenioides*). There are also naturally established mature kahikatea specimens within the gully. Other native tree and shrub species include cabbage tree (*Cordyline australis*), wineberry (*Aristotelia serrata*), karamu (*Coprosma robusta*) and tree ferns mamaku (*Cyathea medullaris*) and wheki (*Dicksonia squarrosa*).

Exotic trees are present including mature poplar (*Populus sp.*), with grey willow (*Salix cinerea*) in the base of the gully.

Natural regeneration of native vegetation occurring with kahikatea seedlings present. Areas of wetland are present in the bottom of the gully. Weeds are present, but incidence is low compared to many other sections of the gully system. Weed species include tree privet (*Ligustrum lucidum*), Chinese privet (*Ligustrum sinense*) and locally periwinkle (*Vinca major*).

Fauna & habitat types observed

Fantail, tui, myna, magpie and kingfisher observed during site visit.

Long-tailed bat are known to inhabit the gully.

Landowner feedback during site visit

Property owners has been in property for 22 years. They have cleared exotics and weeds species and replanted with natives.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input type="checkbox"/> Very common, cover >50% ground area.	
	2	<input type="checkbox"/> Common, 10%-50% ground area.	
	3	<input checked="" type="checkbox"/> Occasional, up to 10% ground area.	
	4	<input type="checkbox"/> None present.	
Stock	1	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	
	2	<input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	<input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges.	
	4	<input checked="" type="checkbox"/> No damage.	
Fencing	1	<input checked="" type="checkbox"/> No fencing.	
	2	<input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks.	
	3	<input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks.	
	4	<input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%.	Closed shrub canopy in many parts of the gully. Mature tree canopy largely absent.
	2	<input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	<input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare.	Closed mid-tier layer
	2	<input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	3	<input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	
	2	<input type="checkbox"/> Common, 10%-50% canopy cover.	
	3	x Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/> None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	Tree privet, Chinese privet
	2	x Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No

CRITERIA		ASSESSMENT
3	<p>It is vegetation or habitat that is currently habitat for indigenous species or associations of indigenous species that are:</p> <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. 	Yes. Provides habitat for long-tailed bats.
4	<p>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.</p>	Yes. Wetland habitat. Vegetation developing values.
5	<p>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.</p>	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	Yes. Wetland habitat present in the base of the gully.
7	<p>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.</p>	No.
8	<p>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.</p>	No.

CRITERIA		ASSESSMENT
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No. Value still developing but likely to meet this criterion in 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.	No.
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	Yes. Gully is part of a corridor of high importance as long-tailed bat habitat.

Boundary Assessment

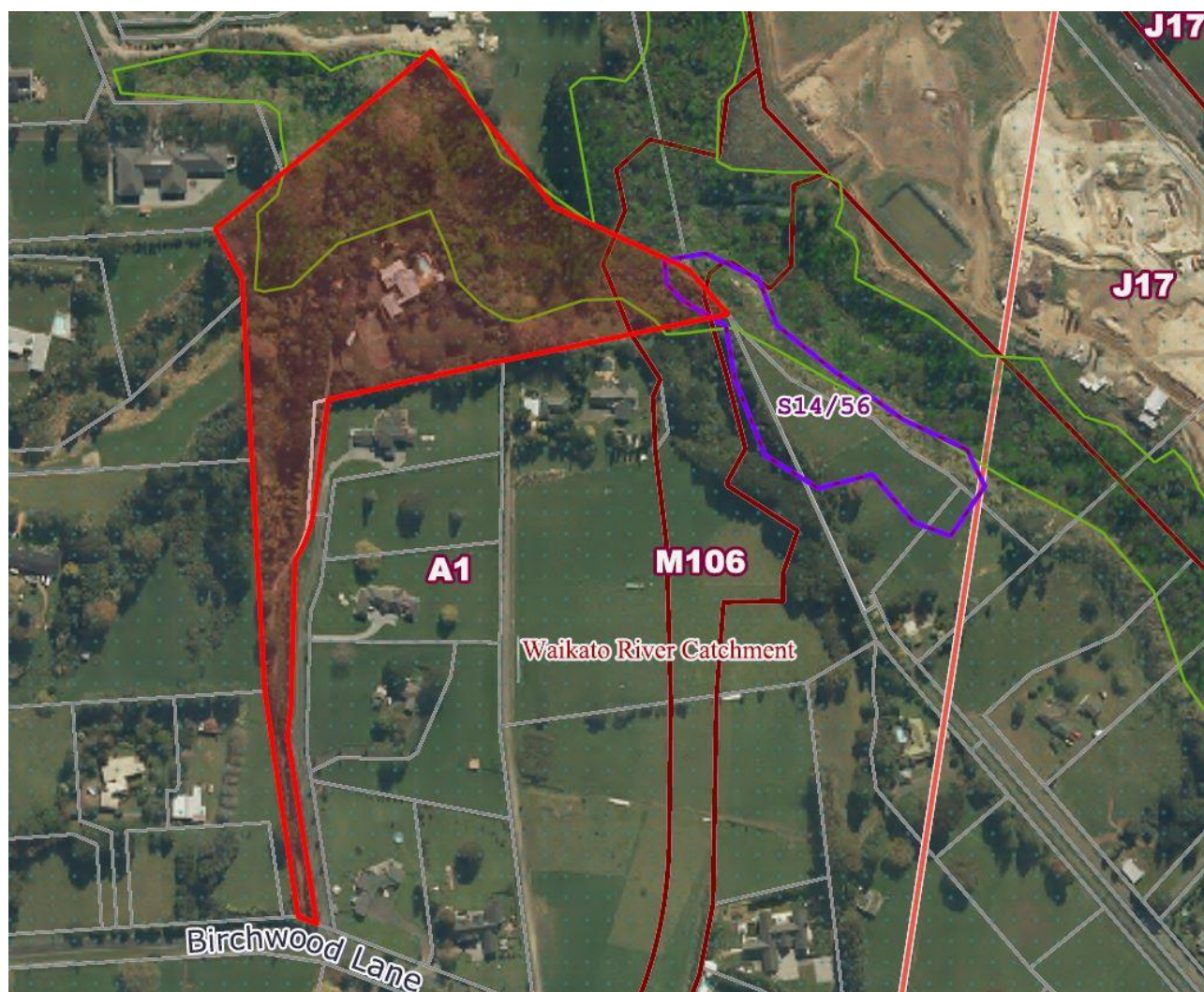
SNA boundary follows gully edge and is appropriately positioned.

SNA Assessment

The SNA is an excellent example of gully restoration and will continue to develop ecological value for decades to come. Already meets several SNA criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat.

SECTION D MAPS AND PHOTOGRAPHS

Property map 31 Birchwood Lane, (Property boundary in red, SNA boundary in green)



Photographs

Photo 1: View across the gully



Photo 2: Native planting in foreground and view across the gully.



Photo 3: Wetland in the base of the gully



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The SNA boundary follows gully edge. It is an excellent example of gully restoration and will continue to develop ecological value for decades to come. Already meets several SNA criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat. Recommend maintaining SNA boundary as indicated.

35 KARAKARIKI ROAD

Visit date	Owner and property address
11 th June 2020	Steve Kirkbride 35 Karakariki Valley Road, Whatawhata.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem Types	Existing ecological data
Pasture	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundary extends over areas of pasture.

Vegetation types, key species and species of note

Vegetation is essentially pasture. Two mature pine (*Pinus sp.*) trees present.

Fauna & habitat types observed

None observed

Landowner feedback during site visit

Gorse had been cleared in the past

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	N/A
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	Yes - pasture
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	N/A
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	N/A
Ground cover	1 2 3 4	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor. <input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor. <input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf letter on remainder.	N/A
Vine weeds	1 2 3 4	<input type="checkbox"/> Very common, >50% canopy cover. <input type="checkbox"/> Common, 10%50% canopy cover. <input type="checkbox"/> Occasional, up to 10% canopy cover. <input type="checkbox"/> None present.	N/A
	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	N/A

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Shrub/Tree Weeds	2	<input type="checkbox"/> Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No
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.	No
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
10	<p>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.</p>	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

Boundary within the property extends over pasture.

SNA Assessment

Pasture. Does not meet the SNA criteria. Remove SNA from the property.

SECTION D MAPS AND PHOTOGRAPHS

Property map 35 Karakariki Road, (Property boundary in red, SNA boundary in green)



Recommended area for removal from SNA (shown in blue)



Photographs

Photo 1: Approximate location of the SNA within red oval



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The area within the SNA is pasture and does not meet the SNA criteria in Section 11A of the WRPS.
Remove SNA from the property.

49 SWALLOW LANE

Visit date	Owner and property address
10 th June 2020	Marc ter Beek 49 Swallow Lane, Tamahere
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Kahikatea forest	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundaries on Planning Maps do not necessarily reflect actual fence lines on the ground.

Vegetation types, key species and species of note

Stands of bush dominated by kahikatea (*Dacrycarpus dacrydioides*) with other canopy species including rimu (*Dacrydium cupressinum*), tawa (*Beilschmiedia tawa*) and rewawrewa (*Knightia excelsa*)

Mid-tier species include cabbage tree, mahoe, *Coprosma robusta*, kawakawa hangehange and silverfern.

Property owner has underplanted with a variety of native forest species.

Fauna & habitat types observed

Tui, fantail, grey warbler, house sparrow and myna.

Nearby stand of Kahikatea known to provide habitat for long-tailed bats therefore long-tailed bats likely to be present at least periodically.

Landowner feedback during site visit

Historically has been grazed by now fenced. Property owner actively engaged in weeding and underplanting. Wants the SNA boundary to follow the fence lines. Canopy of trees extends over fence line distorting the actual extend of the SNA.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input checked="" type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input checked="" type="checkbox"/> No damage.	Historically stock have had access but now stock excluded.
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input checked="" type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input checked="" type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input checked="" type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input checked="" type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	
	2	<input type="checkbox"/> Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% canopy cover.	
	4	x None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/> Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	x None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Possibly. May provide habitat for long-tailed bats.

CRITERIA		ASSESSMENT
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.	Yes.
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.	No.
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No.
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.	No.
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.	No.
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	Yes.

CRITERIA		ASSESSMENT
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.	No.
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No.

Boundary Assessment

SNA boundary alignments do not accurately reflect fence lines due to tree canopy extending over paddocks.

SNA Assessment

The forest areas meet at least two of the SNA criteria and therefore qualify as SNA's.

SECTION D MAPS AND PHOTOGRAPHS

Property map 49 Swallow Lane, (Property boundary in red, SNA boundary in green)





Photographs

Photo 1: Edge of forest stand showing canopy extending over fence boundary.



Photo 2: Kahikatea dominated forest



Photo 3: Native underplanting undertaken by property owner



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The forest areas meet at least two of the SNA criteria and therefore qualify as SNA's. However, SNA boundary alignments do not accurately reflect fence lines due to tree canopy extending over paddocks. Recommend adjustment of SNA boundaries to reflect fence lines.

52B MILL ROAD

Visit date	Owner and property address
6 th August 2020	David Lawrie 52B Mill Road, Pukekohe.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Conifer plantation Exotic tree and scrub	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

A significant area of the property is in QEII Covenant. The SNA mapping has included areas outside of the covenanted forest in the SNA. The property owner has requested that the SNA follows the boundary of the covenanted land.

The covenanted area of forest is high quality native forest. This assessment only considers the vegetation outside of the covenanted land.

Vegetation types, key species and species of note

Vegetation outside of the covenanted forest comprises conifer plantation, exotic scrub, exotic tree planting. Native vegetation is very limited in extent.

Fauna & habitat types observed

None observed

Landowner feedback during site visit

Areas outside the covenanted land comprise areas of exotic scrub, exotic trees and pine plantation with low incidence of native vegetation.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input type="checkbox"/> Very common, cover >50% ground area.	N/A
	2	<input type="checkbox"/> Common, 10%-50% ground area.	
	3	<input type="checkbox"/> Occasional, up to 10% ground area.	
	4	<input type="checkbox"/> None present.	
Stock	1	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	Yes in places
	2	<input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	<input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges.	
	4	<input type="checkbox"/> No damage.	
Fencing	1	<input type="checkbox"/> No fencing.	N/A
	2	<input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks.	
	3	<input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks.	
	4	<input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%.	N/A
	2	<input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	<input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare.	N/A
	2	<input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	<input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	N/A
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	N/A
	2	<input type="checkbox"/> Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/> None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	N/A
	2	<input type="checkbox"/> Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	The covenanted forest meets this criterion. However, the areas outside the covenanted area do not.
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.	No
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. 	No
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.	No

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA		ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

SNA boundary includes areas of low value vegetation outside the covenanted area.

SNA Assessment

The covenanted forest area qualifies as an SNA by meeting criteria 1 of Section 11A of the WRPS. Vegetation outside of the covenanted forest comprises conifer plantation, exotic scrub, exotic tree planting of low ecological value. These areas do not meet the SNA criteria.

SECTION D MAPS AND PHOTOGRAPHS

Property map 52B Mill Road, (Property boundary in red, SNA boundary in green)



Recommended areas for removal from the SNA (shown in blue)



Photographs

Photo 1: Conifer plantation in the north-east edge of covenanted forest



Photo 2: Berberis sp. scrub western edge of the covenanted forest.



Photo 3: Exotic scrub along western edge of covenanted forest



Photo 4: Planted exotic trees along western edge of covenanted forest.



Photo 5: Pine and exotic scrub along western edge of covenanted forest.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The covenanted forest area qualifies as an SNA by meeting criteria 1 of Section 11A of the WRPS. Vegetation outside of the covenanted forest comprises conifer plantation, exotic scrub, exotic tree planting of low ecological value. These areas do not meet the SNA criteria. Recommend removal of all areas outside the covenanted forest from the SNA.

60 YUMELODY LANE

Visit date	Owner and property address
10 th June 2020	Mel Libre 60 Yumelody Lane, Tamahere.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Gully	Part of a gully system that is known to provide important habitat for long-tailed bats.

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

Not currently identified as SNA.

Vegetation types, key species and species of note

Gully slope mainly comprises mature poplars (*Populus sp.*) with pines also occurring. Mainly grasses beneath with little mid-tier or ground cover. Some Chinese privet present.

In the base of the gully there is a small area of scrub that supports wheki, cabbage tree, mahoe and *Coprosma robusta*. Abundant Japanese honeysuckle is present.

Wet pasture also occurs in the base of the gully supporting Yorkshire fog and creeping buttercup.

Appears to have been previously grazed by cattle given sparse ground cover.

Fauna & habitat types observed

Tui.

Long-tailed bats recorded in section of gully close by and it is highly likely that this part of the gully system is also used by bats.

Landowner feedback during site visit

None

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	Historically, but none present now.
Fencing	1 2 3 4	x No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	Dominated by exotic trees
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	Absent
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	
	2	x Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/> None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/> Common, 10%-50% understorey or canopy cover.	
	3	x Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Part of a gully system known to be habitat for long-tailed bats.

CRITERIA		ASSESSMENT
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.	No
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No

CRITERIA		ASSESSMENT
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.	No
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	Yes. Part of a gully system that provides important habitat for long-tailed bats

Boundary Assessment

Not currently identified as SNA.

SNA Assessment

Meets two of the criteria under section 11A of the WRPS due mainly to being part of a gully system that provides important habitat for long-tailed bats.

SECTION D MAPS AND PHOTOGRAPHS

Property map 60 Yumelody Lane, (Property boundary in red)



Recommend area for inclusion as SNA (shown in green)



Photographs

Photo 1: Poplars dominant on gully slopes



Photo 2: Wet pasture base of the gully



SECTION E CONCLUSIONS AND RECOMMENDATIONS

Meets two of the criteria under section 11A of the WRPS due mainly to being part of a gully system that provides important habitat for long-tailed bats. Recommend gully for inclusion as SNA.

63 PARKER LANE

Visit date	Owner and property address
6 th August 2020	Glenn Morse 63 Parker Lane, Pukekohe
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Exotic forest	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

None

Vegetation types, key species and species of note

The canopy within this stream gully is dominated by exotic tree species pines, poplars and eucalyptus.

There abundant tree privet in the mid-tier with *Tradescantia fluminensis* locally abundant in the ground layer.

Native species are present in low abundance. There are a small number (approximately five) of large mature totara. Mahoe and hangehange also occur in the mid-tier. However, the vegetation is dominated by exotic species.

Fauna & habitat types observed

Blackbird, chaffinch, fantail and grey warbler.

Potential long-tailed bat habitat but no data.

Landowner feedback during site visit

None

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input checked="" type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input checked="" type="checkbox"/> No damage.	
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input checked="" type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	Exotic canopy
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	Exotic dominated mid-tier
Ground cover	1 2	<input checked="" type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	
	2	<input type="checkbox"/> Common, 10%-50% canopy cover.	
	3	x Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/> None present.	
Shrub/Tree Weeds	1	x Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/> Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No. Potential long-tailed bat habitat but no data.
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.	No.

CRITERIA		ASSESSMENT
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.	No.
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

Not applicable

SNA Assessment

The site does not meet any of the SNA criteria and does not qualify as an SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 63 Parker Lane, (Property boundary in **red**, SNA boundary in **green**)



Recommended area for removal from SNA (shown in blue)



Photographs

Photo 1: Exotic tree canopy (poplars, pines and eucalypts) and abundant tree privet in the mid-tier



Photo 2: Tree privet with occasional mahoe in the mid-tier



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The site is dominated by exotic vegetation with low incidence of native trees and shrubs. It is potential long-tailed bat habitat which if confirmed may result in the site meeting criterion 3 of Section 11A of the WRPS. However, there is no bat data for the site. Recommend removal of the SNA from the property.

65 KARIOI ROAD

Visit date	Owner and property address
5 th August 2020	John Swann 65 Karioi Road, Raglan.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Broadleaved podocarp forest Manuka/kanuka scrub	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundaries extend over broadleaved podocarp forest and areas of manuka and kanuka scrub that have re-invaded pasture.

Vegetation types, key species and species of note

Property supports extensive areas of broadleaved podocarp forest and manuka/kanuka scrub within hillslope pasture.

The broadleaved podocarp forest supports a wide variety of native tree and shrub species including tawa (*Beilschmiedia tawa*), rewarewa (*Knightia excelsa*), rimu (*Dacrydium cupressinum*), mangeao (*Litsea calicaris*), kohekohe (*Dysoxylum spectabile*), pigeonwood (*Hedycarya arborea*), hangehange (*Geniostoma ligustrifolium*) and mahoe (*Melicytus ramiflorus*). Nikau palm (*Rhopalostylis sapida*) is also present along with tree ferns mamaku (*Cyathea medullaris*), silverfern (*Cyathea dealbata*) and wheki (*Dicksonia squarrosa*). Lianas include supplejack (*Ripogonum scandens*) and *Metrosideros* spp.

Manuka (*Leptospermum scoparium*) and kanuka (*Kunzea robusta*) dominate the manuka/kanuka scrub areas. These areas have low species diversity and in many places are grazed beneath.

Fauna & habitat types observed

Native pigeon and tui.

Potential long-tailed bat habitat but no data.

Landowner feedback during site visit

Manuka and kanuka grow as pest species in this area and rapidly invade pasture if not controlled. Many areas identified as SNA are manuka and kanuka that has reinvaded pasture areas. Request these areas from SNA's. Happy to have the high value areas of bush as SNA.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input type="checkbox"/> Very common, cover >50% ground area.	
	2	<input type="checkbox"/> Common, 10%-50% ground area.	
	3	<input checked="" type="checkbox"/> Occasional, up to 10% ground area.	
	4	<input type="checkbox"/> None present.	
Stock	1	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	90% of broadleaved podocarp forest is fenced.
	2	<input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	<input checked="" type="checkbox"/> Sign uncommon. Sign is often old. Only near edges.	
	4	<input type="checkbox"/> No damage.	
Fencing	1	<input type="checkbox"/> No fencing.	Most of the high-quality forest is fenced.
	2	<input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks.	
	3	<input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks.	
	4	<input checked="" type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%.	
	2	<input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	<input checked="" type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare.	
	2	<input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	<input checked="" type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	Variable
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1 2 3 4	<input type="checkbox"/> Very common, >50% canopy cover. <input type="checkbox"/> Common, 10%-50% canopy cover. x Occasional, up to 10% canopy cover. <input type="checkbox"/> None present.	
Shrub/Tree Weeds	1 2 3 4	<input type="checkbox"/> Very common, <50% understorey or canopy cover. <input type="checkbox"/> Common, 10%-50% understorey or canopy cover. x Occasional, up to 10% understorey or canopy cover. <input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Broadleaved podocarp forest supports <i>Metrosideros spp.</i> all of which are classified as Threatened in most cases due to threat from myrtle rust. Manuka is classified as At Risk (Declining) and kanuka is classified as Nationally Vulnerable due to the threat from myrtle rust.
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.	Yes. Broadleaved podocarp forest.
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	Yes. Fenced sections of forest are healthy representative examples of broadleaved podocarp forest.
10	<p>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.</p>	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary assessment

Stands of intact broadleaved podocarp forest merit inclusion within the SNA. However, SNA boundaries should be adjusted to exclude manuka/kanuka scrub and very small low value modified fragments of forest that are difficult to manage and protect.

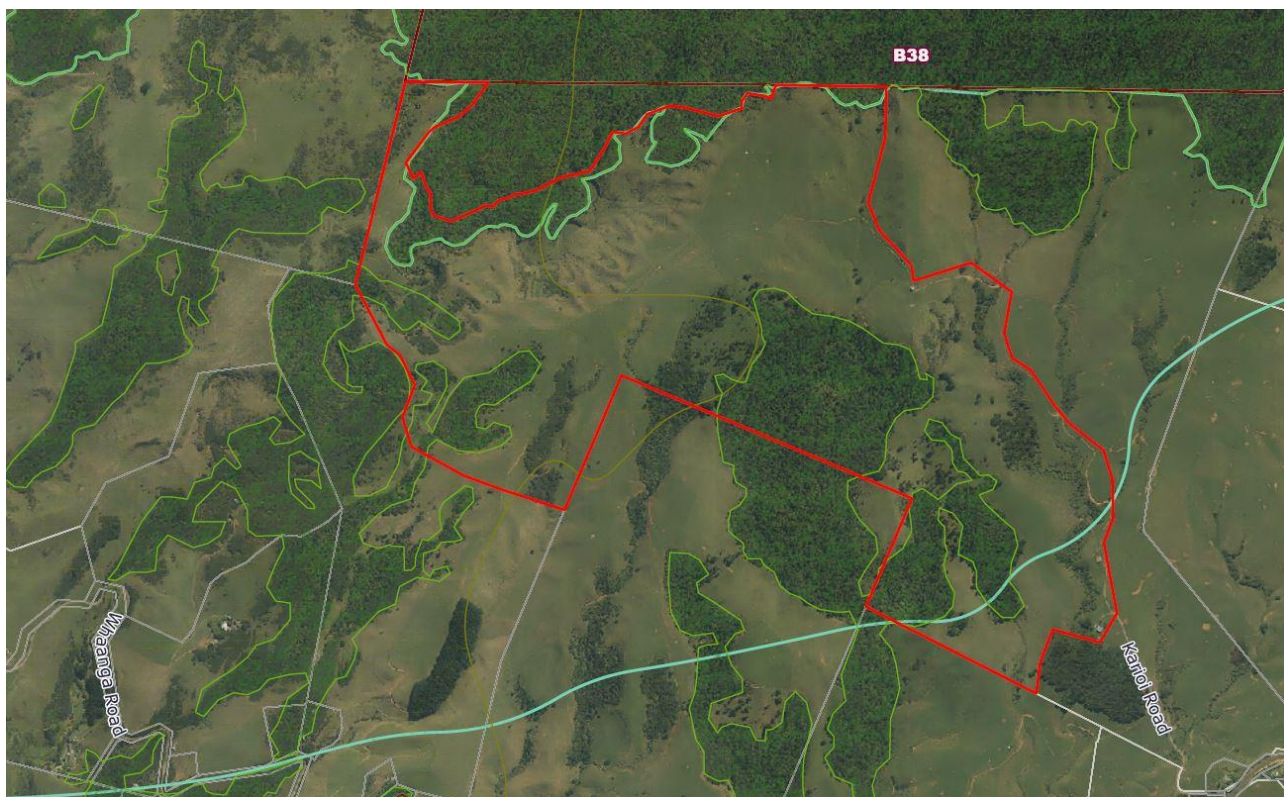
SNA Assessment

The large areas of broadleaved podocarp forest meet several of SNA criteria and merit inclusion within the SNA. While manuka and kanuka are classified respectively as At-Risk and Nationally Vulnerable due to the threat of myrtle rust there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District and grow as a pasture weed in many localities, including within this property. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA.

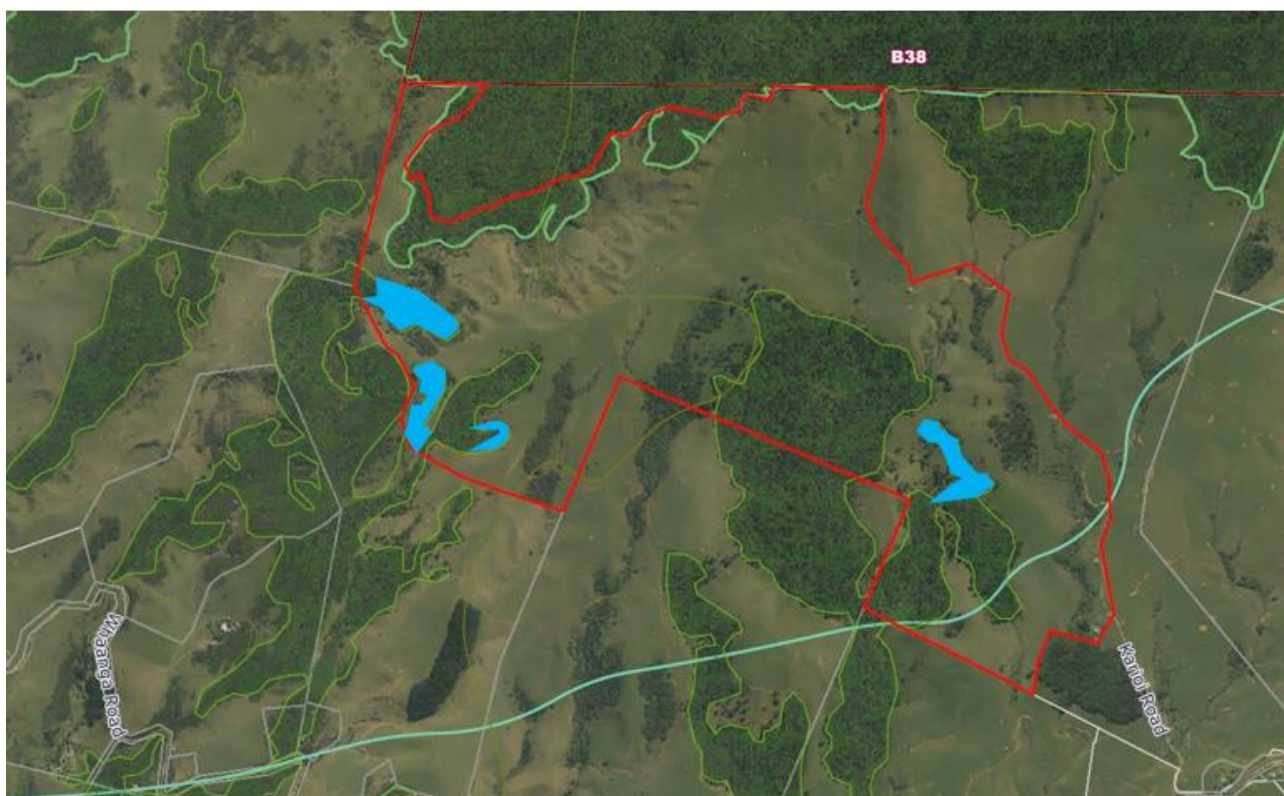
There are also very small degraded fragments of broadleaved podocarp forest that are of low value and difficult to protect and manage. These areas, as well as areas of pasture, that have been included within the SNA, should also be excluded.

SECTION D MAPS AND PHOTOGRAPHS

Property map 65 Karioi Road, (Property boundary in red, SNA boundary in green)



Recommended areas for removal from the SNA (shown in blue)



Photographs

Photo 1: Manuka over pasture in the foreground, broadleaved podocarp forest beyond



Photo 2: Manuka/kanuka scrub closest with broadleaved podocarp forest across the valley



Photo 3: Broadleaved podocarp forest on slopes of Mount Karioi with forest vegetation extending into the edge of property



Photo 4: Broadleaved podocarp forest that has been fenced for approximately 30 years



Photo 5: Sub-canopy of broadleaved podocarp forest



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The large areas of broadleaved podocarp forest within the property meet several of SNA criteria and merit inclusion within the SNA. While manuka and kanuka are classified respectively as At-Risk and Nationally Vulnerable, due to the treat of myrtle rust, there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District and grow as a pasture weed in many localities, including within this property. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA. Recommend adjustment of the SNA boundaries to exclude manuka/kanuka scrub, very small low value areas of forest and pasture.

70 DUNCAN ROAD

Visit date	Owner and property address
10 th June 2020	James Montgomerie 70 Duncan Road, Tamahere.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Mature native trees over pasture.	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

Not currently identified as SNA. Identified as potential SNA by third party submitter.

Vegetation types, key species and species of note

Mature native trees over pasture.

Dominated by kahikatea *Dacrycarpus dacrydioides* with tawa *Beilschmiedia tawa* and hinau *Elaeocarpus dentatus* var. *dentatus* also present

Grazed pasture beneath. Hydrology will have been altered by land drainage and is likely to have changed significantly since the trees were established.

Fauna & habitat types observed

Potential long-tailed bat roosting habitat but no acoustic data

Landowner feedback during site visit

None

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	N/A Pasture beneath.
Stock	1 2 3 4	x Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	Pasture with mature trees
Fencing	1 2 3 4	x No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	Canopy rarely contiguous. Trees scattered through pasture.
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	No mid-tier
Ground cover	1 2 3	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor. <input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	Ground cover pasture.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1 2 3 4	<input type="checkbox"/> Very common, >50% canopy cover. <input type="checkbox"/> Common, 10%-50% canopy cover. <input type="checkbox"/> Occasional, up to 10% canopy cover. x None present.	
Shrub/Tree Weeds	1 2 3 4	<input type="checkbox"/> Very common, <50% understorey or canopy cover. <input type="checkbox"/> Common, 10%-50% understorey or canopy cover. <input type="checkbox"/> Occasional, up to 10% understorey or canopy cover. x None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No. However, long-tailed bats may be present. No data.
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.	No. Trees are a remnant of historic vegetation cover but not a functioning ecosystem.
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
10	<p>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.</p>	No

CRITERIA		ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

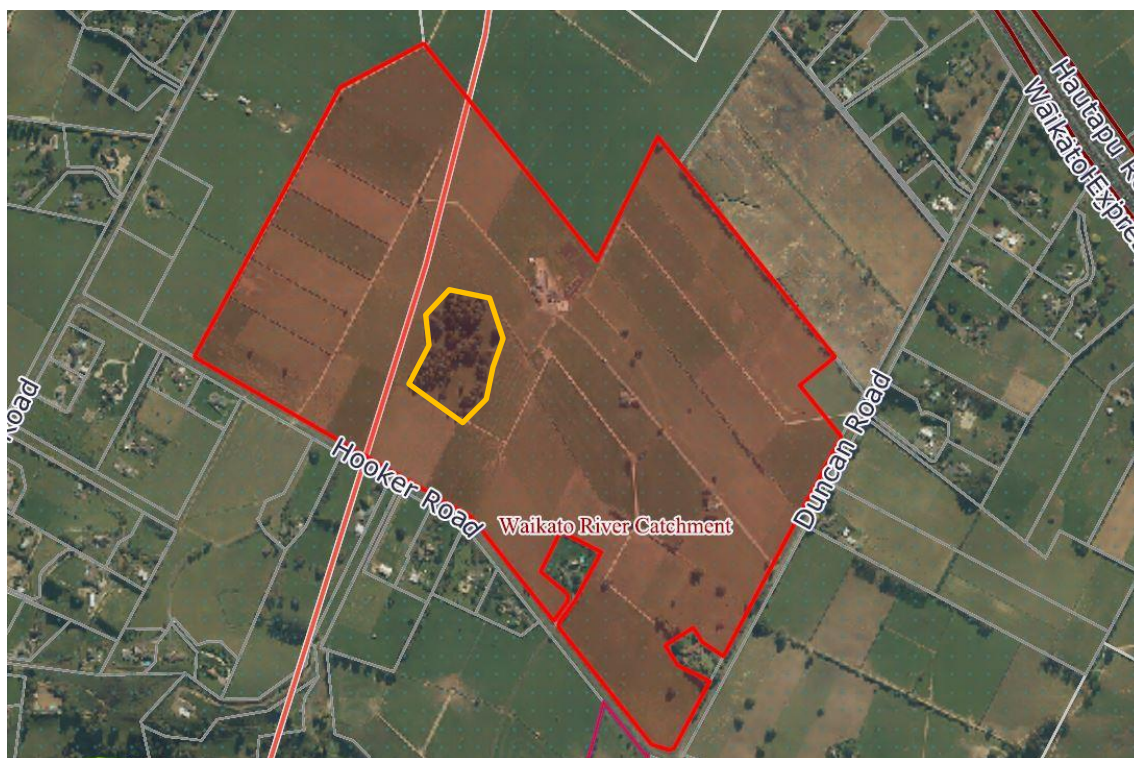
Not currently identified as SNA.

SNA Assessment

Mature native trees are rare in this locality and these are a remnant of historic vegetation cover however this is not a functioning ecosystem. Regular use of the site by long-tailed bats could trigger criterion 3 due to the threatened status of this species. However, there is currently no data for this species at this site. Based on currently available information the site is not recommend inclusion as an SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 70 Duncan Road, (Property boundary in red, potential SNA in orange)



Photographs

Photo 1: Mainly mature kahikatea over pasture.



Photo 2: Mainly mature kahikatea over pasture



Photo 3: Dead kahikatea (left) due to summer drought 2020



SECTION E CONCLUSIONS AND RECOMMENDATIONS

While the site supports mature native trees that are a rare feature in the local landscape this is not a functioning ecosystem and based on currently available information regarding long-tailed bats the site is not recommended for inclusion as an SNA.

72 JAMES ROAD

Visit date	Owner and property address
30 th July 2020	Derek Tate on behalf of D & J Tate 72 James Road, Huntly.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem Types	Existing ecological data
Flooded pasture	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

None

Vegetation types, key species and species of note

Rush pasture. Grazed and rushes (*Juncus spp.*) cut. Vegetation of low value.

Fauna & habitat types observed

25 x pied stilt, black swan, pukeko, paradise shelduck, grey teal and white-faced heron.

Chaffinch, goldfinch.

Landowner feedback during site visit

The pasture is flooded in winter and is grazed during the summer.

Rushes are cut annually.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	N/A
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	Pasture, grazed in summer
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	N/A
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	N/A
Ground cover	1 2 3	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor. <input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	N/A

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1 2 3 4	<input type="checkbox"/> Very common, >50% canopy cover. <input type="checkbox"/> Common, 10%-50% canopy cover. <input type="checkbox"/> Occasional, up to 10% canopy cover. <input type="checkbox"/> None present.	N/A
Shrub/Tree Weeds	1 2 3 4	<input type="checkbox"/> Very common, <50% understorey or canopy cover. <input type="checkbox"/> Common, 10%-50% understorey or canopy cover. <input type="checkbox"/> Occasional, up to 10% understorey or canopy cover. <input type="checkbox"/> None present.	N/A

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No
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.	No
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	Yes. Provides habitat for waterfowl and waders during winter months.
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.	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

SNA boundary extends slightly over an area of dry pasture of low value for wetland birds.

SNA Assessment

SNA provides important winter habitat for waterfowl and waders. The grazing of the pastures and cutting of the rushes helps maintain the shallow open water that attracts the birds. Dry pasture has minimal value for the birds and a slight boundary adjustment is recommended to remove this habitat from the SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 72 James Road, (Property boundary in red, SNA boundary in green)



Recommended area for removal from SNA (shown in blue)



Photographs

Photo 1: Wet pasture



Photo 2: Flooded pasture



Photo 3



Photo 4



Photo 5



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The SNA provides important winter habitat for waterfowl and waders. The grazing of the pastures and cutting of the rushes helps maintain the shallow open water that attracts the birds. It is recommended that the current management regime is maintained.

Dry pasture has minimal value for the birds and a slight boundary adjustment is recommended to remove this habitat from the SNA.

102 HOOKER ROAD

Visit date	Owner and property address
3 rd July 2020	Rob Waddell on behalf of Riverdale Group Ltd 102 Hooker Road, Tamahere
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Regenerating riparian forest	Waikato River corridor and riparian margins are known to be important habitat for long-tailed bats.

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundary within the property is part of the riparian margin of the Waikato River which provides important habitat for long-tailed bats.

Vegetation types, key species and species of note

The riparian corridor of the river supports a variety of native tree and shrubs species including rewarewa (*Knightia excelsa*), kanuka (*Kunzea robusta*), mahoe (*Melicytus ramiflorus*), rangiora (*Brachyglottis repanda*), kawakawa (*Piper excelsum*), hangehange (*Geniostoma ligustrifolium*), myrsine karamu (*Coproma robusta*), pate (*Schefflera digitate*), mamaku (*Cyathea medullaris*), silverfern (*Cyathea dealbata*) and wheki (*Dicksonia squarrosa*).

The property owner has also planted sections of the riparian corridor with native species to extend the width of the riparian margin where it is currently narrow. Species include flax (*Phormium tenax*), wineberry (*Aristotelia serrata*) and karamu.

Weed species include *Tradescantia fluminensis*.

Fauna & habitat types observed

Magpie and silvereye.

Landowner feedback during site visit

Property owner indicated that in the past the site had been assessed to determine if it was an SNA and was rejected by Council. It was subsequently identified as a potential SNA by WRC via aerial mapping.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	Variable. Very clear of ground weeds in places.
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. x No damage.	
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. x Secure, intact fencing around whole area.	Stock excluded from river area.
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	Minimal native canopy.
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	Native mid-tier canopy with some weed species.
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent of uncommon. Leaf litter on remainder of forest floor.	Variable.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	
	2	<input type="checkbox"/> Common, 10%-50% canopy cover.	
	3	x Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/> None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	
	2	x Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Provides habitat for long-tailed bats.
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.	Yes. Sections of the regenerating forest are an example of a scarce habitat in the Ecological District.

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No.
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.	No.
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No.
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.	No.

CRITERIA	ASSESSMENT
<p>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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.</p>	<p>Yes. Waikato River is a corridor of high importance as long-tailed bat habitat.</p>

Boundary Assessment

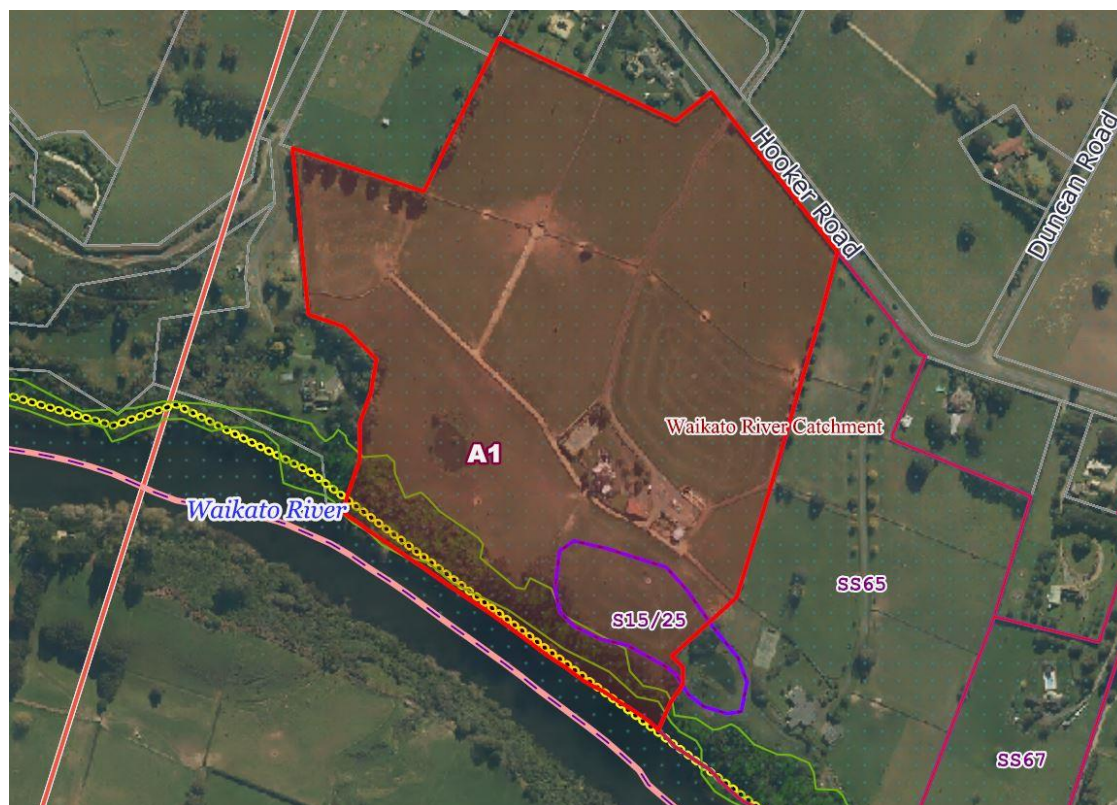
SNA boundary follows riparian margin of the river and is appropriately positioned.

SNA Assessment

The SNA meets several criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat. The vegetation while of variable quality is representative of a scarce resource in central Waikato. The property owner is also undertaking enhancement planting which will mean that the value of the vegetation will continue to develop.

SECTION D MAPS AND PHOTOGRAPHS

Property map 102 Hooker Road, (Property boundary in red, SNA boundary in green)



Photographs

Photo 1: Recent restoration planting



Photo 2: Native scrub on steep riparian bank.



Photo 3: Regenerating native forest



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The SNA meets several criteria including criterion 3 due to the presence of long-tailed bats for which this section of the Waikato River and others provide critical habitat. The vegetation while of variable quality is representative of a scarce resource in central Waikato. The property owner is also undertaking enhancement planting which will mean that the value of the vegetation will continue to develop. The boundary of the SNA follows the riparian margin of the river and is appropriately positioned. Recommend maintaining SNA boundary as indicated.

117 WINDMILL ROAD

Visit date	Owner and property address
3 rd June 2020	Grace M Wilcock 117 Windmill Road, RD3, Hamilton
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Gully	Part of a gully system that is known to provide important habitat for long-tailed bats.

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA follows the gully boundary within the property.

Vegetation types, key species and species of note

The gully within this property varies considerably in character. Some sections are grazed grassland a few scattered mature trees, other sections have planted mature exotic trees. Some sections have native restoration planting and others support more typical gully vegetation comprising native and exotic tree and shrub species, with abundant weed species.

For the most part the tops of the gully slopes support mature exotic trees. Species of exotic trees include poplars, gum and redwood.

Native species recorded on the gully slopes and at the base of the gully included kahikatea (*Dacrycarpus dacrydioides*) cabbage trees (*Cordyline australis*), mahoe (*Melicytus ramiflorus*), fuchsia (*Fuchsia excorticata*), karaka (*Corynocarpus laevigatus*), silverfern (*Cyathea dealbata*) and wheki (*Dicksonia squarrosa*).

Weed species present included blackberry (*Rubus fruticosus*), Chinese privet (*Ligustrum sinense*) and *Tradescantia fluminesis*.

Species within wetland areas supported creeping buttercup (*Ranunculus repens*) and cutty grass (*Carex geminata*).

Fauna & habitat types observed

Tui, chaffinch Song thrush, tui, fantail and silvereye.

Long-tailed bat are known to inhabit the gully.

Landowner feedback during site visit

The property owner discussed management of the various sections of the gully during the site visit. Considered that if the gully was to be designated as SNA then all the gully should be SNA.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input checked="" type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	In some localities.
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	Only grassland sections of the gully.
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input checked="" type="checkbox"/> Secure, intact fencing around whole area.	Where not grazed.
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	No mature native canopy.
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	Mix of exotic and native species.
Ground cover	1 2	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	Very variable.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	In some sections only.
	2	x Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/> None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	In some sections only.
	2	<input type="checkbox"/> Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Provides habitat for long-tailed bats.
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.	Yes in some parts only. Wetland habitat present in base of the gully.

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	Yes in some parts only. Wetland habitat present in the base of the gully.
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.	No.
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.	No.
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No.
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.	No.

CRITERIA	ASSESSMENT
<p>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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.</p>	<p>Yes. Gully is part of a corridor of high importance as long-tailed bat habitat.</p>

Boundary Assessment

SNA boundary follows the gully edge and is appropriately positioned.

SNA Assessment

The SNA meets several criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat. While some sections of the gully are grazed as pasture they are still part of a critical habitat for the bats and merit retention within the SNA to maintain continuity of protection of the corridor. This is consistent with most other sections of this gully system.

SECTION D MAPS AND PHOTOGRAPHS

Property map 117 Windmill Road, (Property boundary in red, SNA boundary in green)



Photographs

Photo 1: Under canopy along section of gully slope



Photo 2: Grazed section of the gully



Photo 3: Section of gully planted with exotic trees



Photo 4: Gully slope with restoration planting



Photo 5: Low lying wetter part of the gully



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The SNA meets several criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat. While some sections of the gully are grazed as pasture they are still part of a critical habitat for the bats and merit retention within the SNA to maintain continuity of protection of the corridor. This is consistent with most other sections of this gully system. The boundary of the SNA within the property follows the gully edge and is appropriately positioned. Recommend maintaining SNA boundary as indicated.

126 B WOODCOCK ROAD

Visit date	Owner and property address
10 th June 2020	Colette Hanrahan 126B Woodcock Road, Tamahere
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Gully	Part of a gully system that is known to provide important habitat for long-tailed bats.

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundary follows the gully edge.

Vegetation types, key species and species of note

Mature pines dominate the gully slope vegetation along sections of the property and Tasmanian blackwood (*Acacia melanoxylon*) in other localities. Willow species, crack willow (*Salix fragilis*) and grey willow (*Salix cinerea*), dominate the vegetation in the base of the gully indicating wetland conditions. Exotic vegetation dominates this part of the gully system although the property owner is actively engaged in restoration. Under the exotic canopy native species are present including mahoe (*Melicytus ramiflorus*), cabbage tree (*Cordyline australis*), karamu (*Coprosma robusta*), pate (*Lonicera japonica*), wheki (*Dicksonia squarrosa*) and the native sedge cutty grass (*Carex geminata*) in wetter locations.

Weed species include abundant blackberry (*Rubus fruticosus*) and Japanese honeysuckle (*Lonicera japonica*) on the gully slopes, as well as Chinese privet (*Ligustrum sinense*). Jasmine is locally abundant along a section of the gully slope.

Areas along the gully slopes have been cleared by the property owner for planting.

Fauna & habitat types observed

Tui, pukeko, fantail, kingfisher, chaffinch, myna and magpie observed during site visit.

Long-tailed bat are known to inhabit the gully.

Landowner feedback during site visit

Property owner is actively engaged in weeding and planting the gully.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input checked="" type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input checked="" type="checkbox"/> No damage.	
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input checked="" type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	No native mature canopy.
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	Dominated by exotic species.
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	Ground cover highly variable.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	
	2	x Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/> None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	
	2	x Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Provides habitat for long-tailed bats.
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.	Yes. Wetland habitat present in base of the gully.

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	Yes. Wetland habitat present in the base of the gully.
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.	No.
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.	No.
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No.
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.	No.

CRITERIA	ASSESSMENT
<p>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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.</p>	<p>Yes. Gully is part of a corridor of high importance as long-tailed bat habitat.</p>

Boundary Assessment

SNA boundary follows gully edge and is appropriately positioned.

SNA Assessment

The SNA meets several criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat.

SECTION D MAPS AND PHOTOGRAPHS

Property map 126B Woodcock Road, (Property boundary in red, SNA boundary in green)



Photographs

Photo 1: View of the base of the gully



Photo 2: Pines along the gully slope

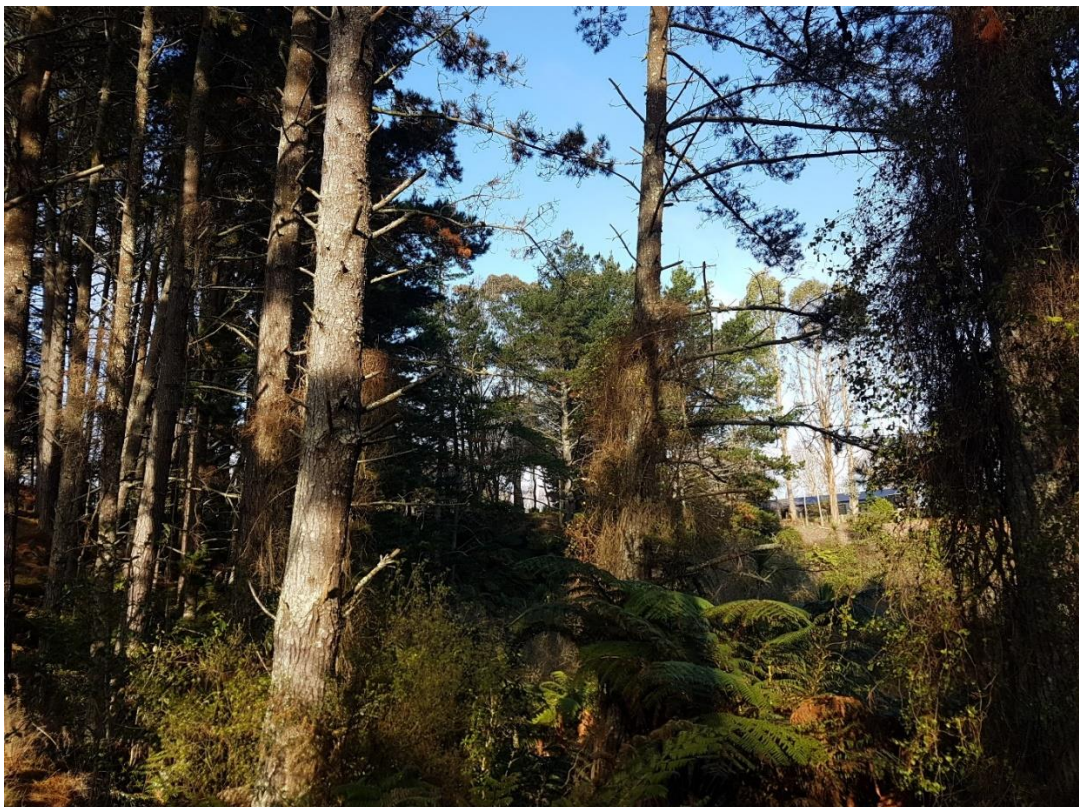


Photo 3: Areas of gully slope cleared by the property owner for planting



Photo 4: Gully slope – gully base transition



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The SNA meets several Section 11A criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat. The boundary of the SNA follows the gully edge and is appropriately positioned. Recommend maintaining SNA boundary as indicated

126C WOODCOCK ROAD

Visit date	Owner and property address
10 th June 2020	Mark & Diane Emms 126C Woodcock Road, Tamahere
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Gully Wetland	Part of a gully system that is known to provide important habitat for long-tailed bats.

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

The SNA boundary has been amended from notified version of the Planning Maps to follow gully edge.

Vegetation types, key species and species of note

Tasmanian blackwood (*Acacia melanoxylon*) and 2-3 redwoods (*Sequoia sempervirens*) planted along the top of the gully slope.

There is no mature canopy over the gully slope or gully floor. Mid-tier vegetation on the gully slope includes a mixture of native and exotic weed species including mahoe (*Melicactus ramiflorus*), tree privet (*Ligustrum lucidum*) and woolly nightshade (*Solanum mauritianum*). There is also abundant Japanese honeysuckle (*Lonicera japonica*).

Grey willow (*Salix cinerea*) is abundant in the base of the gully indicating wetland conditions. Exotic vegetation dominates this part of the gully system although the property owner is actively engaged in restoration. Within the exotic canopy native species are present including mahoe (*Melicytus ramiflorus*), cabbage tree (*Cordyline australis*), karamu (*Coprosma robusta*), pate (*Lonicera japonica*), wheki (*Dicksonia squarrosa*), mamaku (*Cyathea medullaris*) and the native

Fauna & habitat types observed

Blackbird, pukeko, kingfisher and fantail.

Long-tailed bat are known to inhabit the gully.

Landowner feedback during site visit

Property owner is engaged in gully restoration.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input checked="" type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input checked="" type="checkbox"/> No damage.	
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input checked="" type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	No native mature canopy.
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	Dominated by exotic species.
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall)	Ground cover highly variable.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
		<input type="checkbox"/> absent of uncommon. Leaf litter on remainder of forest floor.	
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	
	2	x Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/> None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	
	2	x Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Provides habitat for long-tailed bats.

CRITERIA	ASSESSMENT
<p>4</p> <p>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.</p>	<p>Yes. Wetland habitat present in base of the gully.</p>
<p>5</p> <p>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.</p>	<p>No</p>
<p>6</p> <p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	<p>Yes. Wetland habitat present in the base of the gully.</p>
<p>7</p> <p>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.</p>	<p>No.</p>
<p>8</p> <p>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.</p>	<p>No.</p>
<p>9</p> <p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	<p>No.</p>

CRITERIA		ASSESSMENT
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.	No.
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	Yes. Gully is part of a corridor of high importance as long-tailed bat habitat.

Boundary Assessment

SNA boundary now follows the gully edge and is appropriately positioned.

SNA Assessment

The SNA meets several criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat.

SECTION D MAPS AND PHOTOGRAPHS

Property map 126C Woodcock Road, (Property boundary in red, SNA boundary in green)



Photographs

Photo 1: View down gully slope and across gully floor.



Photo 2: Cabbage tree on gully slope and view across gully floor



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The SNA meets several Section 11A criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat. The boundary of the SNA now follows the gully edge, adjusted in response to the submission received, and is appropriately positioned. Recommend maintaining SNA boundary as indicated.

140B WOODCOCK ROAD

Visit date	Owner and property address
3 rd June 2020	Jon Harris 140B Woodcock Road, Tamahere.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Gully	Part of a gully system that is known to provide important habitat for long-tailed bats.

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

The SNA boundary follows the gully edge.

Vegetation types, key species and species of note

There is no mature canopy over the gully slope or gully floor. Mature gum trees occur at the very top of the gully slope. Mid-tier vegetation on the gully slope includes a mixture of planted native and weed species. Native species include kauri (*Agatha australis*), rimu (*Dacrydium cupressinum*), totara (*Podocarpus totara*), cabbage trees (*Cordyline australis*), kowhai (*Sophora sp.*) and mahoe (*Melicytus ramiflorus*). Locally there is also abundant Japanese honeysuckle (*Lonicera japonica*) and *Tradescantia fluminesis*, both weed species.

Grey willow (*Salix cinerea*) occurs on the gully floor indicating wetland conditions. Exotic vegetation dominates this part of the gully system although the clearance of willow and weed species within this property is shifting the balance to a native dominated system. Native species occurring on the gully floor include kahikatea (*Dacrycarpus dacrydioides*), mahoe, cabbage tree, karamu (*Coprosma robusta*), pate (*Schefflera digitata*), wheki (*Dicksonia squarrosa*), mamaku (*Cyathea medullaris*). The native fern kiokio (*Parablechnum novae-zelandiae*) occurs frequently in the ground layer.

Fauna & habitat types observed

Harrier, fantail, silvereye, tui, song thrush and myna.

Long-tailed bat are known to inhabit the gully.

Landowner feedback during site visit

Property owner is actively working to enhance the gully through weed control. Has undertaken extensive willow and vine clearance. Gully slope have been cleared and restoration is in progress.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input checked="" type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input checked="" type="checkbox"/> No damage.	
Fencing	1 2 3 4	<input checked="" type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	No stock.
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	No mature native canopy.
Mid-tier	1 2 3	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	Mix of native and exotic species.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
	4	<input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	Ground cover highly variable.
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf letter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	
	2	x Common, 10%50% canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/> None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	
	2	x Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No

CRITERIA		ASSESSMENT
3	<p>It is vegetation or habitat that is currently habitat for indigenous species or associations of indigenous species that are:</p> <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. 	Yes. Provides habitat for long-tailed bats.
4	<p>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.</p>	Yes. Wetland habitat present in base of the gully.
5	<p>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.</p>	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	Yes. Wetland habitat present in the base of the gully.
7	<p>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.</p>	No.
8	<p>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.</p>	No.

CRITERIA		ASSESSMENT
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No. Value still developing but likely to meet this criterion in time if restoration continues.
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.	No.
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	Yes. Gully is part of a corridor of high importance as long-tailed bat habitat.

Boundary Assessment

SNA boundary follows the gully edge and is appropriately positioned.

SNA Assessment

The SNA meets several criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat.

SECTION D MAPS AND PHOTOGRAPHS

Property map 140B Woodcock Road, (Property boundary in red, SNA boundary in green)



Photographs

Photo 1: Vegetation in the base of the gully



Photo 2: Gully slope vegetation



Photo 3: Ground cover weed *Tradescantia fluminensis* in the gully slope



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The SNA meets several Section 11A criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat. The boundary of the SNA follows the gully edge and is appropriately positioned. Recommend maintaining SNA boundary as indicated.

142 WOODCOCK ROAD

Visit date	Owner and property address
3 rd June 2020	Roderick MacRae 142 Woodcock Road, Tamahere.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Gully	Part of a gully system that is known to provide important habitat for long-tailed bats.

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundary follows the edge of the gully.

Vegetation types, key species and species of note

There is little mature canopy over the gully slope or gully floor. This section of the gully has had extensive weed clearance and native planting. Native species occurring on the gully slopes include kauri (*Agatha australis*), rimu (*Dacrydium cupressinum*), totara (*Podocarpus totara*), cabbage trees (*Cordyline australis*) and mahoe (*Melicytus ramiflorus*). Weed species include Japanese honeysuckle (*Lonicera japonica*), tree privet (*Ligustrum lucidum*) and Chinese privet (*Ligustrum sinense*).

Parts of the gully floor still support willow forest with crack will (*Salix fragilis*) and grey willow (*Salix cinerea*) occurring. However, there has been extensive willow clearance and there is now an abundance of tree fern and areas planted with native wetland species. Native species occurring on the gully floor include mahoe, cabbage tree, karamu (*Coproma robusta*), pate (*Schefflera digitate*), wheki (*Dicksonia squarrosa*) and mamaku (*Cyathea medullaris*). The native fern kiokio (*Parablechnum novae-zelandiae*) is present and there are various *Carex* spp.

Fauna & habitat types observed

Song thrush, tui, fantail, silvereye, pheasant and harrier.

Long-tailed bat are known to inhabit the gully.

Landowner feedback during site visit

Property owner is engaged in gully restoration including pest control weed and willow clearance and native planting.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input checked="" type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input checked="" type="checkbox"/> No damage.	
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input checked="" type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	No mature native canopy.
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	Mix of native and exotic species with a dominance of native species.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	Ground cover highly variable.
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/> No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/> Very common, >50% canopy cover.	
	2	x Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/> None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/> Very common, <50% understorey or canopy cover.	
	2	x Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/> Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/> None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Provides habitat for long-tailed bats.

CRITERIA		ASSESSMENT
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.	Yes. Wetland habitat present in base of the gully.
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	Yes. Wetland habitat present in the base of the gully.
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.	No.
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.	No.
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No. Value of restored vegetation still developing but likely to meet this criterion in time if restoration continues.

CRITERIA		ASSESSMENT
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.	No.
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	Yes. Gully is part of a corridor of high importance as long-tailed bat habitat.

Boundary Assessment

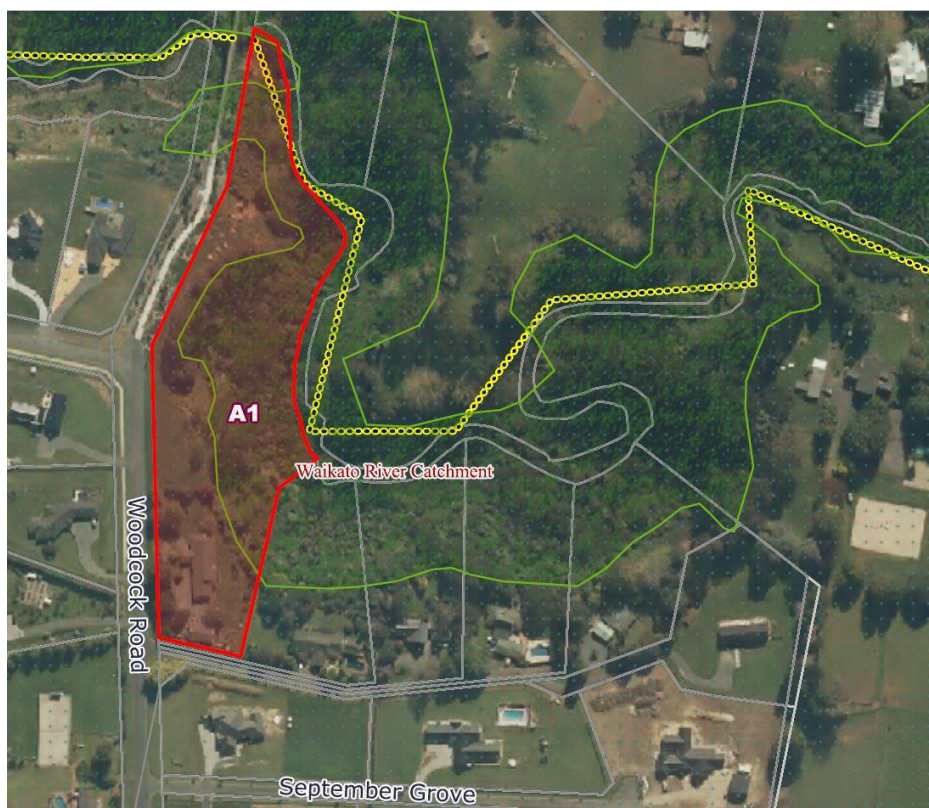
SNA boundary follows the gully edge and is appropriately positioned.

SNA Assessment

The SNA meets several criteria including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat.

SECTION D MAPS AND PHOTOGRAPHS

Property map 142 Woodcock Road, (Property boundary in red, SNA boundary in green)



Photographs

Photo 1: View of gully slope



Photo 2: View of base of the gully mix of native vegetation and willow forest



Photo 3: View of base of the gully – restoration planting



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The SNA meets several Section 11A criteria, including criterion 3 due to the presence of long-tailed bats for which this locality and the other parts of the gully system to the south of Hamilton provide critical habitat. The boundary of the SNA follows the gully edge and is appropriately positioned. Recommend maintaining SNA boundary as indicated.

154 ORINI ROAD

Visit date	Owner and property address
28 th July 2020	Anthony Hutt 154 Orini Road, Taupiri.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Wetland along riparian corridor Pasture	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

The SNA covers riparian wetland along the Whangamaire Stream but also pasture and a workshop and garden within the property.

Vegetation types, key species and species of note

The wetland vegetation consists predominantly of willow species (*Salix fragilis* and *Salix cinerea*). Indigenous elements of the vegetation include cabbage tree (*Cordyline australis*) with various native sedge and rush species beneath including *Carex virgata*, *Carex secta* and *Carex geminata*. Some parts of the wetland are very open and dominated by reed sweetgrass (*Glyceria maxima*). There are also small areas of open water supporting various sedge and rush species and fallen logs (habitat for black mudfish).

Fauna & habitat types observed

Pukeko, kingfisher and magpie.

Long-tailed bats known to inhabit this stream corridor.

Black mudfish known to occur in this stream system but not confirm at this locality, although suitable habitat exists.

Landowner feedback during site visit

Concerned that the SNA takes too much of the property including areas that are not ecologically important.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input checked="" type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	Except areas where reed sweetgrass dominates
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input checked="" type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input checked="" type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	N/A
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	

	2	<input type="checkbox"/>	Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	x	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	x	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	x	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Stream corridor known to provide habitat for long-tailed bats.
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.	Yes. Wetland.

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	Yes.
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA		ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	Yes. Wetland sequence along riparian corridor. Habitat for long-tailed bats.

Boundary Assessment

The SNA encroaches on areas of pasture, garden and a workshop. These areas should be removed from the SNA.

SNA Assessment

The wetland areas within the SNA meet several SNA criteria. However, the pasture areas, garden and workshop should be excluded.

SECTION D MAPS AND PHOTOGRAPHS

Property map 154 Orini Road, (Property boundary in red, SNA boundary in green)



Recommended areas for removal from the SNA (shown in blue)



Photographs

Photo 1: Wetland with willow canopy over various sedge and rush species.



Photo 2: Area of open water with native sedge and fallen logs that can provide suitable habitat for black mudfish.



Photo 3: Fence line along SNA



Photo 4: Reed sweetgrass dominated area within the SNA.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The wetland areas within the SNA meet several SNA criteria. However, the pasture areas, garden and workshop should be excluded. Recommend removal of these areas from the SNA.

156 PADDY ROAD

Visit date	Owner and property address
29 th July 2020	Paul Hoogeveen 156 Paddy Road, Te Kauwhata.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Willow over reed sweetgrass	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

A small area of the SNA encroaches on to this property.

Vegetation types, key species and species of note

Almost exclusively exotic vegetation i.e. willow (*Salix spp.*) over reed sweetgrass (*Glyceria maxima*).
Very occasional native sedge – *Carex virgata*.

No surface water and dry underfoot despite being winter.

Fauna & habitat types observed

No fauna observed.

Landowner feedback during site visit

The wetland no longer floods in winter since operation in recent years of pumping scheme installed by Waikato Regional Council.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	x <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very common, cover >50% ground area. Common, 10%-50% ground area. Occasional, up to 10% ground area. None present.	Reed sweetgrass.
Stock	1 2 3 4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> x Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. Sign uncommon. Sign is often old. Only near edges. No damage.	
Fencing	1 2 3 4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> x No fencing. Some fencing, for example, one side, or fence poorly maintained with large breaks. Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. Foliage sparse in some areas, canopy holes uncommon. Some dieback. Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A - Willows
Mid-tier	1 2 3 4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. Abundant browse palatable species and other species present.	N/A - Willows
Ground cover	1 2 3	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor. Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	Reed sweetgrass.

	4	x	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	x	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No
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.	No
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No. Almost exclusively exotic vegetation and no native fauna present. Very dry since pump scheme became operational.
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.	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA		ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

Remove SNA from property.

SNA Assessment

The SNA support almost no native vegetation or native fauna. No longer wet even in winter due to pump scheme. Recommend removal from SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 156 Paddy Road, (Property boundary in **red**, SNA boundary in **green**)



Recommended area for removal from SNA (shown in blue)



Photographs

Photo 1: Edge of SNA showing dominance of willows.



Photo 2: Characteristic vegetation – willow over reed sweetgrass.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

Damp ecosystem but no longer wet in winter. Almost exclusively dominated by exotic plants. Recommend removal from SNA.

185B HAKARIMATA ROAD

Visit date	Owner and property address
30 th July 2020	Derek Tate on behalf of D & J Tate 185B Hakarimata Road, Ngaruwahia
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Kanuka/manuka scrub	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

The SNA on this property is part of a very large SNA that extends over the Hakarimata Scenic Reserve. Indigenous forest and scrub vegetation of varying quality extends down the slopes of the Hakarimata Range into private properties on the edge of the range.

Vegetation types, key species and species of note

Based on a review of aerial images it is obvious that the lower slopes within the property at 185B Hakarimata Road have been subjected to significant change in vegetation cover over the past few decades. There are numerous tracks through this area and two pine plantations. Much of the vegetation is regenerating manuka/kanuka scrub over pasture. There may be very small pockets of more diverse vegetation but the vegetation on the lower slope is the result of significant modification and land use change.

The site visit confirmed that vegetation on the lower slopes is indeed modified with pine plantation and manuka/kanuka scrub regrowth over pasture. These areas are dominated by kanuka (*Kunzea*

robusta) and manuka (*Leptospermum scoparium*) and have low species diversity. Gorse (*Ulex europaeus*) occurs frequently where there is sufficient light.

The pine plantations and most of the manuka/kanuka scrub appears to have been excluded from the SNA. However, the SNA boundary through property forms an irregular line and in places almost severs the property. This appears to have been done to encapsulate slightly higher value vegetation, however it is not clear what the original basis for the choice line across the property was.

Fauna & habitat types observed

Fantail, kingfisher, pheasant, chaffinch and blackbird.

Landowner feedback during site visit

The SNA boundary potentially places restrictions on the lower slopes of the property that have traditionally been managed as productive land including forestry.

Only assesses vegetation the lower slopes within the property

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input checked="" type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	Grasses present
Stock	1 2 3 4	<input checked="" type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	Only within forestry plantation
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input checked="" type="checkbox"/> Secure, intact fencing around whole area.	Areas of kanuka/manuka scrub fenced.
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	N/A
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall)	N/A

	2	<input type="checkbox"/>	absent of uncommon. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/>	Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
		<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	x	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	Gorse
	2	x	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Kanuka classified as Nationally Vulnerable Manuka classified as At Risk
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.	No. Disturbed areas of vegetation and more recent scrub communities do not meet this criterion. However, vegetation on the upper slopes is likely to meet criterion.

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	N/A
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No. Disturbed areas of vegetation and more recent scrub communities do not meet this criterion. However, vegetation on the upper slopes is likely to meet criterion.
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.	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

The original proposed boundary of the SNA has excluded pine plantation and most of the kanuka/manuka scrub on the lower slope of the property. However, the irregular line of the SNA potentially places management and operational challenges on the property owner. It is not clear what the original basis for the choice line across the property was although it may have been based on the presence of slightly higher quality vegetation.

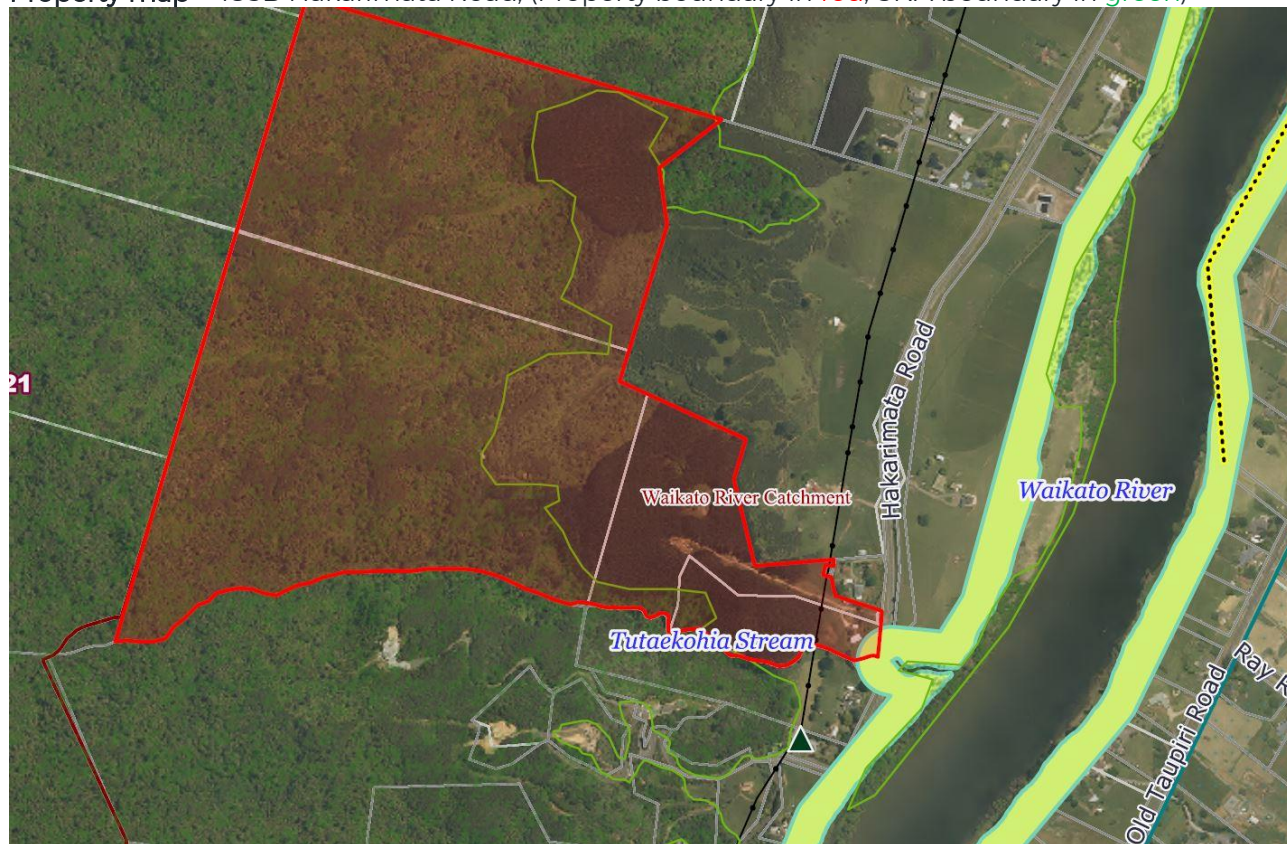
SNA Assessment

The kanuka/manuka scrub on the lower slopes of the property does not trigger any of the SNA criteria except criterion 3. While kanuka and manuka are classified as At-Risk and Nationally Vulnerable respectively due to the threat from myrtle rust, there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA.

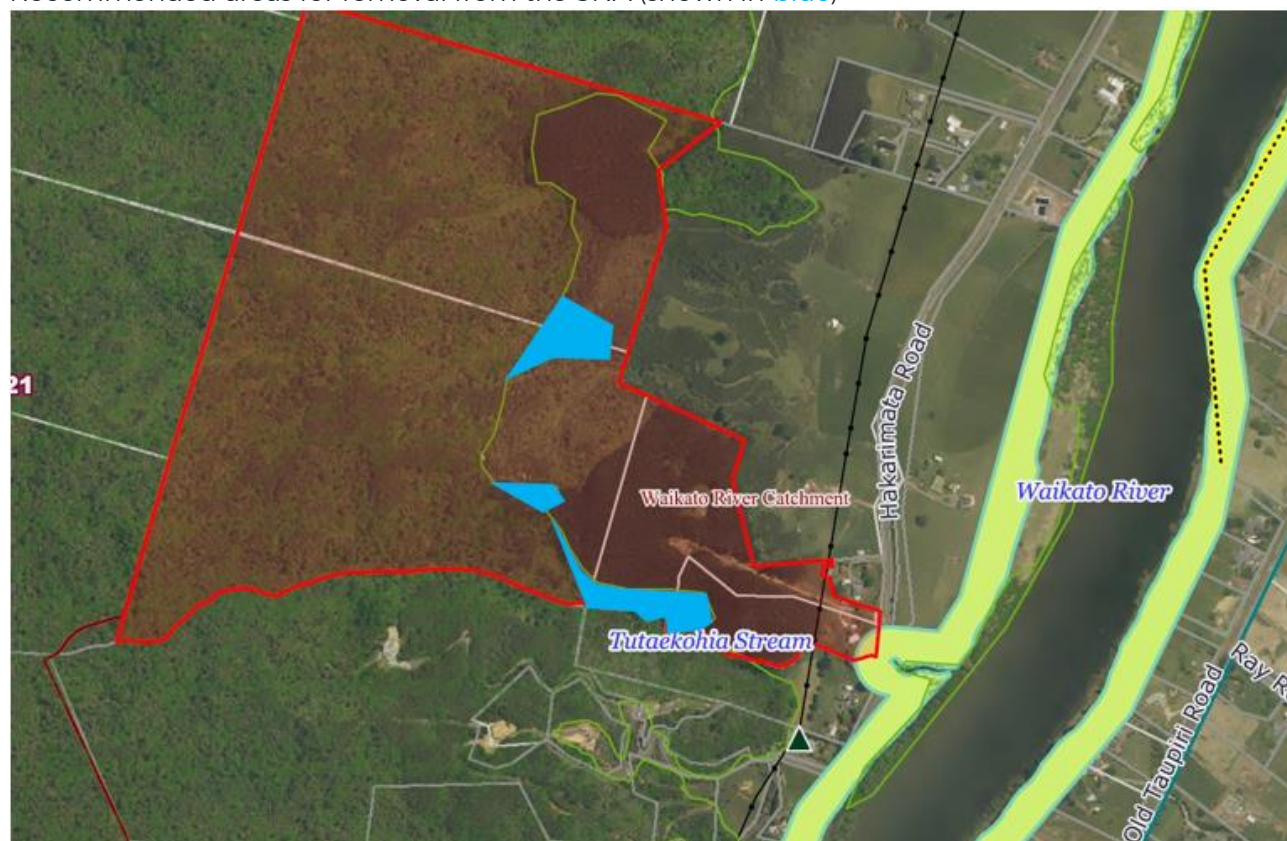
It is possible that some of the areas on the edge of the SNA contain a more diverse range of species than the kanuka/manuka scrub. However, these areas will have been impacted by land-use changes and will be of lower quality and value than vegetation higher up the slope. Based on a review of aerial photographs and the site visit, it is considered reasonable to simplify the SNA boundary in this locality to create a more manageable boundary within the property.

SECTION D MAPS AND PHOTOGRAPHS

Property map 185B Hakarimata Road, (Property boundary in red, SNA boundary in green)



Recommended areas for removal from the SNA (shown in blue)



Photographs

Photo 1: Kanuka and gorse over pasture.



Photo 2: Kunuka scrub

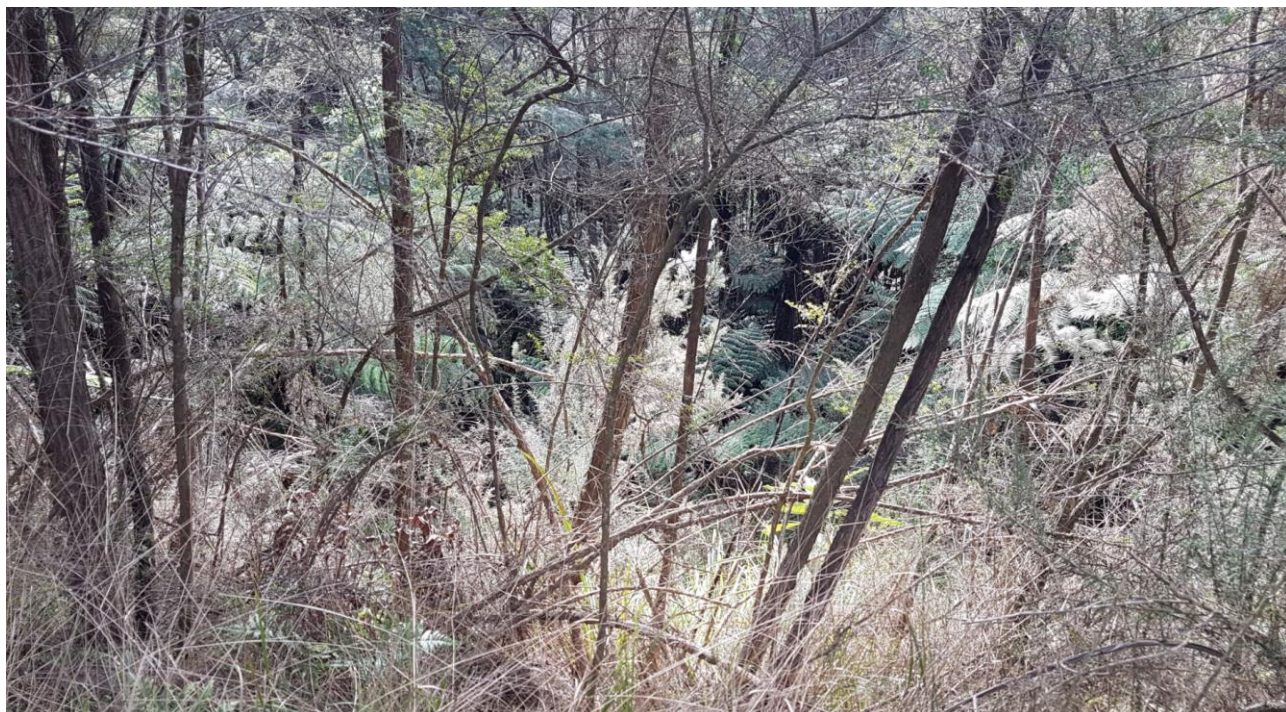


Photo 3: Pines, gorse and mamaku.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The original proposed boundary of the SNA has excluded pine plantation and most of the kanuka/manuka scrub on the lower slope of the property. However, the irregular line of the SNA potentially places management and operational challenges on the property owner. It is not clear what the original basis for the choice line across the property was although it may have been based on the presence of slightly higher quality vegetation.

It is possible that some of the areas on the edge of the SNA contain a more diverse range of species than the kanuka/manuka scrub. However, these areas will have been impacted by land-use changes and will be of lower quality and value than vegetation higher up the slope. Based on a review of aerial photographs and the site visit, it is considered reasonable to simplify the SNA boundary in this locality to create a more manageable boundary within the property.

260 RALPH ROAD

Visit date	Owner and property address
28 th July 2020	Marcus Ralph for Ohinewai Heights Ltd 260 Ralph Road, Huntly.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Willow over pasture.	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA covers a patch of willows within pasture.

Vegetation types, key species and species of note

Willow over pasture (Crack willow *Salix fragilis* and grey willow *Salix cinerea*). Ryegrass (*Lolium perenne*) is abundant with Yorkshire fog (*Holcus lanatus*) also present. Patches of blackberry are also present and a few

Almost no surface water present. Not a wetland habitat.

Fauna & habitat types observed

No wetland fauna observed.

Landowner feedback during site visit

The area is grazed all year.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	N/A
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	Pasture.
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	N/A
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	N/A
Ground cover	1 2	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	N/A

	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No
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.	No

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No – pasture dominated by pasture grasses and exotic shrubs.
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

None of the vegetation and habitats meet the criteria in Section 11A of the WRPS.

SNA Assessment

None of the vegetation or habitat meet the criteria in Section 11A of the WRPS. Recommend removal of SNA from the property.

SECTION D MAPS AND PHOTOGRAPHS

Property map 260 Ralph Road, (Property boundary in red, SNA boundary in green)



Recommended area for removal from the SNA (shown in blue)



Photographs

Photo 1: SNA in the center of photo i.e. area of willow scrub.



Photo 2: Willow over pasture.



Photo 3: Willow over pasture with blackberry



SECTION E CONCLUSIONS AND RECOMMENDATIONS

Willow over pasture. Not wetland habitat. None of the vegetation or habitat meet the criteria in Section 11A of the WRPS. Recommend removal of SNA from the property.

274 OKETE ROAD

Visit date	Owner and property address
1 st July 2020	Norris Peart 274 Okete Road, Raglan.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Totara dominated forest Totara kanuka rewarewa forest	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment note

The property includes 2 areas of SNA. Area 1 is a totara dominated forest extend for over 1.2km along a peninsular.

Area 2 is a strip of indigenous forest that extends along a 600m section of coastline. The SNA includes an area of mature native trees over pasture.

Vegetation types, key species and species of note

Area 1 is a totara dominated forest within which there are patches of well-established pasture within the first 800m of the peninsular. Stock have periodic access to this this section of forest and the associated pasture. The canopy is dominated by totara (*Podocarpus totara*) with species in the sub-canopy including kawakawa (*Piper excelsum*), hangehange (*Geniostoma ligustrifolium*), karaka (*Corynocarpus laevigatus*), (mahoe (*Melicytus ramiflorus*), akiraho (*Olearia paniculata*), kowhai (*Sophora microphylla*), silverfern (*Cyathea dealbata*) and wheki (*Dicksonia squarrosa*). The abundance of mid-tier and ground cover species is variable a result of the impact of grazing.

The most northerly 600m of the peninsular has been fenced from stock for nearly 50 years with only occasional incursions of stock. As a result, there is a well-developed mid-tier and ground layer. The benefits of stock exclusion can be clearly observed. This area supports all the species listed above as well as additional species including kanuka (*Kunzea robusta*), lancewood (*Pseudopanax crassifolius*), *Olearea albida*, *Dodonea viscosa*, rewarewa (*Knightia excelsa*) and *Coprosma areolata*. There are a wide variety of fern species including *Adiantum cunninghamii* and *Doodia australis* and sedges such as *Machaerina sinclairii*. The canopy is still dominated by totara but there are other species in the canopy too such as rewarewa and kowhai. The area is relatively weed free however there are small patches of gorse (*Ulex europaeus*).

Area 2 includes a fenced area of forest along the coastal edge and mature native trees within pasture. Most of the trees within the pasture are totara with a single rimu (*Dacrydium cupressinum*) and two kahikatea (*Dacrycarpus dacrydioides*). Beneath the trees the ground is covered by 100% pasture.

Beyond fence the coastal forest comprises a canopy of totara, kanuka and rewarewa. Areas of pasture grasses including cocksfoot (*Dactylis glomerata*) indicate historic grazing. However, vegetation regeneration is occurring and mid-tier species present include cabbage tree (*Cordyline australis*), mahoe, karamu (*Coprosma robusta*) and silverfern. There are various weed species including gorse, *Berberis* sp. and tree privet (*Ligustrum lucidum*)

Fauna & habitat types observed

Kingfisher, fantail, silvereye, goldfinch and blackbird.

Potential bat habitat but no data.

Landowner feedback during site visit

Concerned about the implications of the SNA for land management and as a minimum would like the areas of pasture (Area 1) and pasture with mature trees (Area 2), excluded from the SNA.

Area 1

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input checked="" type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input checked="" type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	Parts grazed annually. Fenced section rarely grazed.
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input checked="" type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	Northern 600m of peninsular fenced.
Canopy condition	1 2	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	Large gaps in canopy where there is pasture.

	3	<input checked="" type="checkbox"/>	Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/>	Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/>	No browse palatable species 45cm-1.35m. Understorey bare.	Varies between fenced and unfenced sections.
	2	<input type="checkbox"/>	Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	<input type="checkbox"/>	Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/>	Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/>	Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	Varies between fenced and unfenced sections.
	2	<input type="checkbox"/>	Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	<input checked="" type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input checked="" type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

Area 2

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input type="checkbox"/>	
	2	<input type="checkbox"/>	
	3	<input checked="" type="checkbox"/>	
	4	<input type="checkbox"/>	
Stock	1	<input checked="" type="checkbox"/>	Pasture grazed.
	2	<input type="checkbox"/>	
	3	<input type="checkbox"/>	
	4	<input type="checkbox"/>	
Fencing	1	<input type="checkbox"/>	Coastal edge forest is fenced.
	2	<input checked="" type="checkbox"/>	
	3	<input type="checkbox"/>	
	4	<input type="checkbox"/>	
Canopy condition	1	<input type="checkbox"/>	Large gaps in canopy within pasture.
	2	<input type="checkbox"/>	

	3	x	Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/>	Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/>	No browse palatable species 45cm-1.35m. Understorey bare.	No mid-tier within pasture.
	2	<input type="checkbox"/>	Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	<input type="checkbox"/>	Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/>	Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/>	Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	Pasture ground cover within pasture.
	2	<input type="checkbox"/>	Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	x	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	Within coastal edge forest.
	2	x	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

Area 1

CRITERIA		ASSESSMENT
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.	No
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.	No

CRITERIA		ASSESSMENT
3	<p>It is vegetation or habitat that is currently habitat for indigenous species or associations of indigenous species that are:</p> <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. 	Kanuka classified as Nationally Vulnerable.
4	<p>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.</p>	Yes. Forest habitat that is under-represented.
5	<p>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.</p>	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No.
8	<p>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.</p>	No.

CRITERIA		ASSESSMENT
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	Yes. Fenced section example of diverse secondary forest. Unfenced section would increase value if fenced.
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.	No.
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No.

Area 2

CRITERIA		ASSESSMENT
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.	No
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.	No
3	<p>It is vegetation or habitat that is currently habitat for indigenous species or associations of indigenous species that are:</p> <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. 	Kanuka classified as Nationally Vulnerable.

CRITERIA		ASSESSMENT
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.	Yes. Forest habitat that is under-represented. Excluding mature trees within pasture that is not a functioning forest ecosystem.
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.	No
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"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. Unless in those instances they meet the criteria in Whaley et al. (1995)	No
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.	No.
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.	No.
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. 	No. Fenced section is developing value following fencing but as yet does not meet this criterion.

CRITERIA		ASSESSMENT
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.	No.
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No.

Boundary Assessment

Area 1: boundary around SNA is largely appropriate. However, large pasture area should be excluded.

Area 2: boundary around SNA is largely appropriate. However, mature trees over pasture should be excluded.

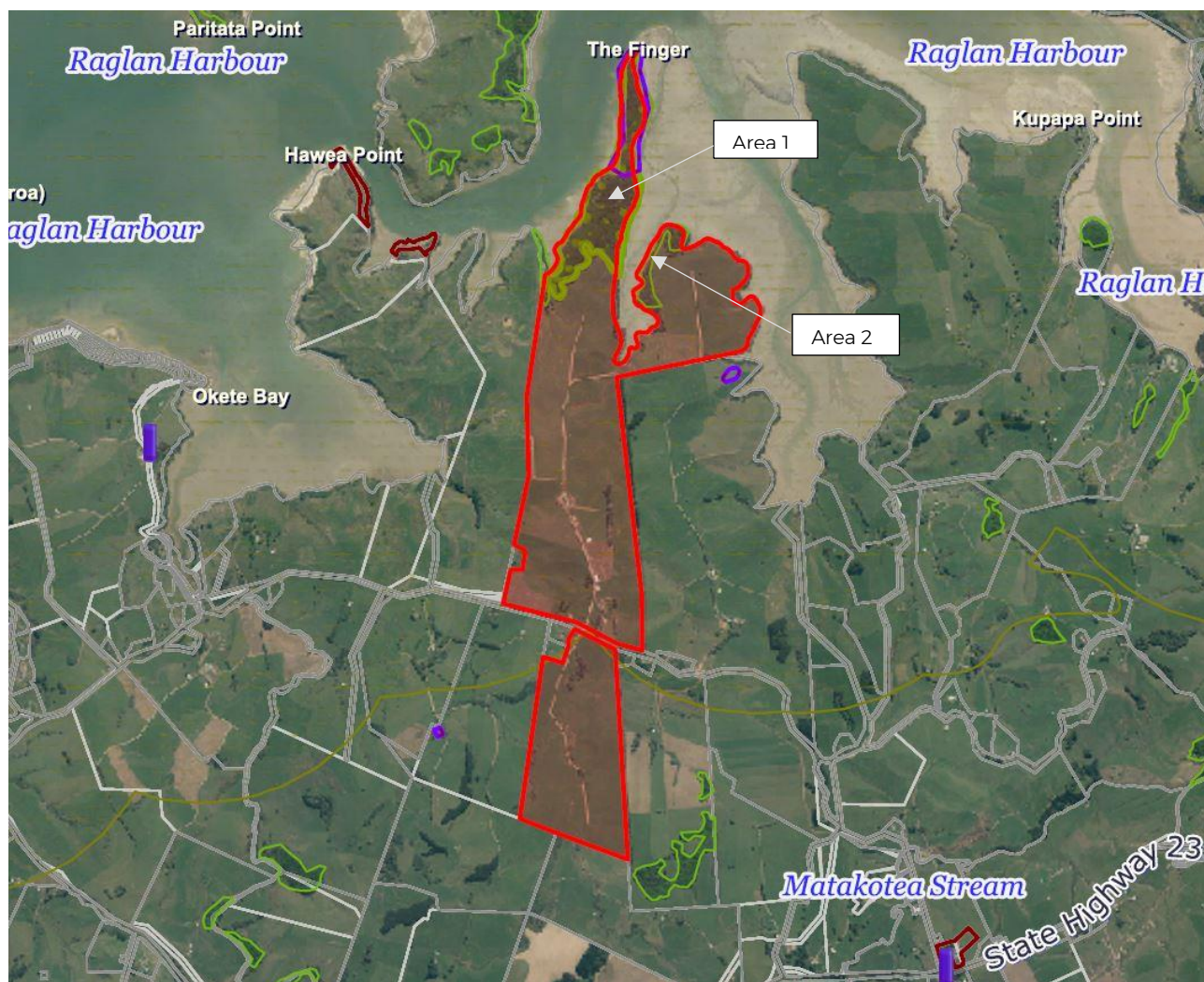
SNA Assessment

Area 1: The area of forest meets at least two SNA criteria, excluding the criterion 3, and therefore most of Area 1 qualifies as SNA. However, pasture areas do not meet the criteria.

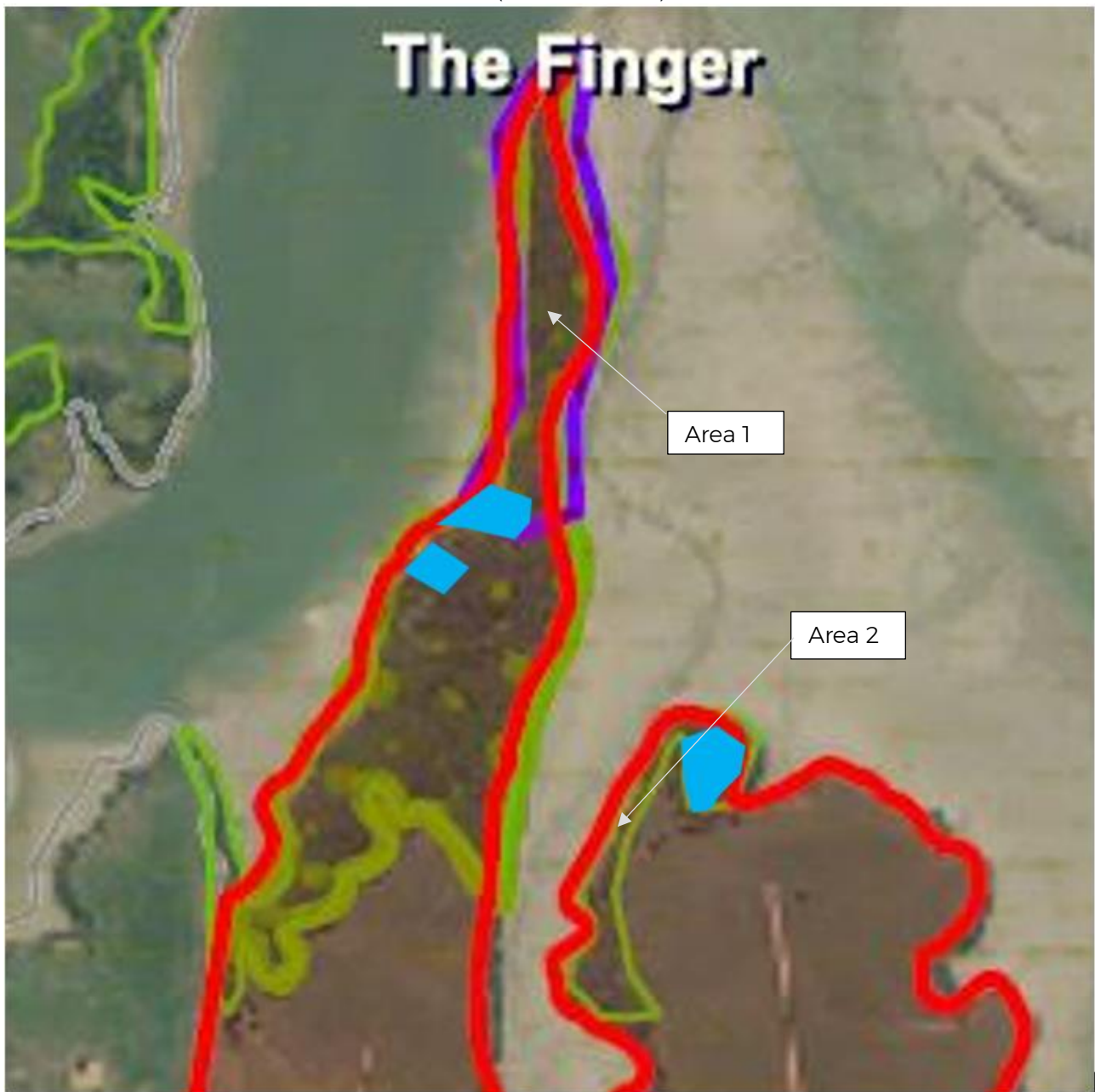
Area 2: The area of fenced forest meets at least one SNA criteria, excluding the criterion 3, and therefore most of Area 2 qualifies as SNA. However, mature trees over pasture areas do not qualify as this is functionally a pasture and not a functioning forest ecosystem.

SECTION D MAPS AND PHOTOGRAPHS

Property map 274 Okete Road, (Property boundary in red, SNA boundary in green)



Recommended areas for removal from SNA (shown in blue)



Photographs

Photo 1: Pasture areas within Area 1 surrounded by totara forest.



Photo 2: Sub-canopy within unfenced section Area 1.



Photo 3: Sub-canopy within fenced section of Area 1.



Photo 4: View of the edge of Area 1 forest.



Photo 5: Mature totara over pasture in Area 2.



Photo 6: Coastal forest edge within fenced section of Area 2.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

Area 1: The area of forest meets at least two SNA criteria, excluding the criterion 3, and therefore most of Area 1 qualifies as SNA. However, pasture areas do not meet the criteria. Recommend removal of the large areas of pasture from the SNA.

Area 2: The area of fenced forest meets at least one SNA criteria, excluding the criterion 3, and therefore most of Area 2 qualifies as SNA. However, mature trees over pasture areas do not qualify as this is functionally a pasture and not a functioning forest ecosystem. Recommend removal of the mature trees over pasture from the SNA.

368 RIVERVIEW ROAD

Visit date	Owner and property address
29 th July 2020	John & Roselei Holland 368 Riverview Road, Huntly.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem type(s)	Existing ecological data
Broadleaved podocarp forest	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

The SNA boundary extends over two areas of broadleaved podocarp forest.

Vegetation types, key species and species of note

The vegetation within the two areas identified as SNA comprises a broadleaved canopy with podocarp species over a sub-canopy area grazed by sheep. The forest supports a diverse range of indigenous tree and shrub species. However, the ground layer has a limited range of species likely the result of the impact of grazing. Canopy species include abundant tawa (*Beilschmiedia tawa*), with rewarewa (*Knightia excelsa*), rimu (*Dacrydium cupressinum*) and titoki (*Alectryon excelsus*). Within the sub-canopy species include abundant kawakawa (*Piper excelsum*), with mingimingi (*Leucopogon fasciculatus*), hangehange (*Geniostoma ligustrifolium*), mahoe (*Melicytus ramiflorus*), silverfern (*Cyathea dealbata*) and wheki (*Dicksonia squarrosa*).

Fauna & habitat types observed

Tui, grey warbler, goldfinch and blackbird.

Potential bat habitat but no data

Landowner feedback during site visit

Property owner concerned about the effect of designating the areas as SNA on the ability to quarry land to the north.

Property owner allows possum trapping on the property.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input checked="" type="checkbox"/> None present.	
Stock	1 2 3 4	<input checked="" type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	Sheep graze beneath the canopy
Fencing	1 2 3 4	<input checked="" type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input checked="" type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input checked="" type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1 2 3	<input checked="" type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor. <input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	

	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	x	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	x	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No
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.	Yes. Broadleaved podocarp forest.
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	Yes. If stock excluded.
10	<p>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.</p>	No

CRITERIA		ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

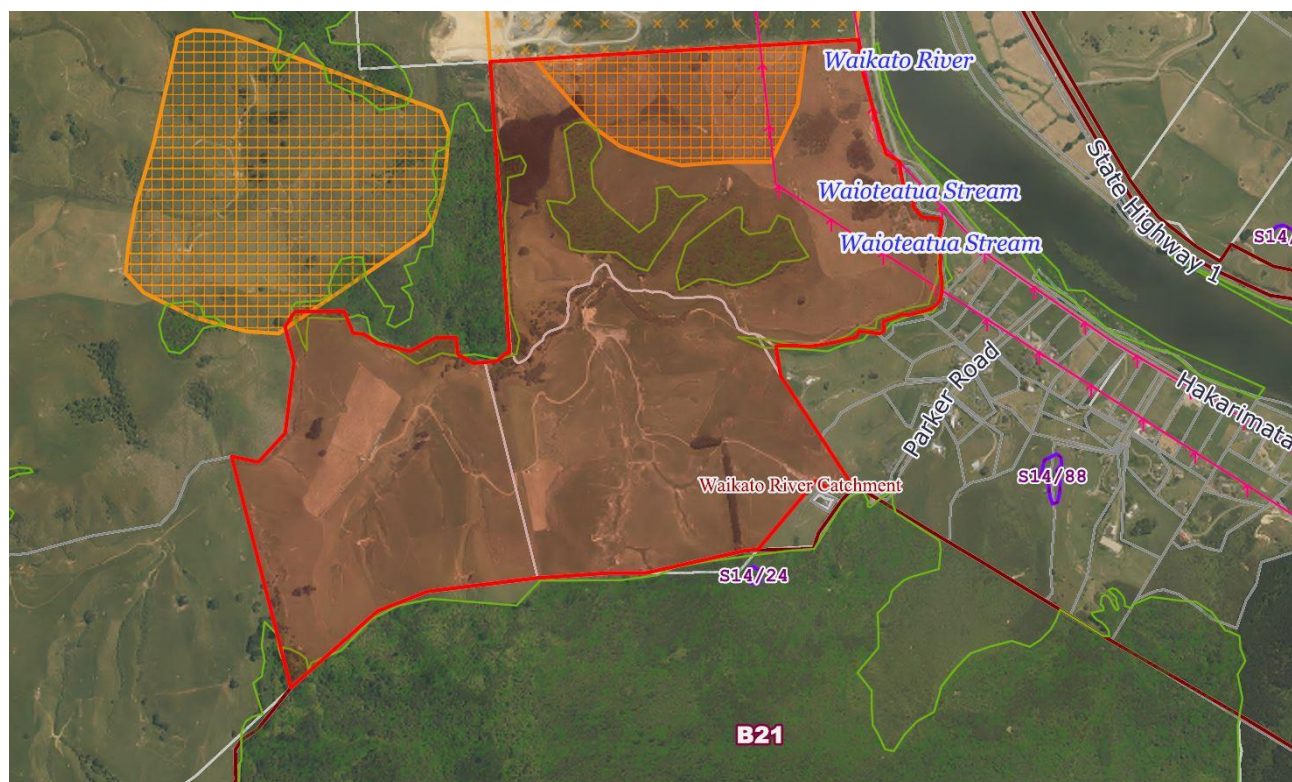
The SNA boundary is appropriate.

SNA Assessment

The SNA meets criterion 4 as an under-represented example of indigenous forest vegetation. Grazing is impacting on the functioning of the system and likely to be impacting successional processes and reducing species richness of the ground and mid-tier layers. However, this is a valuable area of indigenous forest.

SECTION D MAPS AND PHOTOGRAPHS

Property map 368 Riverview Road, (Property boundary in red, SNA boundary in green)



Photographs

Photo 1: Broadleaved podocarp forest



Photo 2: Limited species richness in ground layer and some canopy gap



Photo 3: Broadleaved podocarp forest



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The SNA meets criterion 4 as an under-represented example of indigenous vegetation. Despite some impacts from grazing this is a valuable area of indigenous forest. Recommend maintaining the sites as SNA with no proposed boundary adjustment.

383 KARAKARIKI ROAD

Visit date	Owner and property address
23 rd July 2020	Henk Ensing 383 Karakariki Road,
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Garden environment	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundary extends of private garden.

Vegetation types, key species and species of note

Garden environment with area of cocksfoot (*Dactylis glomerata*) dominated grassland, gorse (*Ulex europaeus*) and various exotic conifers trees.

Fauna & habitat types observed

No fauna recorded.

Landowner feedback during site visit

Did not consider that the vegetation within the garden was significant.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input type="checkbox"/> Very common, cover >50% ground area.	N/A
	2	<input type="checkbox"/> Common, 10%-50% ground area.	
	3	<input type="checkbox"/> Occasional, up to 10% ground area.	
	4	<input type="checkbox"/> None present.	
Stock	1	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	N/A
	2	<input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	<input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges.	
	4	<input type="checkbox"/> No damage.	
Fencing	1	<input type="checkbox"/> No fencing.	N/A
	2	<input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks.	
	3	<input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks.	
	4	<input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%.	N/A
	2	<input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	<input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare.	N/A
	2	<input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	<input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	N/A
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	

	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No
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.	No
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
10	<p>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.</p>	No

CRITERIA	ASSESSMENT
<p>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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.</p>	No

Boundary Assessment

SNA extends over garden environment.

SNA Assessment

SNA extends over garden environment. Vegetation /habitat does not meet criteria in Section 11A of the WRPS and inappropriate to classify such vegetation as SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 383 Karakariki Road, (Property boundary in red, SNA boundary in green)



Recommended area for removal from the SNA (shown in blue)



Photographs

Photo 1: Cocksfoot dominated grassland and gorse.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

SNA extends over garden environment. Vegetation /habitat does not meet criteria in Section 11A of the WRPS and inappropriate to classify such vegetation as SNA. Recommend removal from SNA.

384A KARAKARIKI ROAD

Visit date	Owner and property address
11 th June 2020	Dean Van Ingen 384A Karakariki Road, Hamilton
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystems types	Existing ecological data
Grassland	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundary encroaches slightly into private garden.

Vegetation types, key species and species of note

Mown grassland within garden environment with two plum trees.

Fauna & habitat types observed

None recorded.

Landowner feedback during site visit

Affected area is garden.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	N/A
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	N/A
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	N/A
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	N/A
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	N/A

	2	<input type="checkbox"/>	Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No
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.	No

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA		ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

SNA extends slightly into garden environment.

SNA Assessment

SNA extends over slightly garden environment. Vegetation /habitat does not meet criteria in Section 11A of the WRPS and inappropriate to classify such vegetation as SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 384A Karakariki Road, (Property boundary in red, SNA boundary in green)



Recommended area for removal from SNA (shown in blue)



Photographs

Photo 1: Mown grassland and plum tree along edge of SNA.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

SNA extends over garden environment. Vegetation /habitat does not meet criteria in Section 11A of the WRPS and inappropriate to classify such vegetation as SNA. Recommend removal from SNA.

399 BEDFORD ROAD

Visit date	Owner and property address
11 th June 2020	Brian Butt & Sheryl Kruger for Kiana Lace Ltd on behalf of Year 91 Family Trust 399 Bedford Road, Te Kowhai.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Riparian vegetation/habitat	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

The edge of a much larger SNA crosses the property boundary in two localities along the riparian margin of the adjacent stream. The SNA contains the riparian margins of the stream and wetland areas. Only the SNA within the property was assessed.

Vegetation types, key species and species of note

The SNA crosses the property boundary in two localities shown Area 1 and Area 2 in the property map.

Area 1 encompasses the riparian zone of the stream and includes native tree fern and shrubs but also a significant weed component. Native species present include cabbage tree (*Cordyline australis*), karamu (*Coprosma robusta*), hangehange (*Geniostoma ligustrifolium*), mamaku (*Cyathea medullaris*) and wheki (*Dicksonia squarrosa*). Weed species include Chinese privet (*Ligustrum sinense*), pampas (*Cortaderia selloana*), woolly nightshade (*Solanum mauritianum*) and honeysuckle (*Lonicera japonica*).

Area 2 has a grey willow (*Salix cinerea*) canopy over damp pasture that is grazed during summer. There is abundant Yorkshire fog (*Holcus lanatus*), with cocksfoot (*Dactylis glomerata*), creeping buttercup (*Ranunculus repens*). Chinese privet occurs frequently. There is little indigenous vegetation, although cutty grass (*Carex geminata*) starts to occur towards the edge of the property as wetter ground is encountered.

Fauna & habitat types observed

Chaffinch, song thrush, pukeko and kingfisher.

Landowner feedback during site visit

The property owner is happy to have the indigenous vegetation in Area 1 within the SNA but does not consider that Area 2 merits inclusion.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input type="checkbox"/> Very common, cover >50% ground area.	
	2	<input type="checkbox"/> Common, 10%-50% ground area.	
	3	<input checked="" type="checkbox"/> Occasional, up to 10% ground area.	
	4	<input type="checkbox"/> None present.	
Stock	1	<input checked="" type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	Area 1 only
	2	<input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	<input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges.	
	4	<input type="checkbox"/> No damage.	
Fencing	1	<input type="checkbox"/> No fencing.	Area 1 partially fenced. No fencing required for Area 2.
	2	<input checked="" type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks.	
	3	<input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks.	
	4	<input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%.	N/A
	2	<input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	<input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare.	N/A
	2	<input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	<input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	N/A
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	

	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	Area 2 only.
	2	x	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	x	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No
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.	No
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
10	<p>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.</p>	Yes. Likely for Area 1.

CRITERIA	ASSESSMENT
<p>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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.</p>	<p>Area 2 only, likely to qualify as corridor linking wetland habitats.</p>

Boundary Assessment

The SNA assessment indicates that boundary adjustment is warranted as Area 2 does not merit inclusion within the SNA.

SNA Assessment

Area 1 has some ecological value due to presence indigenous plant species. It is unlikely that of itself it would not qualify as SNA. However, it is part of a much larger SNA and likely to qualify under criterion 11 as part of a corridor linking wetland habitats.

Area 2 has little value for either indigenous flora or fauna and is a highly modified extension to an area of pasture albeit dominated by willow. It does not merit inclusion within the SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 399 Bedford Road, (Property boundary in red, SNA boundary in green)



Recommended area for removal from the SNA (shown in blue)



Photographs

Photo 1: Tree ferns along riparian edge of river.



Photo 2: Mixed native and exotic riparian vegetation.



Photo 3: Willow over pasture.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

Area 1 has some ecological value due to presence indigenous plant species. It is unlikely that of itself it would not qualify as SNA. However, it is part of a much larger SNA and likely to qualify under criterion 11 as part of a corridor linking wetland habitats. Recommend retention of Area 1 within the SNA.

Area 2 has little value for either indigenous flora or fauna and is a highly modified extension to an area of pasture albeit dominated by willow. It does not merit inclusion within the SNA. Recommend removal of Area 2 from the SNA.

511 TE AKAU WHARF ROAD

Visit date	Owner and property address
24 th July 2020	Isobel Waitere 511 Te Akau Wharf Road, Te Akau South
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Kanuka dominated regenerating forest	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

Most of the property is covered by kanuka dominated regenerating forest. Within the property are dwelling areas where vegetation is substantially modified and where there are utility areas. Some but not all these areas are excluded from the SNA.

Vegetation types, key species and species of note

This is an area of kanuka (*Kunzea robusta*) dominated regenerating forest supporting a wide range of forest species in the mid-tier and ground layer including kahikatea (*Dacrycarpus dacrydioides*), cabbage tree (*Cordyline australis*), titoki (*Alectryon excelsus*), kowhai (*Sophora microphylla*), kawakawa (*Piper excelsum*), akiraho (*Olearia paniculata*), lancewood (*Pseudopanax crassifolius*) hangehange (*Geniostoma ligustrifolium*) and mahoe (*Melicytus ramiflorus*). Nikau palm (*Rhopalostylis sapida*) is also present along with abundant tree ferns mamaku (*Cyathea medullaris*), and silverfern (*Cyathea dealbata*).

The ground layer includes seedling of broadleaved species e.g. mangleo (*Litsea calicaris*) indicating regeneration of broadleaved canopy species.

Fauna & habitat types observed

Kingfisher, tui, grey warbler and silvereye.

Potential long-tailed bat habitat but no data.

Landowner feedback during site visit

The family has owned the property for approximately 100 years during which time the bush has been protected. A covenant is in place protection the bush.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input checked="" type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input checked="" type="checkbox"/> No damage.	
Fencing	1 2 3 4	<input checked="" type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	No stock.
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input checked="" type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input checked="" type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	Species rich mid-tier
Ground cover	1 2 3	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent of uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor. <input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	Variable

	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	x	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	x	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	Land is covenanted but no details
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.	No
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. 	Yes. Kanuka is classified as Nationally Vulnerable due to the threat from myrtle rust.
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.	Yes. Regenerating forest dominated by kanuka supporting wide range of native forest species.
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	Yes. Regenerating forest dominated by kanuka supporting wide range of native species.
10	<p>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.</p>	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary assessment

The boundary of the SNA within the property is for the most part appropriate however one dwelling area is included within the SNA. This should be excluded.

SNA Assessment

The area of forest meets at least two SNA criteria, excluding the criterion 3, and therefore most of the property qualifies as SNA. One of the dwellings on the property, built within a forest clearing, is currently included within the SNA. This area does not meet the SNA criteria and it is not appropriate for it to be included within the SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 511 Te Akau Wharf Road, (Property boundary in red, SNA boundary in green)



Recommended area for removal from the SNA (shown in blue)



Photographs

Photo 1: Well developed mid-tier below kanuka canopy.



Photo 2: Dense, species rich mid-tier layer



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The area of forest meets at least two SNA criteria, excluding the criterion 3, and therefore most of the property qualifies as SNA. One of the dwellings on the property, built within a forest clearing, is currently included within the SNA. This area does not meet the SNA criteria and it is not appropriate for it to be included within the SNA. Recommend that the dwelling area be excluded from the SNA.

523 WAINGARO ROAD

Visit date	Owner and property address
29 th July 2020	Bonita Dean 523 Waingaro Road, Ngaruawahia.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem type	Existing ecological data
Kanuka forest with broadleaved and podocarp emergent species.	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

The boundary of the SNA extends over mature kanuka forest with remnant emergent forest species. It also includes areas of pasture.

Vegetation types, key species and species of note

Mature kanuka (*Kunzea robusta*) dominated forest with emergent rewarewa (*Knightia excelsa*), pukatea (*Laurelia novae-zelandiae*), kahikatea (*Dacrycarpus dacrydioides*) and hinau (*Elaeocarpus dentatus*) in pockets/scattered throughout. Grazed by cattle beneath which suppresses mid-tier and ground cover. Mid-tier species include mahoe (*Melicytus ramiflorus*) and silverfern (*Cyathea dealbata*).

There are areas within the SNA that are pasture and others where kanuka/manuka have recently established. While some of these areas still support isolated patches of the mature native trees this is very fragmented low value habitat.

Fauna & habitat types observed

Native pigeon, tui, grey warbler and silvereye.

Potential long-tailed bat habitat but no data.

Landowner feedback during site visit

Property owner considers that the vegetation does not have any value and that the SNA includes areas of pasture.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input type="checkbox"/> Very common, cover >50% ground area.	
	2	<input type="checkbox"/> Common, 10%-50% ground area.	
	3	<input checked="" type="checkbox"/> Occasional, up to 10% ground area.	
	4	<input type="checkbox"/> None present.	
Stock	1	<input checked="" type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	Cattle
	2	<input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	<input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges.	
	4	<input type="checkbox"/> No damage.	
Fencing	1	<input checked="" type="checkbox"/> No fencing.	
	2	<input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks.	
	3	<input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks.	
	4	<input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%.	
	2	<input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	<input checked="" type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare.	
	2	<input checked="" type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	<input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input checked="" type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	

	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	x	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	x	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Kanuka classified as Nationally Vulnerable.
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.	Yes. Under-represented vegetation.
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	If fenced would likely develop a representative flora given forest remnant species present over time.
10	<p>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.</p>	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

There are areas within the SNA that contain pasture or very low value vegetation e.g. early stage establishment of manuka/kanuka in pasture. These should be excluded from the SAN.

SNA Assessment

Parts of the kanuka forest are well established and contain remnants of a more diverse forest ecosystem. As a result, these areas meet at least one of the SNA criteria. Pasture areas and areas with early establishment kanuka/manuka do not meet the criteria. While manuka and kanuka are classified as At-Risk and Nationally Vulnerable respectively due to the threat from myrtle rust, there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District and grow as a pasture weed in many localities, including within this property. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 523 Waingarō Road, (Property boundary in **red**, SNA boundary in **green**)



Recommended areas for removal from the SNA (shown in blue)



Photographs

Photo 1: SNA in the foreground



Photo 2: Sub-canopy of the kanuka forest



Photo 3: Early establishment kanuka within pasture.



Photo 4: Gum, gorse and early establishment kanuka in pasture.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

Parts of the kanuka forest are well established and contain remnants of a more diverse forest ecosystem. As a result, these areas meet at least one of the SNA criteria. Recommend that these areas remain within the SNA.

Pasture areas and areas with early establishment kanuka/manuka do not meet the criteria except with respect to criterion 3. However, while manuka and kanuka are classified as At-Risk and Nationally Vulnerable respectively due to the threat from myrtle rust, there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District and grow as a pasture weed in many localities, including within this property. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA. Recommend removal of these areas from the SNA.

524 SH1, TAMAHERE

Visit date	Owner and property address
03 rd July 2020	Elvin Priest 524B State Highway 1, Tamahere.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Garden. Gully.	The gully is confirmed long-tailed bat habitat.

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundary encroaches into the bottom end of the garden.

Vegetation types, key species and species of note

Along the top of the gully are mature *Pinus sp.*, macrocarpa (*Cupressus macrocarpa*) and *Acacia sp.*.

The understorey on the gully slopes includes native plant species mamaku (*Cyathea medullaris*), pate (*Schefflera digitate*), mahoe (*Melicytus ramiflorus*), cabbage tree (*Cordyline australis*). Weed species include tree privet (*Ligustrum lucidum*) and Chinese privet (*Ligustrum sinense*).

In the bottom of the gully is wetland.

Away from the gully edge the garden area comprises grassland with mature oak (*Quercus robur*) trees.

Fauna & habitat types observed

Long-tailed bats

Blackbird, chaffinch, fantail, grey warbler. Anticipate that the gully will support a range of common native and introduced bird species.

Landowner feedback during site visit

Property owner happy for the SNA to be within the property as long as it follows the gully edge. Keen to install artificial bat roosts to provide roosting habitat for bats.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input checked="" type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input checked="" type="checkbox"/> No damage.	
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input checked="" type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	Dominated by exotic species.
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input checked="" type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	Native species in mid-tier.
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	

	2	<input checked="" type="checkbox"/>	Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input checked="" type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input checked="" type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Gully provides habitat for long-tailed bats.
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.	No

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	Yes. Wetland in the base of the gully.
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA	ASSESSMENT
<p>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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.</p>	<p>Yes. Part of gully system that provides habitat for long-tailed bats and other native fauna.</p>

Boundary Assessment

Adjust boundary to follow the gully edge.

SNA Assessment

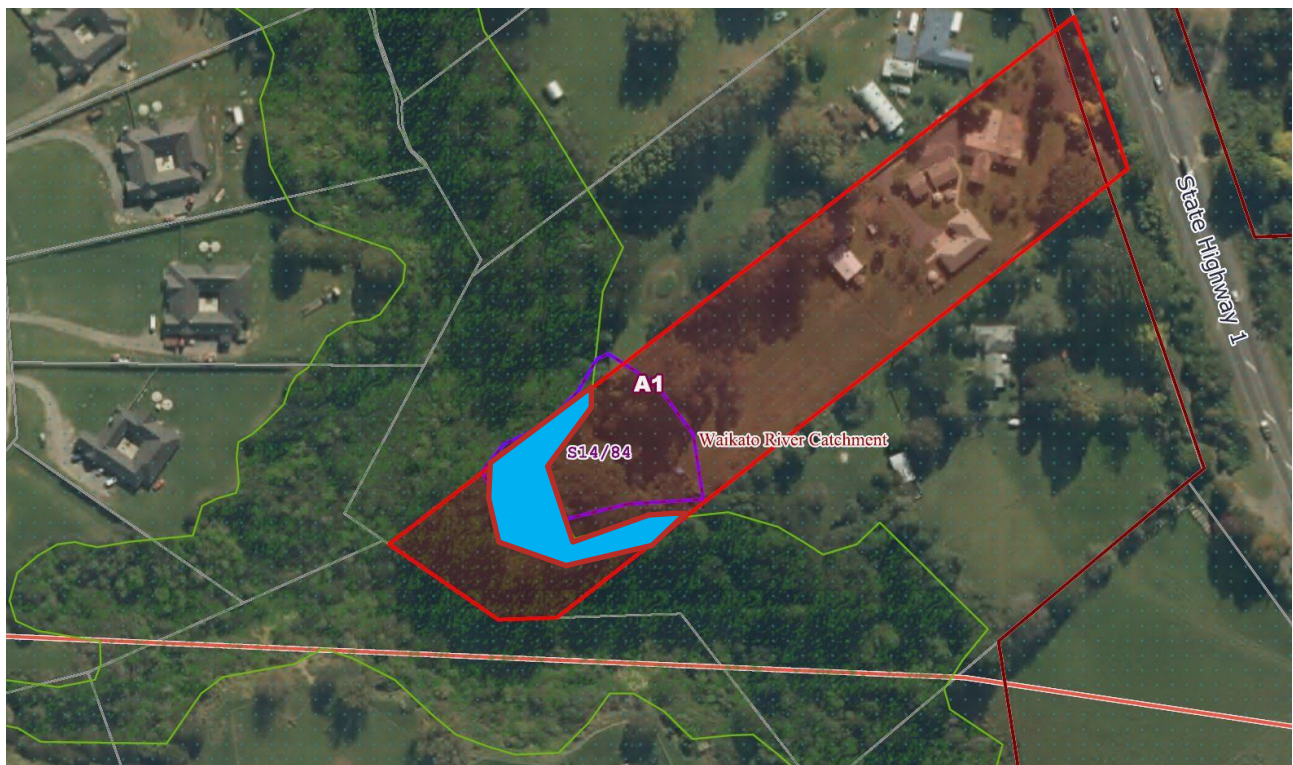
Gully meets SNA criteria but grassland within garden does not. Inappropriate to extend SNA over garden area.

SECTION D MAPS AND PHOTOGRAPHS

Property map 524B SH1, (Property boundary in red, SNA boundary in green)



Recommended area for removal from the SNA (shown in blue)



Photographs

Photo 1: Grassland area at the within garden currently included in the SNA.



Photo 2: Gully habitat



SECTION E CONCLUSIONS AND RECOMMENDATIONS

Gully meets SNA criteria but grassland within garden does not. Inappropriate to extend SNA over garden area. Recommend adjusting the SNA boundary to follow the gully edge.

538 TE PAPATAPU ROAD

Visit date	Owner and property address
17 th July 2020	Sara Brown on behalf of S & J Brown 538 Te Papatapu Road, Te Mata
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Exotic scrub Podocarp and kanuka dominated forest	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

One SNA within the property includes an area that is exotic scrub.

A second area within the property comprising podocarp forest with kanuka forest has not been mapped as SNA.

Vegetation types, key species and species of note

An area of exotic scrub dominated by hawthorn has been mapped as one of the SNA's on the property. It is entirely dominated by this exotic species and does not meet any SNA criteria.

A large area of forest on the property has not been mapped as SNA. At the base of the hill slope the forest is dominated by kahikatea (*Dacrycarpus dacrydioides*). Further up the hill slope, as the soil conditions become drier, the forest is dominated kanuka (*Kunzea robusta*) with emergent rewarewa (*Knightia excelsa*). Other species present included rimu (*Dacrydium cupressinum*), totara (*Podocarpus totara*), lancewood (*Pseudopanax crassifolius*), mahoe (*Melicytus ramiflorus*),

Coprosma spp., wheki (*Dicksonia squarrosa*) and silverfern (*Cyathea dealbata*). The forest supports a mid-tier and ground layer.

Fauna & habitat types observed

Grey warbler, tui and magpie

Landowner feedback during site visit

Property owner requested removal of an area of exotic scrub dominated by hawthorn and grazed by sheep beneath and the inclusion of an area of forest considered to merit SNA status.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input type="checkbox"/> Very common, cover >50% ground area.	
	2	<input type="checkbox"/> Common, 10%-50% ground area.	
	3	<input type="checkbox"/> Occasional, up to 10% ground area.	
	4	x None present.	
Stock	1	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	Lower hillslope only
	2	<input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	x Sign uncommon. Sign is often old. Only near edges.	
	4	<input type="checkbox"/> No damage.	
Fencing	1	<input type="checkbox"/> No fencing.	Sections of boundary securely fenced but have stock have access to parts of the forest.
	2	<input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks.	
	3	<input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks.	
	4	<input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%.	
	2	<input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	x Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare.	
	2	<input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	x Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	x Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	

	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	x	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	x	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Kanuka – classified as Nationally Vulnerable
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.	Yes. Kahikatea and kanuka dominated forest.
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	Yes. If stock completely excluded.
10	<p>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.</p>	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

Area of hawthorn dominated scrub to be excluded from SNA. Kahikatea and kanuka dominated forest areas to be included as SNA.

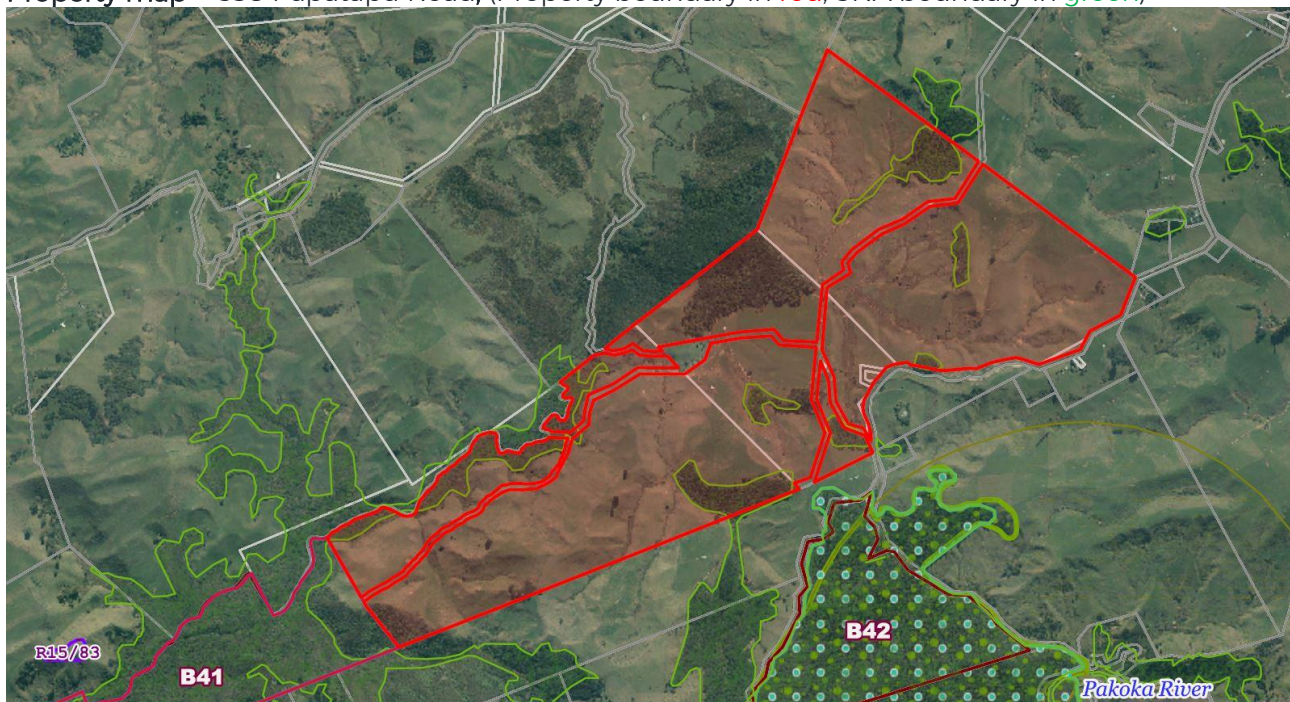
SNA Assessment

The area of hawthorn scrub that is currently SNA however it does not meet any of the SNA criteria.

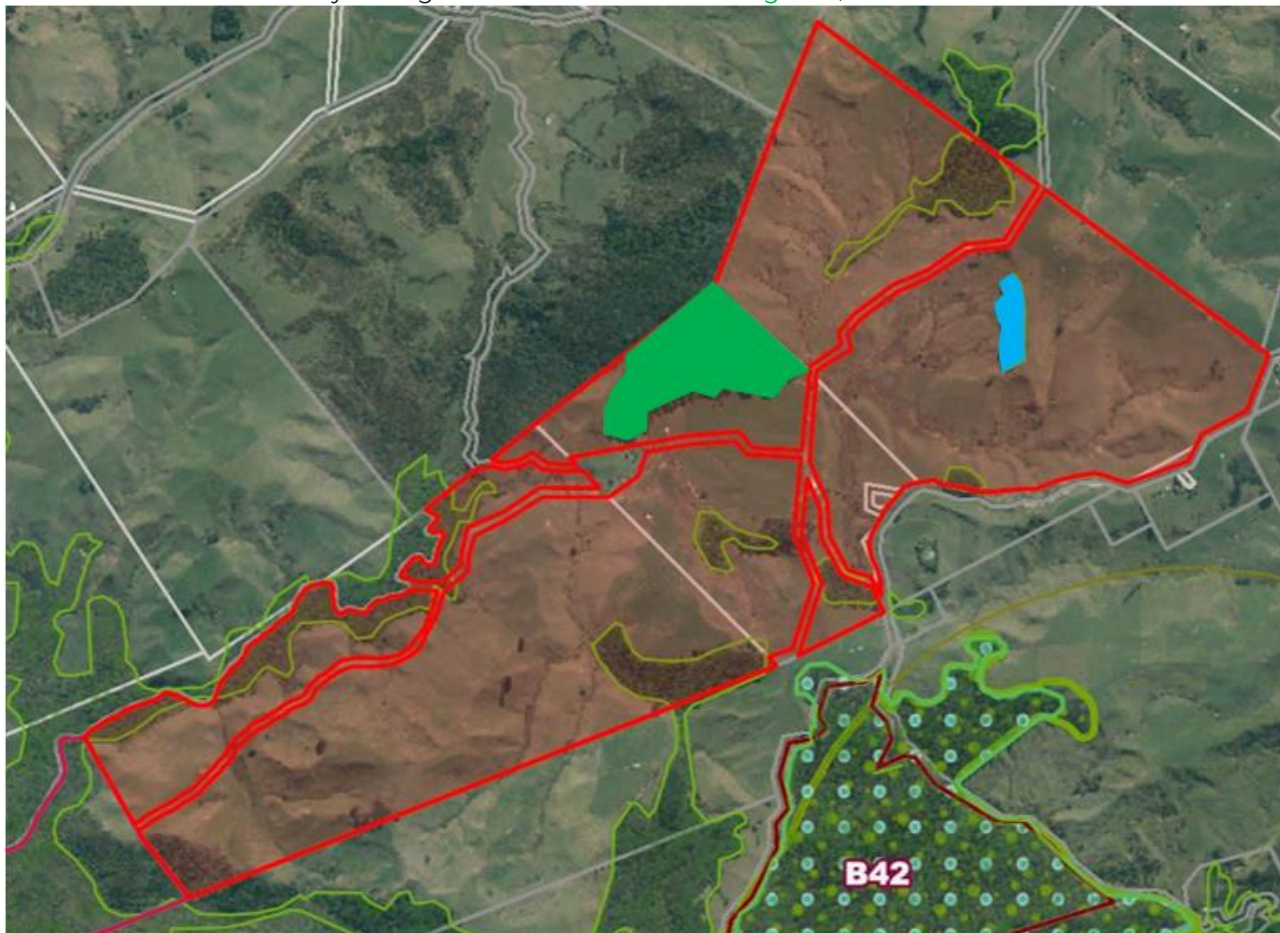
The area of forest meets at least two SNA criteria, excluding the criterion 3, and therefore this area should be included as SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 538 Papatapu Road, (Property boundary in red, SNA boundary in green)



Recommended boundary changes include area shown in green, delete area shown in blue.



Photographs

Photo 1: SNA dominated by hawthorn



Photo 2: Kahikatea forest currently not mapped as SNA



Photo 3: Kanuka dominated forest with emergent rewarewa currently not mapped as SNA



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The area of hawthorn scrub that is currently SNA does not meet any of the SNA criteria. Recommend deletion of this area as an SNA.

The area of forest meets at least two SNA criteria, excluding the criterion 3, and therefore this area should be included as SNA. Recommend inclusion of this area as an SNA.

567 KARAKARIKI ROAD

Visit date	Owner and property address
23 rd July 2020	Anthony Armstrong 567 Karakariki Road, Hamilton
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Willow over pasture. Wet pasture flooded in winter.	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

The property has several SNA's identified on the Planning Maps. All but one is an area of native forest. The property owner's submission concerns only an area wet and flooded pasture. Only this area was visited and assessed.

Vegetation types, key species and species of note

Comprises an area of willow (*Salix cinerea*) and an area of pasture that is flooded during winter and dry and grazed during the summer months. Supports reed sweetgrass (*Glyceria maxima*), soft rush (*Juncus effusus*), wiwi (*Juncus edgariae*) and spearwort (*Ranunculus flammula*).

The incidence of native plant species is low.

Fauna & habitat types observed

No wetland birds observed but likely to provide habitat for duck at times.

Landowner feedback during site visit

Floods more regularly in recent years due to area having been dug out to create duck pond and installation of culvert at the property boundary impeding the drainage.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input checked="" type="checkbox"/> Very common, cover >50% ground area.	Dominated by exotic species.
	2	<input type="checkbox"/> Common, 10%-50% ground area.	
	3	<input type="checkbox"/> Occasional, up to 10% ground area.	
	4	<input type="checkbox"/> None present.	
Stock	1	<input checked="" type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	
	2	<input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	<input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges.	
	4	<input type="checkbox"/> No damage.	
Fencing	1	<input checked="" type="checkbox"/> No fencing.	
	2	<input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks.	
	3	<input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks.	
	4	<input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%.	N/A
	2	<input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	<input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare.	N/A
	2	<input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	<input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	N/A
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	

	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	no
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.	No
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. 	No
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.	No

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No. Low incidence of native plant species and no native bird species recorded. Artificially maintained wet pasture.
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA	ASSESSMENT
<p>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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.</p>	No

Boundary Assessment

Remove SNA from within property.

SNA Assessment

Vegetation /habitat does not meet criteria in Section 11A of the WRPS.

SECTION D MAPS AND PHOTOGRAPHS

Property map 567 Karakariki Road, (Property boundary in red, SNA boundary in green)



Recommended area for removal from SNA (shown in blue)



Photographs

Photo 1: Willow over pasture



Photo 2: Rush pasture and area flooded during winter



Photo 3: Wet pasture and flooded pasture



SECTION E CONCLUSIONS AND RECOMMENDATIONS

Artificially created/maintained and low-quality habitat. Vegetation/habitat does not meet criteria in Section 11A of the WRPS. Recommend removal of section of SNA from within property.

607 PENCARROW ROAD

Visit date	Owner and property address
10/06/20	607 Pencarrow Road, Tamahere
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Mature kahikatea grove	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

This site was not identified as an SNA in the notified district plan. Identified as a potential SNA by a third-party submitter. The grove of mature kahikatea (*Dacrycarpus dacrydioides*) extends over three properties but only 607 Pencarrow Road was the subject of the submission. The assessment therefore relates to 607 Pencarrow Road.

Vegetation types, key species and species of note

Grove of mature kahikatea including specimens exceeding 25m in height. No mid-tier or understorey. Grass species provide ground cover including meadow rice grass (*Microlaena stipoides*).

Fauna & habitat types observed

Chaffinch, kingfisher.

Long-tailed bats

Landowner feedback during site visit

Property owner hand weeds under the kahikatea. Reported that long-tailed bats had been recorded by a survey undertaken by Waikato University.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	Grasses
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	N/A
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	N/A
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. x Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1 2 3 4	x No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1 2	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	Grasses

	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	x	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	Occasional lemonwood.
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	x	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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 <u>ecological sustainability</u> of the ecosystem is threatened.	No
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. 	Yes. Long-tailed bat recorded.
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.	No. Trees are significant as examples of historic tree canopy cover but not a functioning ecosystem. No natural regeneration occurring.
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
10	<p>It is an area of indigenous vegetation or habitat that forms part of an <u>ecological sequence</u>, that is either not common in the Waikato region or an ecological district, or is an exceptional, representative example of its type.</p>	No
11	<p>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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.</p>	No

Boundary Assessment

Not currently SNA.

SNA Assessment

While the trees are significant as examples of the historic vegetation cover of the area, the trees do not form a functioning ecosystem. However, the trees provide habitat for long-tailed and on this basis meet the SNA criteria.

SECTION D MAPS AND PHOTOGRAPHS

Property map 607 Pencarrow Road, (Property boundary in red, SNA boundary in green)



Recommended area for inclusions as SNA (shown in green)



Photographs

Photo 1: Mature kahikatea grove



SECTION E CONCLUSIONS AND RECOMMENDATIONS

While the trees are significant as examples of the historic vegetation cover of the area, the trees do not form a functioning ecosystem. However, the trees provide habitat for long-tailed and on this basis meet the SNA criteria. Recommend inclusion as an SNA. It is also recommended that trees on adjacent properties also be assessed as these are also likely to provide habitat for long-tailed bats.

656 WAINUI ROAD

Visit date	Owner and property address
9 th July 2020	Patrick Day on behalf of P & B Day 656 Wainui Road, Raglan.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Regenerating native forest Mown grassland Garden and utility areas.	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

The SNA boundary extends over private property. Some of the property area remains essentially forest in character. However, areas close to the house comprise mown grassland, planted garden beds, utility areas including sheds and water tower.

Vegetation types, key species and species of note

Bush areas within and immediately adjacent to the property have a kanuka (*Kunzea robusta*) canopy and a wide variety of associated native tree and shrub species including tawa (*Beilschmiedia tawa*), rewarewa (*Knightia excelsa*), kohekohe (*Dysoxylum spectabile*), mahoe (*Melicytus ramiflorus*), *Olearia albida*, kawakawa (*Piper excelsum subsp. excelsum*), nikau palm (*Rhopalostylis sapida*), mangeao (*Litsea calicaris*) and silverfern (*Cyathea dealbata*).

Much of the forest area within the property and immediately adjacent is diverse and high-quality forest. However, areas immediately adjacent to the property within areas of garden and areas used for utility have much lower ecological value and are within the functional area of the property.

Fauna & habitat types observed

Tui, fantail, native pigeon, kingfisher and blackbird observed.

Landowner feedback during site visit

Property owner wishes to have garden and utility areas excluded from the SNA.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input type="checkbox"/> Very common, cover >50% ground area.	N/A
	2	<input type="checkbox"/> Common, 10%-50% ground area.	
	3	<input type="checkbox"/> Occasional, up to 10% ground area.	
	4	<input type="checkbox"/> None present.	
Stock	1	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	N/A
	2	<input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	<input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges.	
	4	<input type="checkbox"/> No damage.	
Fencing	1	<input type="checkbox"/> No fencing.	N/A
	2	<input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks.	
	3	<input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks.	
	4	<input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%.	N/A
	2	<input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	<input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare.	N/A
	2	<input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	<input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall)	N/A

	2	<input type="checkbox"/>	absent of uncommon. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/>	Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
		<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf letter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes, supports kanuka classified as Nationally Vulnerable. However, the classification of kanuka is precautionary based on risk of effects of myrtle rust.

CRITERIA		ASSESSMENT
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.	Yes. Areas of intact forest are an under-represented forest.
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	Yes. Areas outside the garden and utility areas meets this criterion.

CRITERIA		ASSESSMENT
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.	No
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No.

Boundary Assessment

Boundary of SNA should be readjusted to take account of garden and utility areas.

SNA Assessment

Intact areas of forest within the property and immediately adjacent meet SNA Section 11A of the WRPS criteria. However, areas of garden including mown grassland and planted borders as well as utility areas do not meet criteria and should be excluded from the SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 656 Wainui Road, (Property boundary in **red**, SNA boundary in **green**)



Recommended areas for removal from the SNA (shown in blue)



Photographs

Photo 1: Area of mown grassland within SNA.



Photo 2: Sheds within the garden within the edge of the SNA.



Photo 3: Planted border areas within SNA.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

Intact areas of forest within the property and immediately adjacent meet SNA Section 11A of the WRPS criteria. However, areas of garden including mown grassland and planted borders, as well as utility areas, do not meet criteria and should be excluded from the SNA. Recommend removal of these areas from the SNA.

658 TE AKAU WHARF ROAD

Visit date	Owner and property address
24 th July 2020	Seumas Macdonald 658 Te Akau Wharf Road, Te Akau.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Regenerating coastal forest Grassland Exotic scrub	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

The SNA boundary previously extended over the regenerating native coastal forest as well as weedy shrub communities. The latest version of the Planning Maps indicates that the weedy shrub communities have been removed from the SNA.

Vegetation types, key species and species of note

The vegetation with property comprises areas of grassland, exotic weedy scrub communities comprising gorse (*Ulex europaeus*), woolly nightshade (*Solanum mauritianum*) and regenerating coastal forest dominated by manuka/kanuka.

Fauna & habitat types observed

None recorded.

Landowner feedback during site visit

Property owner happy to accept areas of native vegetation on hillslopes as SNA. Wished to exclude areas of weedy scrub from the SNA. Latest Planning Maps show that exotic weedy shrub communities have been removed.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. x No damage.	
Fencing	1 2 3 4	x No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. x Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	

	2	<input type="checkbox"/>	Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No
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.	Likely. Regenerating native forest within property part of much larger SNA. Requires full assessment to determine full significance of vegetation.

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA		ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

Property owner happy to accept areas of native vegetation on hillslopes as SNA. Wished to exclude areas of weedy scrub from the SNA. Latest Planning Maps show that exotic weedy shrub communities have been removed.

SNA Assessment

The site visit confirmed that the area requested for removal from the SNA was exotic weedy scrub dominated by gorse and woolly nightshade. Removal of this area confirmed.

SECTION D MAPS AND PHOTOGRAPHS

Property map 658 Te Akau Wharf Road, (Property boundary in red, SNA boundary in green)



Approximate extent of area removed from the SNA (shown in blue)



Photographs

Photo 1: Grassland along coastal edge and area of exotic shrub on ridge removed from SNA



Photo 2: Regenerating coastal forest to be retained within SNA pending assessment of entire SNA



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The site visit confirmed that the area requested for removal from the SNA was exotic weedy scrub dominated by gorse and wooly nightshade. Removal of this area confirmed.

703B TE KOWHAI ROAD

Visit date	Owner and property address
11 th June 2020	Marshall & Kristine Stead 703B Te Kowhai Road, Te Kowhai.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Garden	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA extends over a private garden.

Vegetation types, key species and species of note

Landscaped garden environment that includes artificial ponds, areas of mown grassland. There are areas of native tree and shrub planting including totara (*Podocarpus totara* var. *totara*), kahikatea (*Dacrycarpus dacrydioides*), cabbage tree (*Cordyline australis*) kauri (*Agathis australis*), lemonwood (*Pittosporum eugenioides*), kanuka (*Kunzea robusta*) and manuka (*Leptospermum scoparium* var. *scoparium*). There are also a variety of exotic trees including walnut (*Juglans* sp.), plum (*Prunus* sp.), weeping willow (*Salix babylonica*), sweet chestnut (*Castanea sativa*) and liquidambar (*Liquidambar styraciflua*).

Lake edge supports planted native sedges (*Carex* spp.) and flax (*Phormium tenax*).

While there is a significant native component to the vegetation this is a planted landscaped environment and not appropriate to assess as an SNA.

Fauna & habitat types observed

Mallard and tui.

Landowner feedback during site visit

SNA extends over a garden area.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	N/A
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	N/A
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	N/A
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	N/A
Ground cover	1 2	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	N/A

	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No. Kauri classified as Nationally Vulnerable however this is a planted specimen in a garden environment and not appropriate to classify as significant.
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.	No

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

SNA extends over garden environment.

SNA Assessment

SNA extends over garden environment. Vegetation /habitat does not meet criteria in Section 11A of the WRPS and inappropriate to classify such vegetation as SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 703B Te Kowhai Road, (Property boundary in **red**, SNA boundary in **green**)



Recommended area for removal from SNA (shown in blue)



Photographs

Photo 1: Stand of planted native trees within garden.



Photo 2: View over most of the garden.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

SNA extends over garden environment. Vegetation /habitat does not meet criteria in Section 11A of the WRPS and inappropriate to classify such vegetation as SNA. Recommend removal from SNA.

759 WAINUI ROAD

Visit date	Owner and property address
18 th June 2020	Bernard Brown 759 Wainui Road, Raglan.
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Garden	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundary extends of private garden.

Vegetation types, key species and species of note

The SNA boundary extends over a small area of vegetation planted by the property owner at the rear of the property. The planting includes native species such as golden totara (*Podocarpus totara* 'Aurea') and lemonwood (*Pittosporum eugenioides*).

Fauna & habitat types observed

None recorded.

Landowner feedback during site visit

Vegetation within the SNA planted by the property owner.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	N/A
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	N/A
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	N/A
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	N/A
Ground cover	1 2	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	N/A

	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	N/A
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	<input type="checkbox"/>	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	No
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.	No

CRITERIA		ASSESSMENT
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA		ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary Assessment

SNA extends over garden environment.

SNA Assessment

SNA extends over garden environment. Vegetation /habitat does not meet criteria in Section 11A of the WRPS and inappropriate to classify such vegetation as SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 759 Wainui Road, (Property boundary in red, SNA boundary in green)



Recommended area for removal from the SNA (shown in blue)



Photographs

Photo 1: Vegetation within the SNA boundary



Photo 2: Vegetation to the side and rear of the property dominated by gorse



Photo 3: Gorse to the side of the property



SECTION E CONCLUSIONS AND RECOMMENDATIONS

SNA extends over garden environment. Vegetation /habitat does not meet criteria in Section 11A of the WRPS and inappropriate to classify such vegetation as SNA. Recommend removal from SNA.

996 PAPATAPU ROAD

Visit date	Owner and property address
17 th July 2020	Jihong Chen 996 Te Papatapu Road, Raglan
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Building platform Metalled areas Grassland Riparian wetland	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

Boundary of SNA extends around highly impacted property with building platform.

Vegetation types, key species and species of note

This is a highly variable site that encompasses a metalled building platform and area of mature pines and gum trees. There is an area on the roadside of the property that has recently been planted with native vegetation and areas dominated by exotic species such as *Agapanthus praecox* and *Watsonia sp.*

Away from the raised building platform to the north there is grassland with abundant cocksfoot (*Dactylis glomerata*) and creeping buttercup (*Ranunculus repens*). Within this area there are occasional native shrubs that have seeded into the grassland, including kanuka (*Kunzea robusta*).

As the stream is approached the ground becomes wetter and here the vegetation changes becoming dominated by native wetland species including cutty grass (*Carex geminata*), flax (*Phormium tenax*) and raupo (*Typha orientalis*). This is part of a wetland that extends well beyond the property boundary and only has a small footprint within the property itself.

Fauna & habitat types observed

Chaffinch, goldfinch, song thrush and kingfisher.

Landowner feedback during site visit

Property owner not present during site visit.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input checked="" type="checkbox"/> Common, 10%-50% ground area. <input type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input checked="" type="checkbox"/> No damage.	No stock
Fencing	1 2 3 4	<input checked="" type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	N/A
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	N/A
Ground cover	1 2 3	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor. <input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	Variable

	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	x	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	x	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Kanuka classified as Nationally Vulnerable.
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.	Yes. Wetland – only a small footprint within the property.
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	Yes. Wetland – only a small footprint within the property.
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.	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	No
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.	No

CRITERIA		ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	Yes. Part of wetland habitat extending along the stream corridor.

Boundary Assessment

Most of the property does not qualify as SNA and a boundary adjustment is therefore appropriate.

SNA Assessment

Most of the property does not meet SNA criteria i.e. building areas, grassland or areas dominated by exotic vegetation. A few kanuka specimens were recorded in the grassland and this triggers criterion 3 due to being classified as Nationally Vulnerable. The Nationally Vulnerable classification is due to the threat of the potential effects of myrtle rust. However, there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District and grow as a pasture weed in many localities, including within this property. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA.

The area of wetland area along the stream meets several SNA criteria and therefore this part of the property qualifies as SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 996 Te Papapatapu Road, (Property boundary in red, SNA boundary in green)



Recommended area for removal from the SNA (shown in blue)



Photographs

Photo 1: Grassland, exotic trees and kanuka



Photo 2: Building platform



Photo 3 Pines along edge of building area



Photo 4: Recent indigenous planting.



Photo 5: Wetland vegetation adjacent to the stream.



SECTION E CONCLUSIONS AND RECOMMENDATIONS

Most of the property does not meet SNA criteria i.e. building areas, grassland or areas dominated by exotic vegetation. The area of wetland area along the stream meets several SNA criteria and therefore this part of the property qualifies as SNA. Recommend adjustment of the SNA boundary to include only the wetland area adjacent to the stream.

1109 WHAANGA ROAD

Visit date	Owner and property address
14 th July 2020	Tim Newton 1109 Whaanga Road, Raglan
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal - Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Broadleaved podocarp forest Manuka/kanuka scrub	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundaries extend over broadleaved podocarp forest and areas of manuka/kanuka scrub that have re-invaded pasture.

Vegetation types, key species and species of note

On the day of the site visit there was low cloud over the property and rain. Access around the property was restricted due the weather conditions and vehicle access. Some assessment of vegetation within a restricted area was possible but a comprehensive assessment of the property was not possible. In part this also reflected the extent and complexity of the vegetation pattern across this property.

The property supports areas of broadleaved podocarp forest and extensive areas of manuka/kanuka scrub within hillslope pasture.

The broadleaved podocarp forest supports a wide variety of native tree and shrub species including rewarewa (*Knightia excelsa*), rimu (*Dacrydium cupressinum*), kohekohe (*Dysoxylum spectabile*), pigeonwood (*Hedycarya arborea*), hangehange (*Geniostoma ligustrifolium*) and mahoe (*Melicytus ramiflorus*). Nikau palm (*Rhopalostylis sapida*) is also present along with tree ferns mamaku (*Cyathea medullaris*), silverfern (*Cyathea dealbata*) and wheki (*Dicksonia squarrosa*).

Manuka (*Leptospermum scoparium*) and kanuka (*Kunzea robusta*) dominate the manuka/kanuka scrub areas. These areas typically have low species diversity and in many places are grazed beneath.

Fauna & habitat types observed

Tui and kingfisher.

Potential long-tailed bat habitat but no data.

Landowner feedback during site visit

Manuka and kanuka grow as pest species in this area and rapidly invade pasture if not controlled. Many areas identified as SNA are manuka and kanuka that has reinvaded pasture areas. Request these areas from SNA's. Happy to have the high value areas of bush as SNA and some areas have already been fenced and are in the process of being covenanted.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input type="checkbox"/> Very common, cover >50% ground area.	
	2	<input type="checkbox"/> Common, 10%-50% ground area.	
	3	x Occasional, up to 10% ground area.	
	4	<input type="checkbox"/> None present.	
Stock	1	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	In some localities.
	2	x Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	<input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges.	
	4	<input type="checkbox"/> No damage.	
Fencing	1	<input type="checkbox"/> No fencing.	Fencing in some localities.
	2	x Some fencing, for example, one side, or fence poorly maintained with large breaks.	
	3	<input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks.	
	4	<input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%.	
	2	<input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	x Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare.	Condition of mid-tier depends on locality.
	2	<input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	x Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	

	4	<input type="checkbox"/>	Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/>	Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent or uncommon. Leaf litter on remainder of forest floor.	Variable
	2	<input type="checkbox"/>	Scattered bare soil & rock. Ground vegetation <20%. Leaf litter on remainder of forest floor.	
	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	x	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	x	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Manuka is classified as At Risk (Declining) and kanuka is classified as Nationally Vulnerable due to the threat from myrtle rust.

CRITERIA		ASSESSMENT
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.	Yes. Broadleaved podocarp forest.
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.	No
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
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.	No
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.	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	Yes. Fenced sections of forest are healthy representative examples of broadleaved podocarp forest.

CRITERIA		ASSESSMENT
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.	No
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary assessment

Stands of intact broadleaved podocarp forest merit inclusion within the SNA. However, SNA boundaries should be adjusted to exclude manuka/kanuka scrub and very small low value modified fragments of forest that are difficult to manage and protect. The weather conditions at the time of the site visit and the extent of indigenous vegetation on the property meant that a comprehensive assessment of areas to be excluded from the SNA was not possible.

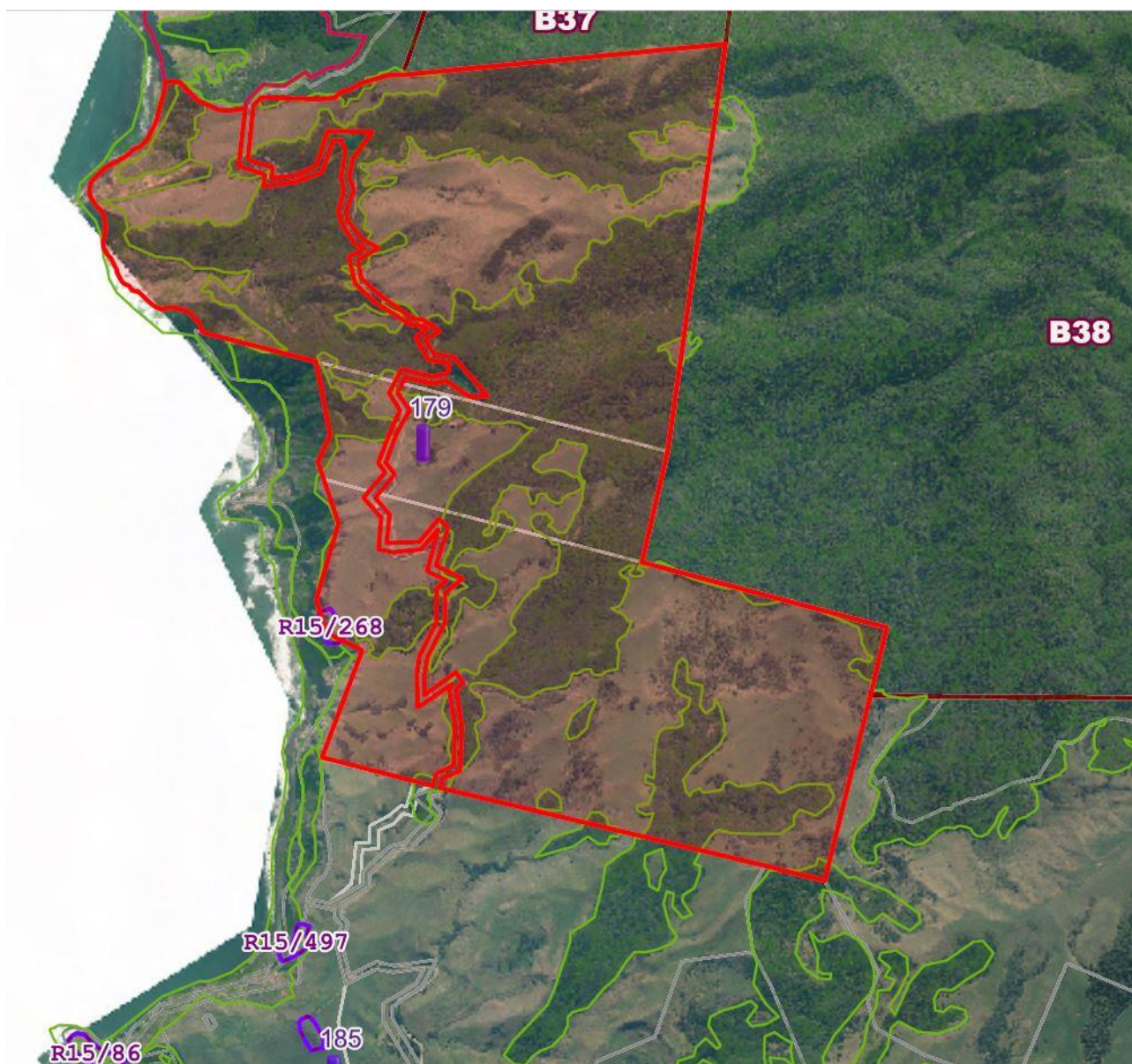
SNA Assessment

The areas of broadleaved podocarp forest meet at least two of SNA criteria and merit inclusion within the SNA. While manuka and kanuka are classified respectively as At-Risk and Nationally Vulnerable due to the threat from myrtle rust there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District and grow as a pasture weed in many localities, including within this property. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA.

There are clearly areas of manuka/kanuka within the property that warrant exclusion from the SNA, however a further site visit(s) will be required to determine which areas should be included and which should be excluded from the SNA.

SECTION D MAPS AND PHOTOGRAPHS

Property map 1109 Whaanga Road, (Property boundary in red, SNA boundary in green)



Photographs

No photographs available for the property due to camera failure. Likely linked to low light conditions.

SECTION E CONCLUSIONS AND RECOMMENDATIONS

The areas of broadleaved podocarp forest meet at least two of SNA criteria and merit inclusion within the SNA. While manuka and kanuka are classified respectively as At-Risk and Nationally Vulnerable due to the threat of myrtle rust there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District and grow as a pasture weed in many localities, including within this property. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA.

There are clearly areas of manuka/kanuka within the property that warrant exclusion from the SNA however a further site visit(s) will be required to determine which areas should be included and which should be excluded from the SNA.

1384 WHAANGA ROAD

Visit date	Owner and property address
5 th August 2020	Caroline Swann 1384 Whaanga Road, Raglan
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Broadleaved podocarp forest Manuka/kanuka scrub	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundaries extend over broadleaved podocarp forest and areas of manuka/kanuka scrub that have re-invaded pasture.

Vegetation types, key species and species of note

Property supports areas of broadleaved podocarp forest and extensive areas of manuka/kanuka scrub within hillslope pasture.

The broadleaved podocarp forest supports a wide variety of native tree and shrub species including tawa (*Beilschmiedia tawa*), rewarewa (*Knightia excelsa*), rimu (*Dacrydium cupressinum*), mangeao (*Litsea calicaris*), kohekohe (*Dysoxylum spectabile*), pigeonwood (*Hedycarya arborea*), hangehange (*Geniostoma ligustrifolium*) and mahoe (*Melicytus ramiflorus*). Nikau palm (*Rhopalostylis sapida*) is also present along with tree ferns mamaku (*Cyathea medullaris*), silverfern (*Cyathea dealbata*) and wheki (*Dicksonia squarrosa*). Lianas include supplejack (*Ripogonum scandens*) and *Metrosideros* spp.

Manuka (*Leptospermum scoparium*) and kanuka (*Kunzea robusta*) dominate the manuka/kanuka scrub areas. These areas have low species diversity and in many places are grazed beneath.

Fauna & habitat types observed

Tui, kingfisher and harrier.

Potential long-tailed bat habitat but no data.

Landowner feedback during site visit

Manuka and kanuka grow as pest species in this area and rapidly invade pasture if not controlled. Many areas identified as SNA are manuka and kanuka that has reinvaded pasture areas. Request these areas from SNA's. Happy to have the high value areas of bush as SNA.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1	<input type="checkbox"/> Very common, cover >50% ground area.	
	2	<input type="checkbox"/> Common, 10%-50% ground area.	
	3	<input checked="" type="checkbox"/> Occasional, up to 10% ground area.	
	4	<input type="checkbox"/> None present.	
Stock	1	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	
	2	<input checked="" type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	<input type="checkbox"/> Sign uncommon. Sign is often old. Only near edges.	
	4	<input type="checkbox"/> No damage.	
Fencing	1	<input checked="" type="checkbox"/> No fencing.	
	2	<input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks.	
	3	<input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks.	
	4	<input type="checkbox"/> Secure, intact fencing around whole area.	
Canopy condition	1	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%.	
	2	<input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	<input checked="" type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	<input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare.	
	2	<input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	<input checked="" type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	<input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent of uncommon. Leaf litter on remainder of forest floor.	Variable
	2	<input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	

	3	<input type="checkbox"/>	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	x	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	x	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Broadleaved podocarp forest supports <i>Metrosideros spp.</i> all of which are classified as Threatened in most cases due to threat from myrtle rust. Manuka is classified as At Risk (Declining) and kanuka is classified as Nationally Vulnerable due to the threat from myrtle rust.
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.	Yes. Broadleaved podocarp forest.
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	Yes. Fenced sections of forest are healthy representative examples of broadleaved podocarp forest.
10	<p>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.</p>	No

CRITERIA		ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary assessment

Stands of intact broadleaved podocarp forest merit inclusion within the SNA. However, SNA boundaries should be adjusted to exclude manuka/kanuka scrub and very small low value modified fragments of forest that are difficult to manage and protect.

SNA Assessment

The large areas of broadleaved podocarp forest meet several of SNA criteria and merit inclusion within the SNA. While manuka and kanuka are classified respectively as At-Risk and Nationally Vulnerable due to the threat from myrtle rust there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District and grow as a pasture weed in many localities, including within this property. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA.

There are also very small degraded fragments of broadleaved podocarp forest that are of low value and difficult to protect and manage. These areas, as well as areas of pasture, that have been included within the SNA, should also be excluded.

SECTION D MAPS AND PHOTOGRAPHS

Property map 1384 Whaanga Road, (Property boundary in red, SNA boundary in green)



Recommended areas for removal from SNA (shown in blue)



Photographs

Photo 1: Manuka and kanuka over pasture.

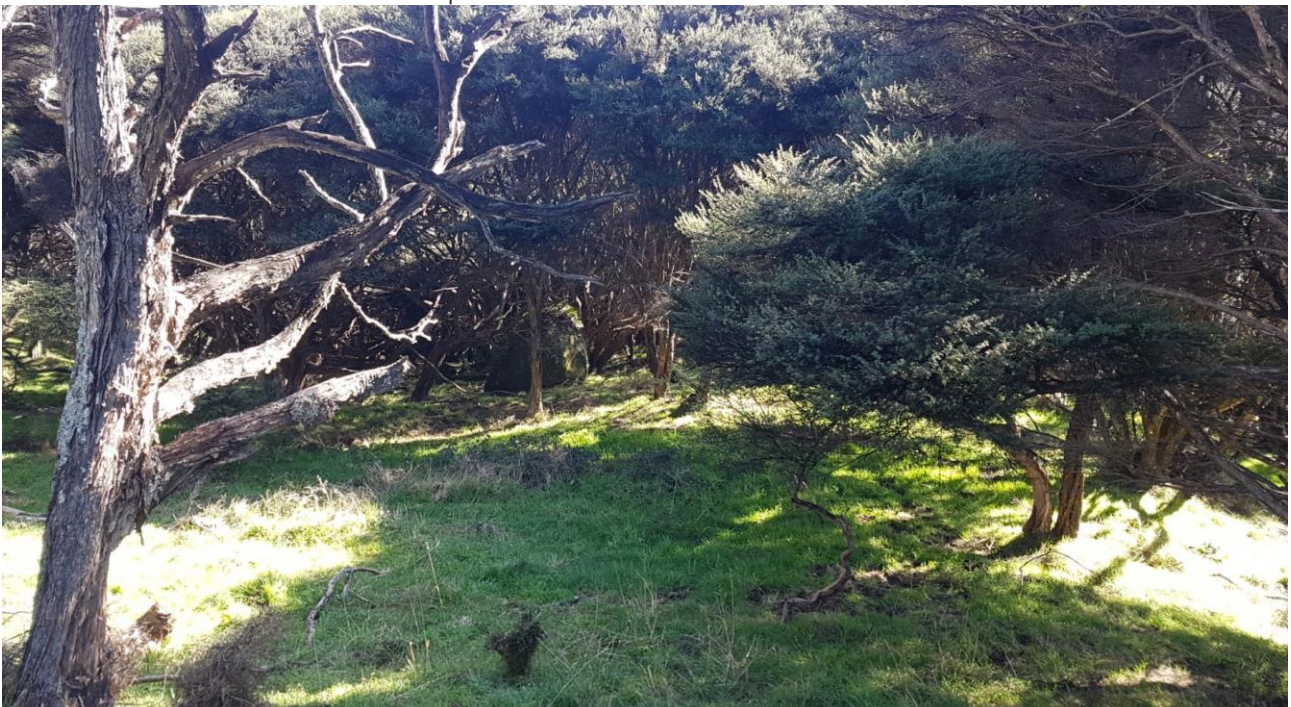


Photo 2: Early stage of manuka/kanuka invasion of pasture (small tussocks are manuka/kanuka)



Photo 3: Areas of manuka/kanuka over pasture.



Photo 4: Areas of manuka/kanuka over pasture in foreground, areas of broadleaved podocarp forest towards horizon



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The areas of broadleaved podocarp forest within the property meet several of SNA criteria and merit inclusion within the SNA. While manuka and kanuka are classified respectively as At-Risk and Nationally Vulnerable, due to the treat of myrtle rust, there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District and grow as a pasture weed in many localities, including within this property. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA. Recommend adjustment of the SNA boundaries to exclude manuka/kanuka scrub, very small low value areas of forest and pasture.

1665 WHAANGA ROAD

Visit date	Owner and property address
5 th August 2023	Phillip Swann 1665 Whaanga Road, Raglan
Inspecting ecologist and WDC Council Representative	Ecologist: John Turner (Technical Principal – Ecology, WSP Ltd) WDC Representative: Susan Chibnall (Policy Planner, WDC)

SECTION A SUMMARY OF EXISTING DATA FROM REPORTS AND DATABASES

Ecosystem types	Existing ecological data
Broadleaved podocarp forest Manuka/kanuka scrub over pasture	

SECTION B FIELD SURVEY ASSESSMENT

Boundary alignment notes

SNA boundaries extend over secondary broadleaved podocarp forest and areas of manuka/kanuka scrub that have re-invaded pasture.

Vegetation types, key species and species of note

Property supports extensive areas of broadleaved podocarp forest and manuka/kanuka scrub within hillslope pasture.

The secondary broadleaved podocarp forest supports a wide variety of native tree and shrub species including rewarewa (*Knightia excelsa*), rimu (*Dacrydium cupressinum*), mangeao (*Litsea calicaris*), puriri (*Vitex lucens*), kohekohe (*Dysoxylum spectabile*), pigeonwood (*Hedycarya arborea*), hangehange (*Geniostoma ligustrifolium*) and mahoe (*Melicytus ramiflorus*). Nikau palm (*Rhopalostylis sapida*) is also present along with tree ferns mamaku (*Cyathea medullaris*), silverfern (*Cyathea dealbata*) and wheki (*Dicksonia squarrosa*). Lianas include supplejack (*Ripogonum scandens*) and *Metrosideros* spp.

Manuka (*Leptospermum scoparium*) and kanuka (*Kunzea robusta*) dominate the manuka/kanuka scrub areas. These areas have low species diversity and in many places are grazed beneath.

Fauna & habitat types observed

Native pigeon, tui and harrier.

Potential long-tailed bat habitat but no data.

Landowner feedback during site visit

Manuka and kanuka grow as pest species in this area and rapidly invade pasture if not controlled. Many areas identified as SNA are manuka and kanuka that has reinvaded pasture areas. Request these areas from SNA's. Happy to have the high value areas of bush as SNA.

Indicator	Rating	Estimate (Tick appropriate level)	Notes Species etc
Ground cover weeds	1 2 3 4	<input type="checkbox"/> Very common, cover >50% ground area. <input type="checkbox"/> Common, 10%-50% ground area. <input checked="" type="checkbox"/> Occasional, up to 10% ground area. <input type="checkbox"/> None present.	
Stock	1 2 3 4	<input type="checkbox"/> Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area. <input type="checkbox"/> Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge. <input checked="" type="checkbox"/> Sign uncommon. Sign is often old. Only near edges. <input type="checkbox"/> No damage.	80% of broadleaved podocarp forest is fenced.
Fencing	1 2 3 4	<input type="checkbox"/> No fencing. <input type="checkbox"/> Some fencing, for example, one side, or fence poorly maintained with large breaks. <input type="checkbox"/> Most of boundary fenced, includes all areas where stock access likely. Some small recent breaks. <input checked="" type="checkbox"/> Secure, intact fencing around whole area.	Most of the high-quality forest is fenced. Some areas accessible to stock.
Canopy condition	1 2 3 4	<input type="checkbox"/> Very sparse foliage, many large holes, dieback>20%. <input type="checkbox"/> Foliage sparse in some areas, canopy holes uncommon. Some dieback. <input checked="" type="checkbox"/> Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback. <input type="checkbox"/> Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid-tier	1 2 3 4	<input type="checkbox"/> No browse palatable species 45cm-1.35m. Understorey bare. <input type="checkbox"/> Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species. <input checked="" type="checkbox"/> Moderate browse palatable species 45cm-1.35m. Other species relatively abundant. <input type="checkbox"/> Abundant browse palatable species and other species present.	
Ground cover	1 2 3	<input type="checkbox"/> Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent of uncommon. Leaf litter on remainder of forest floor. <input type="checkbox"/> Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor. <input type="checkbox"/> Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	Variable

	4	<input type="checkbox"/>	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf litter on remainder.	
Vine weeds	1	<input type="checkbox"/>	Very common, >50% canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% canopy cover.	
	3	x	Occasional, up to 10% canopy cover.	
	4	<input type="checkbox"/>	None present.	
Shrub/Tree Weeds	1	<input type="checkbox"/>	Very common, <50% understorey or canopy cover.	
	2	<input type="checkbox"/>	Common, 10%-50% understorey or canopy cover.	
	3	x	Occasional, up to 10% understorey or canopy cover.	
	4	<input type="checkbox"/>	None present.	

SECTION C RANKING & BOUNDARY ASSESSMENT

Assessment against Section 11A of the Waikato Regional Policy Statement – “Criteria for determining significance of indigenous biodiversity”

CRITERIA		ASSESSMENT
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.	No
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.	No
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. 	Yes. Broadleaved podocarp forest supports <i>Metrosideros spp.</i> all of which are classified as Threatened. In most cases due to threat from myrtle rust. Manuka is classified as At Risk (Declining) and kanuka is classified as Nationally Vulnerable due to the threat from myrtle rust.
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.	Yes. Broadleaved podocarp forest.
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.	No

CRITERIA		ASSESSMENT
6	<p>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:</p> <ul style="list-style-type: none"> • Wastewater treatment; • Wastewater renovation; • Hydroelectric power lakes (excluding Lake Taupo); • Water storage for irrigation. <p>Unless in those instances they meet the criteria in Whaley et al. (1995)</p>	No
7	<p>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.</p>	No
8	<p>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.</p>	No
9	<p>It is an area of indigenous vegetation or habitat that is a healthy and representative example of its type because:</p> <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. 	Yes. Fenced sections of forest are healthy representative examples of broadleaved podocarp forest.
10	<p>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.</p>	No

CRITERIA	ASSESSMENT
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, ecological buffer, linkage, or corridor and which is necessary to protect any site identified as significant under criteria 1-11 from external adverse effects.	No

Boundary assessment

Stands of intact broadleaved podocarp forest merit inclusion within the SNA. However, SNA boundaries should be adjusted to exclude manuka/kanuka scrub and very small low value modified fragments of forest that are difficult to manage and protect.

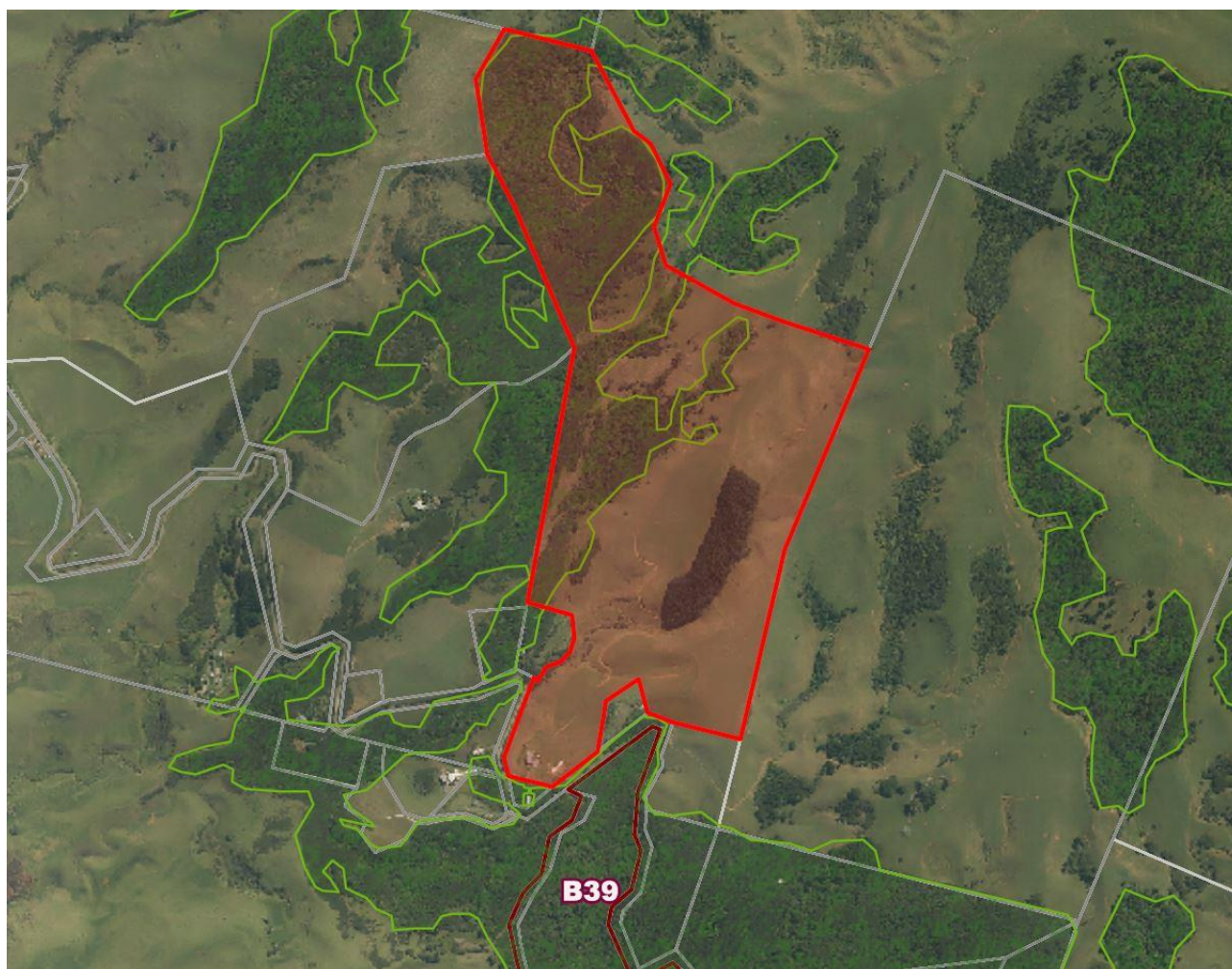
SNA Assessment

The large areas of broadleaved podocarp forest meet several of SNA criteria and merit inclusion within the SNA. While manuka and kanuka are classified as At-Risk and Nationally Vulnerable respectively due to the threat from myrtle rust, there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District and grow as a pasture weed in many localities, including within this property. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA.

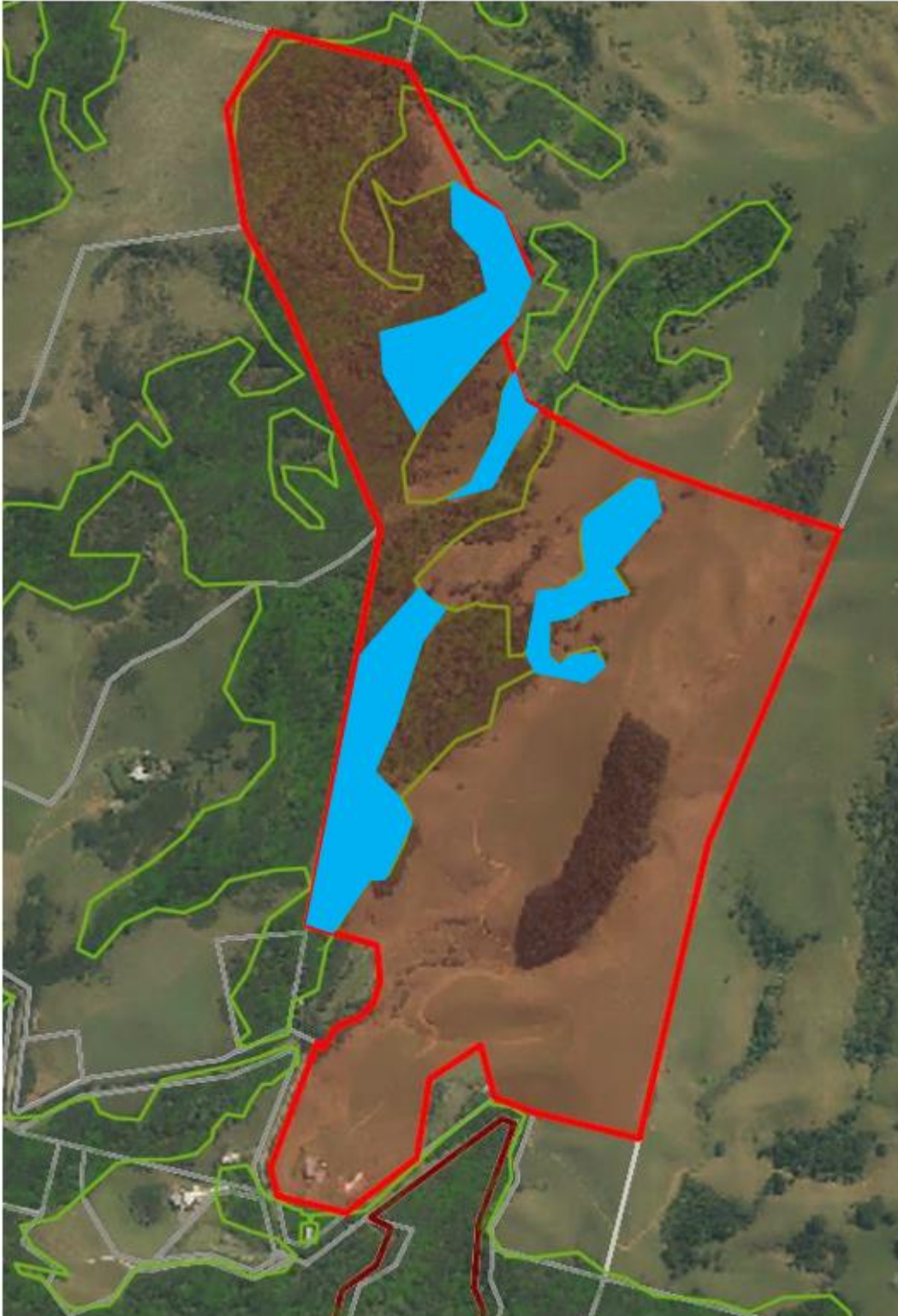
There are also very small degraded fragments of broadleaved podocarp forest that are of low value and difficult to protect and manage. These areas, as well as areas of pasture, that have been included within the SNA, should also be excluded.

SECTION D MAPS AND PHOTOGRAPHS

Property map 1665 Whaanga Road, (Property boundary in red, SNA boundary in green)



Recommended areas for removal from SNA (shown in blue)



Photographs

Photo 1: Secondary broadleaved podocarp forest



Photo 2: Manuka/kanuka scrub grazed beneath



Photo 3: Manuka/kanuka scrub (left), broadleaved podocarp forest (right)



SECTION E CONCLUSIONS AND RECOMMENDATIONS

The large areas of broadleaved podocarp forest within the property meet several of SNA criteria and merit inclusion within the SNA. While manuka and kanuka are classified as At-Risk and Nationally Vulnerable respectively, due to the threat from myrtle rust, there is currently no evidence that populations of these species are being significantly impacted by the disease, either nationally, or within the Waikato District. Both species are extremely common within the District and grow as a pasture weed in many localities, including within this property. There appears to be little justification at this time for including areas of manuka/kanuka that have regenerated over pasture within SNA's or indeed using the status of these species as a basis for determining an SNA. Recommend adjustment of the SNA boundaries to exclude manuka/kanuka scrub, very small low value areas of forest and pasture.

