

DRAFT

A CLASSIFICATION OF
SIGNIFICANT NATURAL AREAS
IN WHAKATANE DISTRICT

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1. INTRODUCTION

Territorial local authorities are required to provide for the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna (Section 6(c) of the Resource Management Act 1991). Whakatane District Council is currently working through this process, and 185 unprotected or partially-protected Significant Natural Areas (SNAs) have been identified within Whakatane District (Wildland Consultants 2010a). A report completed in 2010 discussed two options for categorising these SNAs: one based on the ecological evaluation criteria in the Regional Policy Statement and the other on threatened land environment classifications (Wildland Consultants 2010b).

The Council has consulted with stakeholders and, as an outcome of that process, has requested that a study be undertaken to identify SNAs in Whakatane District that have the highest priority for protection from vegetation clearance. Sites are to be identified based on threatened land environment classifications, the national priorities for protection of biodiversity on private land (MfE and DOC 2007), and the proposed national policy statement on biodiversity.

2. BACKGROUND

The national priorities for the protection of biodiversity on private land (MfE and DOC 2007) and the proposed national policy statement on indigenous biodiversity recognise the importance of natural areas on land environments where 20% or less of indigenous cover remains. These land environments are classified as 'Acutely threatened' or 'Chronically Threatened' (for an explanation of threatened land environment classifications, refer to Appendix 1). Priority is also to be given to sand dunes, wetlands, 'originally rare' ecosystem types, and habitats of threatened indigenous species.

3. METHODS

3.1 Applying threatened land environments as a framework for classification

Site boundaries of all unprotected and partially-protected SNAs were overlaid on a digital map of threatened land environments, and the area of each SNA within each land environment classification was calculated. For each site, the proportions within 'Acutely Threatened' and Chronically Threatened' land environments were added together. The SNAs were then divided into groups, based on the proportion of their area within land environments that are 'Acutely Threatened' or Chronically Threatened', i.e. greater than 50% or less than 50%.

The data set was examined to identify sites which are wholly or partly within 'Unclassified' land environments, including open water habitats such as lakes or estuaries. If the unclassified portions were large enough to affect which group a SNA was assigned to, digital aerial photographs and maps of the SNA and threatened land environment classifications were assessed visually. The unclassified portion was then

assigned to the predominant surrounding land environment classification, based on adjacent land environments on terrain of a similar contour and elevation. For example, the 'Nukuhou' SNA comprises estuarine wetland vegetation at the mouth of the Nukuhou Stream. To the west, the SNA is bounded by a hillslope that is within an 'Underprotected' land environment but other low-lying areas next to the stream are within an 'Acutely Threatened' land environment. Therefore, 'Nukuhou' was reclassified as occurring on an 'Acutely Threatened' land environment.

If the unclassified portion of a site was small enough that it would not alter the classification of a site, the unclassified portion was not re-assigned to another land environment.

For sites with less than 50% of their area within 'Acutely Threatened' or 'Chronically Threatened' land environments, existing published and unpublished information (refer to the 'Reference' section) was reviewed to determine if the site meets one of the other national priorities for the protection of biodiversity on private land:

- National Priority 2: Sand dunes and wetlands;
- National Priority 3: Originally rare ecosystems;
- National Priority 4: Habitats of threatened species.

4. FINDINGS

4.1 SNAs with greater than 50% of site area within 'Acutely Threatened' or 'Chronically Threatened' land environments

Fifty-five (55) SNAs comprising c.2,311 ha have greater than 50% of their area within 'Acutely Threatened' or 'Chronically Threatened' land environments (refer to Table 2 below).

Table 2: Unprotected and partially-protected Significant Natural Areas (SNAs) in Whakatane District which have more than 50% of their area within 'Acutely Threatened' or 'Chronically Threatened' land environments.

SNA Name	Area (ha)	% AT+CT
Mangate Stream Wetlands	22.9	100%
Matai Road covenant	289.6	100%
Rimu Forest Remnant	1.0	100%
Tumutara Road Wetland	3.3	100%
Awahou Kahikatea	1.0	100%
Braemar Road	1.4	100%
Earnest Pukatea	0.2	100%
Kawerau Road Kanuka	0.5	100%
Keir Kanuka	2.4	100%
Kopuatawhiti	21.0	100%
McGougan Kahikatea	0.7	100%
Park Road Kanuka	4.8	100%
Pukaahu Spring	0.0	100%
Tebutt Kahikatea	1.3	100%
Thornton Road Dunes	30.3	100%
Titoki	1.6	100%

SNA Name	Area (ha)	% AT+CT
Waioho Kahikatea	1.4	100%
Waioho Stream	0.0	100%
Whakatane River Oxbow	4.6	100%
White Pine Bush Scenic Reserve	5.1	100%
Tarawera Cut Extension	4.1	100%
Waiotane Stream	5.0	100%
*Nukuhou	9.4	100%
*Whakatane Estuary	149.4	100%
*Kawerau Pond	8.4	100%
*Walker Road Wetlands	2.5	100%
*Mangaone Stream Wetlands	4.9	100%
*Tarawera Road Wetland	6.4	100%
Ohope Spit	104.2	99%
Ohope Sand Dunes	45.7	99%
Tarawera River B	3.7	99%
*Tunanui Stream Inlet	13.2	99%
Waiaute Stream Wetlands	61.8	98%
Orini Stream	4.5	98%
*Uretara Island Scenic Reserve Extension	35.3	98%
Stewardship Area (Unnamed, near Fort Galatea)	99.9	97%
Pokairoa Road Wetlands	31.7	96%
*Needham Ponds	2.6	96%
Kohika	44.6	94%
Te Kairere Wetland	2.6	91%
Lake Tahuna Wetland	40.4	87%
*Lake Taikahu	6.1	87%
Otamarakau-Matata-Whakatane Dunes	750.0	85%
Bookers	30.1	85%
Nukuhou Saltmarsh Stewardship Area	15.0	82%
Young Wetlands	26.3	81%
Stewardship Area ("Matahina Forest")	273.8	80%
*Awaraputuna Stream	8.7	80%
Harbour Road	8.9	79%
Tukiri Block	54.5	75%
Lambert's Wetland	18.5	69%
Tarawera River Kanuka	1.8	67%
Waiohau Wetland	7.3	60%
Lake Onerahi Wetland	28.9	53%
Tumurau Extension	7.6	51%
Total	2,310.9	

* These SNAs were placed in this category after portions within 'Unclassified' land environments were reclassified as 'Acutely Threatened' or 'Chronically Threatened'.

4.2 SNAs with less than 50% of site area within 'Acutely Threatened' or 'Chronically Threatened' land environments

One hundred and thirty (130) SNAs comprising c.53,907 ha have less than 50% of their area within 'Acutely Threatened' or 'Chronically Threatened' land environments (refer to Table 3 below). Twenty-six (26) of these SNAs comprise wetlands, so they satisfy 'National Priority 2' for the protection of biodiversity on private land. In addition, parts of a further nine SNAs are wetlands. Thirty-three (33) SNAs meet 'National Priority 4' because they are known habitats of one or more 'Threatened' or 'At Risk' species. A further twenty-four (24) SNAs may, based on historic records or

records from contiguous natural areas, provide habitat for threatened species. Two sites include examples of an originally rare ecosystem type so satisfy 'National Priority 3'.

The sites listed in Table 3 include c.1,862 ha of indigenous vegetation on 'Acutely Threatened' or 'Chronically Threatened' land environments. Most of this area is in the following SNAs: 'Waikanapiti' (c.363 ha), 'Mangawhio Stream' (c.326 ha), 'Matata-Maungawhakamana Natural Area Corridor Extension' (c.237 ha), and 'Putauaki' (c.121 ha).

Coastal forest has been greatly reduced in extent, both nationally and locally. Sites in Table 3 that include coastal forest are 'Ohinekoao', the northern parts of the 'Matata-Maungawhakamana Natural Area Corridor', 'Awakaponga', 'Kohi Point', 'West End', 'Ohope Scenic Reserve', 'Ohope Scenic Reserve Extension', 'Pohutukawa Remnant', 'Ohope Pohutukawa Remnants', 'Tauwhare', and 'Clayton Place'.

Table 3: Unprotected and partially protected Significant Natural Areas (SNAs) in Whakatane District that have less than 50% of their extent within 'Acutely Threatened' (AT) or 'Chronically Threatened' (CT) land environments. The final four columns indicate if the site meets (✓) or may meet (?) one of the other national priorities for the protection of indigenous biodiversity on private land (MfE and DOC 2007).

SNA Name	Area (ha)	% AT+CT	National Priorities			
			Wetland	Dune	Threatened Species ¹	Originally Rare
Wahieroa Wetland	6.0	45%	✓		✓	
Mangapapa Stream	42.9	45%			✓	
Rotoehu Extension	49.8	43%			✓	
Eivers' Wetland	2.1	42%	✓			
Waikanapiti	904.2	40%			?	
Moetahanga Stream	95.8	37%				
Maungawhakamana	235.3	36%				
Wainui Wetland	6.6	35%	✓		✓	
Puhipuhi Road	84.6	35%				
Tuketoromiro	25.2	32%				
Sisam's Round Bush	117.0	31%				
Glenholme Road Kahikatea	3.1	30%				
Mangaone Extension	141.8	27%			✓	
Rangitaiki River	26.0	27%				
Parimahana extension	297.6	26%	part		✓	part: geothermal
Putauaki	473.0	26%				
Matata-Maungawhakamana Natural Area Corridor Exten	986.2	24%			?	
⁴ Maawhai	2.5	23%				
Lake Aniwhenua	268.7	23%	✓		✓	
Sisam Wetland 4	2.0	20%	✓			
Lake Otumahi	32.1	20%	✓		✓	
Onerahi Wetland	1.7	17%	✓			
Mangawhio Stream	2016.2	16%	small parts			
Waipapa Stream	550.7	15%				
Waiwhero Road Wetland	6.5	15%	✓			

SNA Name	Area (ha)	% AT+CT	National Priorities			
			Wetland	Dune	Threatened Species ¹	Originally Rare
Wheao	47.8	14%				
Richardson's Wetland	1.9	13%	✓			
Ohinetewai	44.1	10%				
Lake Pupuharau	47.4	9%	✓		✓	
Ohinekoao	89.3	9%			?	
Te Rake	56.3	9%			?	
Sisam Wetland 5	0.7	8%	✓			
Uretara Island Scenic Reserve	88.8	8%	part			
Tarawera River Raupo Wetland	0.5	8%	✓			
³ Lake Matahina	433.2	7%	✓		✓	
Minginui Stream	26.2	6%				
Manawahe Scarp	191.3	6%				
Hauone Stream Wetland	2.8	6%	✓			
Tuhoe Forest Wetlands	12.4	5%	✓		✓	
Te Kooti Road Block	176.4	5%	part			
Whitiwhiti	69.1	5%	part		✓	
Tarawera Scarp	169.2	4%				
Ohope Pohutukawa Remnants	11.8	4%				
Tauwhare	21.5	4%	small part			
Kiwinui Foothills	141.1	4%				
Te Urewera Extension (Tuhoe Forest)	953.7	3%			?	
Waiotane Scenic Reserve Extension	340.3	3%			✓	
Waiohau Extension	181.5	3%				
Sisam's Trig Bush	145.4	3%	small part			
Mitchell Property	52.5	2%				
Watchorn's Quarry	62.0	2%				
Rewatu Road	340.5	2%				
Innes Smith Forest	84.0	2%				
Hiwarau (Part)	184.9	2%	part			
Otuhepo	44.4	2%			✓	
Waikokopu Stream	1790.9	2%			✓	
Awakaponga	400.6	2%			?	
Tahuna Road	76.6	1%				
Kaihua	494.9	1%			?	
Awakeri Extension	569.7	1%			?	
Heruiwi	205.0	1%			✓	
² Ohiwa Harbour	1346.9	0%	✓		✓	
Kohi Point	189.9	0%			✓	
Sisam's "Office" and "Gums" Reserves	43.0	0%				
Brosnahan's	298.0	0%				
Hanamahihi	1083.6	0%			?	
Taiarahia	1785.0	0%			✓	
Waimana Gorge Scenic Reserve	238.3	0%			?	
Ohope Scenic Reserve	495.0	0%				
West End	8.8	0%				
Tahora P.F. Olsen	53.2	0%				
Ngati Awa	111.6	0%			?	
Taneatua Foothills	89.1	0%				
Ridge Road	90.3	0%				
Whakatane River	7429.4	0%			✓	
Te Whaiti 'B'	1705.5	0%			✓	
Waikarewhenua	159.6	0%			?	

SNA Name	Area (ha)	% AT+CT	National Priorities			
			Wetland	Dune	Threatened Species ¹	Originally Rare
Tauwharemanuka	790.8	0%			?	
Ruatahuna (Part)	16661.3	0%			✓	
Raroa-Matitere	508.1	0%	Small parts		✓	
Waimana River	1499.3	0%			✓	
² Islets near Ohakana Island	0.4	0%				
Park Road Wetland	1.0	0%	✓			
Ouaki Creek Wetlands	4.6	0%	✓			
Clayton Place	0.8	0%			?	
⁴ Te Pae o Tuhoë	298.8	0%			?	
Waimana Forest Farms	56.5	0%			?	
Waimana Gorge Scenic Reserve Extension	152.7	0%			?	
Maungapohatu I	92.8	0%			?	✓Cliffs
Maungapohatu II	1882.0	0%			✓	
Te Pohue	625.3	0%			?	
Parau Stream Headwaters	147.2	0%			?	
Tawhana	243.8	0%			?	
Mangamako Stream	248.9	0%			✓	
Waingarara Stream	84.8	0%				
Pekepeke Stream	28.4	0%			✓	
Waiotahi Conservation Area Extension	233.5	0%			✓	
Tarepe Stream	29.2	0%				
Horowera	22.5	0%			?	
Tuhoë Forest 3	44.9	0%			?	
Rust Forest	16.0	0%				
Arawhatawhata	96.8	0%			?	
Wekanui	38.9	0%				
Tuhoë Forest 1	9.9	0%				
Tuhoë Forest 2	23.8	0%				
Tait's Forest	51.9	0%				
Puhikoko	611.5	0%				
Pukehoko Forest	81.8	0%			✓	
Ohope Scenic Reserve Extension	3.2	0%			✓	
⁴ Stanley Falls Scenic Reserve	22.1	0%				
Asplin Forest	14.9	0%				
Cranswick Kahikatea	1.6	0%				
Mangatoetoe Stream Wetland	1.2	0%	✓		✓	
Matamanu	37.1	0%	✓			
McLean's Forest	29.5	0%				
Millar Bush	6.5	0%				
Murphy Road	18.1	0%				
Pohutukawa Remnant	3.7	0%				
Sisam Forest Remnant 1	5.8	0%				
Sisam Forest Remnant 2	11.3	0%				
Sisam Wetland 1	2.3	0%	✓			
Sisam Wetland 2	1.7	0%	✓			
Sisam Wetland 3	2.6	0%	✓			
Sisam's "Discing Reserve"	23.9	0%				
Te Kooti Road Tawa Forest	3.3	0%				
Te Rereoterangi	39.8	0%	part			
Tuhua Wetland	6.2	0%	✓		✓	
Williams Wetland	9.6	0%	✓		✓	

SNA Name	Area (ha)	% AT+CT	National Priorities			
			Wetland	Dune	Threatened Species ¹	Originally Rare
Wordsworth Covenant Extension	7.7	0%			✓	
Totara Road	3.4	0%	✓			
Sum	53,907					

¹ Species classified as Threatened or At Risk as per Miskelly *et al.* 2008 or de Lange *et al.* 2009.

² These sites have 100% and 50% (respectively) of their area 'Unclassified'. Adjacent land environments are predominantly 'Underprotected'.

³ Lake Matahina is within an 'Unclassified' land environment and is surrounded by a narrow strip of an 'Underprotected' land environment, within a wider area that is 'Chronically Threatened'.

⁴ These sites had previously been identified as being legally protected, so have not been assessed. No information is available for threatened species.

4.4 Priority sites for protection from vegetation clearance

Unprotected and partially protected significant natural areas in Whakatane District that have the highest priority for protection from vegetation clearance include:

- SNAs with half or more of their land area on acutely threatened or chronically threatened land environments (i.e. Table 2);
- Wetlands and sand dunes (including the portion of 'Hiwarau (part)' that includes a coastal wetland (refer to Figure 1));
- Originally rare ecosystem types;
- Coastal forest (including the coastal part of 'Matata-Maungawhakamana Natural Area corridor, as shown in Figure 2);
- SNAs that are small and that are not contiguous with a larger natural area, so that vegetation clearance would result in the loss of biodiversity and/or reduce the long-term viability of the site.

The one hundred and eleven (111) sites (including coastal parts of two SNAs) that satisfy one or more of these conditions are listed in Table 4. The remaining 76 sites (including inland parts of two SNAs) are listed in Table 5. This method should not be used to infer the relative ecological significance or importance of the sites and should not be used as a basis for determining or prioritising management actions.

Table 4: Unprotected and partially protected significant natural areas in Whakatane District that have the highest priority for protection from vegetation clearance.

SNA Name	Area (ha)
Asplin Forest	14.9
Awakaponga	400.6
Awahou Kahikatea	1.0
Awaraputuna Stream	8.7
Bookers	30.1
Braemar Road	1.4
Clayton Place	0.8

SNA Name	Area (ha)
Cranswick Kahikatea	1.6
Earnest Pukatea	0.2
Eivers' Wetland	2.1
Glenholme Road Kahikatea	3.1
Harbour Road	8.9
Hauone Stream Wetland	2.8
Hiwarau (Part), coastal	39.0
Islets near Ohakana Island	0.4
Kawerau Pond	8.4
Kawerau Road Kanuka	0.5
Keir Kanuka	2.4
Kohi Point	189.9
Kohika	44.6
Kopuatawhiti	21
Lake Aniwhenua	268.7
Lake Matahina	433.2
Lake Onerahi Wetland	28.9
Lake Otumahi	32.1
Lake Pupuwharau	47.4
Lake Tahuna Wetland	40.4
Lake Taikehu	6.1
Lambert's Wetland	18.5
Maawhai	2.5
Mangaone Stream Wetlands	4.9
Mangate Stream Wetlands	22.9
Mangatoetoe Stream Wetland	1.2
Matai Road covenant	289.6
Matamanu	37.1
Matata-Maungawhakamana Natural Area Corridor Exten (coastal)	167.0
Maungapohatu I	92.8
McGougan Kahikatea	0.7
Millar Bush	6.5
Minginui Stream	26.2
Murphy Road	18.1
Needham Ponds	2.6
Nukuhou	9.4
Nukuhou Saltmarsh Stewardship Area	15
Ohinekoao	89.3
Ohiwa Harbour	1,346.9
Ohope Pohutukawa Remnants	11.8
Ohope Sand Dunes	45.7
Ohope Scenic Reserve	495
Ohope Scenic Reserve Extension	3.2
Ohope Spit	104.2
Onerahi Wetland	1.7
Orini Stream	4.5
Otamarakau-Matata-Whakatane Dunes	750
Ouaki Creek Wetlands	4.6
Parimahana extension	297.6
Park Road Kanuka	4.8
Park Road Wetland	1
Pohutukawa Remnant	3.7
Pokairoa Road Wetlands	31.7
Pukaahu Spring	0
Rangitaiki River	26
Richardson's Wetland	1.9

SNA Name	Area (ha)
Rimu Forest Remnant	1
Rust Forest	16
Sisam Forest Remnant 1	5.8
Sisam Forest Remnant 2	11.3
Sisam Wetland 1	2.3
Sisam Wetland 2	1.7
Sisam Wetland 3	2.6
Sisam Wetland 4	2
Sisam Wetland 5	0.7
Stewardship Area ("Matahina Forest")	273.8
Stewardship Area (Unnamed, near Fort Galatea)	99.9
Tarawera Cut Extension	4.1
Tarawera River B	3.7
Tarawera River Kanuka	1.8
Tarawera River Raupo Wetland	0.5
Tarawera Road Wetland	6.4
Tauwhare	21.5
Te Kairere Wetland	2.6
Te Kooti Road Tawa Forest	3.3
Tebutt Kahikatea	1.3
Thornton Road Dunes	30.3
Titoki	1.6
Totara Road	3.4
Tuhoe Forest 1	9.9
Tuhoe Forest Wetlands	12.4
Tuhua Wetland	6.2
Tukiri Block	54.5
Tumurau Extension	7.6
Tumutara Road Wetland	3.3
Tunanui Stream Inlet	13.2
Uretara Island Scenic Reserve	88.8
Uretara Island Scenic Reserve Extension	35.3
Wahioroa Wetland	6
Waiaute Stream Wetlands	61.8
Wainui Wetland	6.6
Waiohau Wetland	7.3
Waioho Kahikatea	1.4
Waioho Stream	0
Waiotane Stream	5
Waiwhero Road Wetland	6.5
Walker Road Wetlands	2.5
West End	8.8
Whakatane Estuary	149.4
Whakatane River Oxbow	4.6
White Pine Bush Scenic Reserve	5.1
Williams Wetland	9.6
Wordsworth Covenant Extension	7.7
Young Wetlands	26.3

Table 5: Unprotected and partially protected significant natural areas in Whakatane District that are less threatened by vegetation clearance than sites listed in Table 4 (above).

SNA Name	Area (ha)
Arawhatawhata	96.8
Awakeri Extension	569.7
Brosnahan's	298
Hanamahihi	1,083.6
Heruiwi	205
Hiwarau (Part), inland	146.0
Horowera	22.5
Innes Smith Forest	84
Kaihua	494.9
Kiwiniui Foothills	141.1
Manawahe Scarp	191.3
Mangamako Stream	248.9
Mangaone Extension	141.8
Mangapapa Stream	42.9
Mangawhio Stream	2,016.2
Matata-Maungawhakamana Natural Area Corridor Extension (inland)	819.0
Maungapohatu II	1882
Maungawhakamana	235.3
McLean's Forest	29.5
Mitchell Property	52.5
Moetahanga Stream	95.8
Ngati Awa	111.6
Ohinetewai	44.1
Otuhepo	44.4
Parau Stream Headwaters	147.2
Pekepeke Stream	28.4
Puhikoko	611.5
Puhipuhi Road	84.6
Pukehoko Forest	81.8
Putauaki	473
Raroa-Matatere	508.1
Rewatu Road	340.5
Ridge Road	90.3
Rotoehu Extension	49.8
Ruatahuna (Part)	16,661.3
Sisam's "Discing Reserve"	23.9
Sisam's "Office" and "Gums" Reserves	43
Sisam's Round Bush	117
Sisam's Trig Bush	145.4
Stanley Falls Scenic Reserve	22.1
Tahora P.F. Olsen	53.2
Tahuna Road	76.6
Taiarahia	1785
Tait's Forest	51.9
Taneatua Foothills	89.1
Tarawera Scarp	169.2
Tarepe Stream	29.2
Tauwharemanuka	790.8
Tawhana	243.8
Te Kooti Road Block	176.4
Te Pae o Tuhoe	298.8
Te Pohue	625.3
Te Rake	56.3

SNA Name	Area (ha)
Te Rereoterangi	39.8
Te Urewera Extension (Tuhoe Forest)	953.7
Te Whaiti 'B'	1,705.5
Tuhoe Forest 2	23.8
Tuhoe Forest 3	44.9
Tuketoromiro	25.2
Waikanapiti	904.2
Waikarewhenua	159.6
Waikokopu Stream	1,790.9
Waimana Forest Farms	56.5
Waimana Gorge Scenic Reserve	238.3
Waimana Gorge Scenic Reserve Extension	152.7
Waimana River	1,499.3
Waingarara Stream	84.8
Waiohau Extension	181.5
Waiotahi Conservation Area Extension	233.5
Waiotane Scenic Reserve Extension	340.3
Waipapa Stream	550.7
Watchorn's Quarry	62
Wekanui	38.9
Whakatane River	7,429.4
Wheao	47.8
Whitiwhiti	69.1

5. CONCLUSIONS

Fifty-five (55) SNAs comprising c.2,311 ha have greater than 50% of their area within 'Acutely Threatened' or 'Chronically Threatened' land environments. One hundred and thirty (130) SNAs comprising c.53,907 ha have less than 50% of their area within 'Acutely Threatened' or 'Chronically Threatened' land environments but, of these sites:

- 26 SNAs comprise wetlands;
- parts of a further nine SNAs are wetlands;
- 33 SNAs are known habitats of one or more 'Threatened' or 'At Risk' species;
- 24 SNAs may, based on historic records or records from contiguous natural areas, provide habitat for threatened species;
- two SNAs include examples of an originally rare ecosystem type;
- 11 SNAs include coastal forest, a habitat type that has been greatly reduced in extent, both nationally and locally.

One hundred and eleven (111) unprotected and partially protected significant natural areas in Whakatane District are of the highest priority for protection from vegetation clearance including:

- SNAs with half or more of their land area on acutely threatened or chronically threatened land environments;

- wetlands and sand dunes;
- originally rare ecosystem types;
- coastal forest;
- SNAs that are small and that are not contiguous with a larger natural area, so vegetation clearance would result in the loss of biodiversity and/or reduce the long-term viability of the site.

All 185 of the SNAs in Whakatane District are of ecological significance, and this study should not be used to infer the relative ecological significance of sites or their importance, or be used as a basis for determining or prioritising management actions.

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THREATENED LAND ENVIRONMENT CLASSIFICATIONS

Threatened land environment classifications are based on the Land Environments of New Zealand (Landcare Research and MfE 2003) and recognises five levels of threat classification:

- **Acutely Threatened:** A land environment in which less than 10% of indigenous habitat remains.
- **Chronically Threatened:** A land environment in which 10% - 20% of indigenous habitat remains.
- **At Risk:** A land environment in which 20%-30% of indigenous habitat remains.
- **Critically Underprotected:** A land environment in which more than 30% of indigenous habitat remains, but less than 10% is protected.
- **Underprotected:** A land environment in which more than 30% of indigenous habitat remains, but less only 10% - 20% is protected.
- **Better Protected and Less Reduced:** A land environment in which more than 30% of indigenous habitat remains, and more than 20% is protected.