

Otorohanga District SNA: Kawhia coastline dunes

SITE_NUMBER	OT0712
SITE_NAME	Kawhia coastline dunes
SITE_DESCRIPTION	This privately owned site comprises a relatively large coastal dune system that extends c.7km along the Kawhia Coastline from (and including) Pukeatua hill in the north to c.800m from Tauratahi Point in the South and to c.2km from the sea. The dune system provides habitat for Threatened and At Risk indigenous flora and fauna as well as international migratory birds. Hot water (Te Puia) springs are present above the low-tide mark in the south of the site and multiple archaeological sites are present in the northern portion of the site. The site is contiguous with two other SNA sites: OT0868-Kahua Point Marginal Strip and OT0005, and is contiguous with 2003 SNA-001 Lake Parangi. Dune systems are a regionally and nationally uncommon habitat type and these dunelands are a representative example even though habitat quality has been considerably reduced by modification and surrounding land use. Dune care programmes and protection from threats (including development) are probably required to ensure ecological sustainability over time.
AREA_HA	315.51
ECOSYSTEM_TYPE	Sand Dune
SIGNIFICANT_FLORA	<i>Pimelea arenaria</i> (Sand daphne) (Declining) (DOC 2010a), and <i>Ficinia spiralis</i> (pingao) (Relict) (Wildland Consultants 2003).
LIKELY_FLORA	<i>Poa billardierei</i> (sand tussock) (Declining) is present at the adjacent SNA OT0007 - Raukumura Beach Dunelands (DOC 2010a) and may also be present within this site.
SIGNIFICANT_FAUNA	<i>Egretta sacra sacra</i> (reef heron) (Nationally Vulnerable), <i>Charadrius obscurus aquilonius</i> (Northern New Zealand dotterel) (Nationally Vulnerable), <i>Charadrius bicinctus bicinctus</i> (banded dotterel) (Nationally Vulnerable), <i>Hydroprogne caspia</i> (Caspian tern) (Nationally Vulnerable), and <i>Limosa lapponica baueri</i> (eastern bar-tailed godwit) (Migrant) (Wildland Consultants 2003).
LIKELY_FAUNA	
OTHER_FEATURES	Twenty-five "Maori period" archaeological sites are present within the site boundary. Twenty-three of these are middens, one contains a midden and an intact earth oven, and one is a pit/mound/terrace (EW Archaeological Sites 2009).
CRITERION_1	no
CRITERION_2	no
CRITERION_3	yes
CRITERION_4	yes
CRITERION_5	no
CRITERION_6	no
CRITERION_7	yes
CRITERION_8	no
CRITERION_9	yes
CRITERION_10	yes
CRITERION_11	yes
CRITERIA_YES	3,4,7,9,10,11,
CRITERIA_LIKELY	
CRITERIA_INDETERMINATE	
SIGNIFICANCE	Regional
SIGNIFICANCE_JUSTIFICATION	This unprotected site comprises a large area of duneland system that provides habitat for threatened and at risk indigenous flora and fauna. Although heavily modified with extensive populations of exotic species and encroached on by commercial plantation forest, this area is a notable example of duneland. However, larger and better quality examples of duneland exist elsewhere in the Waikato Region but outside of the Otorohanga District (e.g. Aotea Heads Scientific Reserve).
CONFIDENCE_LEVEL	Medium

PEST_ANIMAL_ISSUE	Likely
PEST_PLANT_ISSUE	Yes
STOCK_ISSUE	Likely
DEVELOPMENT_ISSUE	No
OTHER_ISSUE	Likely
ISSUE_JUSTIFICATION	Feral cats, mustelids, rabbits, mice, and hedgehogs are common threats in dune systems.;Marram grass and lupin are present within the dune system (DOC 2010a). Coastal wattle and pampas grass may be present.;Farmland is present <500m from the north-eastern boundary of this site so stock incursions may be an issue.;;This site may be under threat from recreational use such as quad biking and horse riding.
REFERENCES	EW SNA 2010, EW WRAPS 2007
BOUNDARY_CHANGE	
VEG_CHANGE	
ASSESSMENT_NOTES	Duneland. Recommend that the boundaries of this site be reviewed as they do not follow vegetation boundaries. Consider including the remaining area of 2003 SNA-196 that is not included this time.;;This site comprises approximately 55% of 2003 SNA-196 which was ranked as regionally significant. Dune care programmes and protection from threats (including development) are probably required to ensure ecological sustainability over time.
NZTM_EASTING	1,757,778
NZTM_NORTHING	5,788,714
TENURE_STATUS	PRESUMED PRIVATELY OWNED
TENURE_DETAIL	PRESUMED PRIVATELY OWNED (315.51 ha)
PROTECTION_DETAIL	UNPROTECTED (315.2 ha), PROTECTED (.31 ha)
ECOLOGICAL_DISTRICT	Kawhia (315.03 ha), Coastal (.48 ha)
BIOCLIMATIC_ZONE	Coastal Zone (168.81 ha), Lowland Zone (146.44 ha), Part not in Bioclimate Zone (.26 ha)
LENZ_IV	G1.1d (294.63 ha), D2.1b (17.72 ha), A7.2c (3.05 ha), Part not in LENZ_IV (.11 ha)
VEGETATION_1840	Duneland (311.58 ha), Conifer-broadleaved forest (3.6 ha), Water (.33 ha)
BIOVEG_2012	Sand Dunes (308.18 ha), Part not in Bioveg 2007 (5.16 ha), Pine Forest - Closed Canopy (1.72 ha), Manuka and or Kanuka (.45 ha)
DISTRICT_NAME_2012	Otorohanga District (310.41 ha), Area Outside Territorial Authority (5.1 ha)
MHWS	Above MHWS (315.25 ha), Below MHWS (.26 ha)
LCDB4_NAME_2012	Sand or Gravel (241.97 ha), Low Producing Grassland (50 ha), High Producing Exotic Grassland (17.86 ha), Exotic Forest (3.61 ha), Manuka and/or Kanuka (1.81 ha), Part not in LCDB4 (.26 ha)
LENZ_TEC	At Risk (294.63 ha), Chronically Threatened (17.72 ha), Acutely Threatened (3.05 ha), Part not in LENZ_TEC (.11 ha)
DATA_SET_STATUS	Unconfirmed for the current district/city council plan
ID	568
GEOMETRY.AREA	0.00
GEOMETRY.LEN	0.00

Otorohanga District SNA: Kahua Point Marginal Strip

SITE_NUMBER	OT0868
SITE_NAME	Kahua Point Marginal Strip
SITE_DESCRIPTION	This site comprises a small, linear area of coastal sand dunes just south of the Aotea Harbour mouth. The site is contiguous with OT0712-Kawhia coastline dunes, a large, privately owned area of coastal and inland sand dune and may provide habitat for an At Risk indigenous plant species. Sand dune habitat is a nationally rare habitat type and, although modified with numerous exotic species present, this habitat type is uncommon in the Waikato Region. There are no records available for threatened fauna species for this site but it is likely that the species recorded for Aotea Harbour, Kawhia Harbour, and the greater Kawhia coastline dune system will utilise this site from time to time. Long term viability is probably dependent on active management of this vulnerable ecosystem.
AREA_HA	8.30
ECOSYSTEM_TYPE	Sand Dune
SIGNIFICANT_FLORA	
LIKELY_FLORA	<i>Pimelea arenaria</i> (Sand daphne) (Declining) may be present within this site as it has been recorded <500m from the northern site boundary (DOC 2010a). <i>Poa billardi</i> (sand tussock) (Declining) and <i>Ficinia spiralis</i> (pingao) (Relict) are present within the adjacent SNA (OT0712) and may be present at this site.
SIGNIFICANT_FAUNA	
LIKELY_FAUNA	<i>Egretta sacra sacra</i> (reef heron) (Nationally Vulnerable), <i>Charadrius obscurus aquilonius</i> (New Zealand dotterel northern) (Nationally Vulnerable), <i>Charadrius bicinctus bicinctus</i> (banded dotterel) (Nationally Vulnerable), and <i>Hydroprogne caspia</i> (Caspian tern) (Nationally Vulnerable) have been recorded from the adjacent SNA (OT0712) and may utilise this site.
OTHER_FEATURES	
CRITERION_1	yes
CRITERION_2	no
CRITERION_3	likely
CRITERION_4	yes
CRITERION_5	no
CRITERION_6	no
CRITERION_7	no
CRITERION_8	no
CRITERION_9	no
CRITERION_10	no
CRITERION_11	yes
CRITERIA_YES	14,11,
CRITERIA_LIKELY	3,
CRITERIA_INDETERMINATE	
SIGNIFICANCE	Local
SIGNIFICANCE_JUSTIFICATION	This protected site (DOC Fixed Marginal Strip) comprises sand dune habitat, a nationally rare habitat type, may provide habitat for Threatened and At Risk indigenous species and, along with remainder of the coastline at Kawhia, is a representative example of its type. Although modified and with numerous exotic species present, this habitat type is uncommon in the Waikato Region, however long term viability is probably dependent on active management of this vulnerable ecosystem. Field survey is recommended to determine vegetation composition and to validate the ecological assessment.
CONFIDENCE_LEVEL	Medium

PEST_ANIMAL_ISSUE	Likely
PEST_PLANT_ISSUE	Yes
STOCK_ISSUE	Indeterminate
DEVELOPMENT_ISSUE	No
OTHER_ISSUE	Likely
ISSUE_JUSTIFICATION	Feral cats, mustelids, rabbits, mice, and hedgehogs are common threats in dune systems.;Marram grass and lupin are present within the contiguous dune system (DOC 2010a) and are therefore likely to be present at this site. Coastal wattle and pampas grass may also be present.;;This site may be under threat from recreational use such as quad biking and horse riding.
REFERENCES	EW SNA 2010, EW WRAPS 2007
BOUNDARY_CHANGE	The entire marginal strip above the high tide line should be included within this site. Use DOC parcel layer to rectify.
VEG_CHANGE	
ASSESSMENT_NOTES	This site approximately equates 2003 SNA-32 which was ranked as regionally significant.
NZTM_EASTING	1,756,798
NZTM_NORTHING	5,789,208
TENURE_STATUS	PRESUMED PRIVATELY OWNED
TENURE_DETAIL	PRESUMED PRIVATELY OWNED (8.3 ha)
PROTECTION_DETAIL	PROTECTED (6.55 ha), UNPROTECTED (1.75 ha)
ECOLOGICAL_DISTRICT	Kawhia (8.3 ha)
BIOCLIMATIC_ZONE	Coastal Zone (5.13 ha), Part not in Bioclimate Zone (3.18 ha)
LENZ_IV	G1.1d (8.3 ha)
VEGETATION_1840	Duneland (8.3 ha)
BIOVEG_2012	Part not in Bioveg 2007 (5.56 ha), Sand Dunes (2.74 ha)
DISTRICT_NAME_2012	Otorohanga District (6.55 ha), Area Outside Territorial Authority (1.75 ha)
MHWS	Above MHWS (5.13 ha), Below MHWS (3.18 ha)
LCDB4_NAME_2012	Low Producing Grassland (4.2 ha), Part not in LCDB4 (3.18 ha), Sand or Gravel (.92 ha)
LENZ_TEC	At Risk (8.3 ha)
DATA_SET_STATUS	Unconfirmed for the current district/city council plan
ID	803
GEOMETRY.AREA	0.00
GEOMETRY.LEN	0.00

Otorohanga District SNA: Te Ariaotewiwini Inlet wetland

SITE_NUMBER	OT0001
SITE_NAME	Te Ariaotewiwini Inlet wetland
SITE_DESCRIPTION	A small, privately owned, coastal saline wetland fed by the Te Ariaotewiwini Inlet, near the entrance of Kawhia Harbour. BIOVEG (2007) indicates that this site is likely to support herbaceous saline wetland vegetation dominated by indigenous sedges and rushes (Graeme 2005a). The wetland is buffered by young pine plantation and is protected from stock, though future harvesting may threaten its integrity. No threatened species are known for this site.
AREA_HA	1.73
ECOSYSTEM_TYPE	Wetland - Estuarine
SIGNIFICANT_FLORA	
LIKELY_FLORA	
SIGNIFICANT_FAUNA	
LIKELY_FAUNA	
OTHER_FEATURES	
CRITERION_1	no
CRITERION_2	no
CRITERION_3	indeterminate
CRITERION_4	yes
CRITERION_5	no
CRITERION_6	yes
CRITERION_7	no
CRITERION_8	no
CRITERION_9	no
CRITERION_10	no
CRITERION_11	no
CRITERIA_YES	4,6,
CRITERIA_LIKELY	
CRITERIA_INDETERMINATE	3,
SIGNIFICANCE	Local
SIGNIFICANCE_JUSTIFICATION	This unprotected site contains wetland habitat which is dominated by indigenous saline species. Wetlands which are similar in vegetation and size to this site exist elsewhere in the Waikato Region. A field survey is required to validate the site's level of significance.
CONFIDENCE_LEVEL	Medium
PEST_ANIMAL_ISSUE	Likely
PEST_PLANT_ISSUE	Yes
STOCK_ISSUE	No
DEVELOPMENT_ISSUE	Yes
OTHER_ISSUE	Indeterminate
ISSUE_JUSTIFICATION	Mustelids, feral cats and Norway rats are likely to be present at the site.;Pampas is known to be present (Graeme 2005a).;Aerial photography indicates that the site is surrounded by pine plantation, thus stock are unlikely to be present.;Future harvesting of surrounding pine plantation.;
REFERENCES	EW SNA 2010, Google Earth 2010, DOC 2010a
BOUNDARY_CHANGE	

VEG_CHANGE	
ASSESSMENT_NOTES	Cloud cover made visual assessment difficult.
NZTM_EASTING	1,757,047
NZTM_NORTHING	5,783,789
TENURE_STATUS	PRESUMED PRIVATELY OWNED
TENURE_DETAIL	PRESUMED PRIVATELY OWNED (1.73 ha)
PROTECTION_DETAIL	UNPROTECTED (1.72 ha), PROTECTED (.01 ha)
ECOLOGICAL_DISTRICT	Kawhia (1.72 ha), Coastal (.01 ha)
BIOCLIMATIC_ZONE	Coastal Zone (1.44 ha), Part not in Bioclimate Zone (.28 ha)
LENZ_IV	G1.1d (1.73 ha)
VEGETATION_1840	Duneland (1.73 ha)
BIOVEG_2012	Herbaceous Saline Vegetation (1.38 ha), Part not in Bioveg 2007 (.35 ha)
DISTRICT_NAME_2012	Otorohanga District (1.73 ha)
MHWS	Above MHWS (1.44 ha), Below MHWS (.28 ha)
LCDB4_NAME_2012	Exotic Forest (.98 ha), Sand or Gravel (.46 ha), Part not in LCDB4 (.28 ha)
LENZ_TEC	At Risk (1.73 ha)
DATA_SET_STATUS	Unconfirmed for the current district/city council plan
ID	1
GEOMETRY.AREA	0.00
GEOMETRY.LEN	0.00



Blue: OT0712, Yellow top: OT0868, Yellow bottom: OT0001.