Schedule 4 Significant Ecological Areas – Marine Schedule

Factors for assessing ecological value [rps]

An area shall be considered an area of significant indigenous vegetation and/or a significant habitat of indigenous fauna in the coastal marine area if it meets one or more of the sub-factors (1) to (6) below, with factors (1) to (5) being applied first, and factor (6) last to identify gaps in representation across marine habitats and ecosystems, and to identify best examples of each habitat or ecosystem. These factors are also referred to in B7.2.2(3).

These factors have been used to determine the areas included in Schedule 4 Significant Ecological Areas – Marine Schedule, and will be used to assess proposed future additions to the schedule.

FACTORS:

(1) RECOGNISED INTERNATIONAL OR NATIONAL SIGNIFICANCE

Sub-factor:

(a) it is an area identified as internationally or nationally significant for either indigenous marine ecosystems or biodiversity, or with reference to the species that utilise these ecosystems.

(2) THREAT STATUS AND RARITY

Sub-factors:

(a) it is a habitat that is required to provide for the life cycle of a marine plant or animal that is locally rare and has been assessed under the New Zealand Threat Classification System (NZTCS), and determined to have a national ‘At Risk’ conservation status of Naturally Uncommon, Relict, Recovering and Declining; or

(b) it is a habitat that is required to provide for the life cycle of a plant or animal that occurs naturally in Auckland and has been assessed as having a regional threatened conservation status including Regionally Critical, Endangered and Vulnerable and Serious and Gradual Decline; or

(c) it is a habitat that is required to provide for the life cycle of a plant or animal that occurs naturally in Auckland and has been assessed by a nationally or internationally recognised assessment process (e.g. NZTCS, IUCN) and determined to have a threatened conservation status including Critical, Endangered, or Vulnerable; or

(d) it is a habitat that occurs naturally in Auckland and is required to provide for the life cycle of a marine animal that is listed as a Protected Species in Schedule 7A of the Wildlife Act (1953); or

(e) it is an indigenous marine habitat or ecosystem that occurs naturally in Auckland and has been assessed by the Council or other national

assessment process to be threatened based on evidence and expert advice; or

(f) it is an indigenous vegetation or habitat of indigenous fauna that occurs within an indigenous coastal ecosystem as identified in NZCPS Policy 11b(iii) as being particularly vulnerable to modification.

(3) UNIQUENESS OR DISTINCTIVENESS

Sub-factors:

(a) it is habitat for a marine plant or animal that is endemic or near-endemic to the Auckland region; or

(b) it is an indigenous ecosystem that is endemic to the Auckland region or supports ecological assemblages, structural forms or unusual combinations of species that are endemic to the Auckland region; or

(c) it is a habitat that supports occurrences of a plant, animal or fungi that are the largest specimen or largest population of the indigenous species in Auckland or New Zealand.

(4) DIVERSITY

Sub-factors:

(a) it is an intact habitat sequence extending across an environmental gradient, and including both floral and faunal habitat components; or

(b) it includes a large number of intertidal and/or subtidal habitats; or

(c) it is a habitat type that supports a high species richness for its type.

(5) STEPPING STONES, BUFFERS AND MIGRATION PATHWAYS

Sub-factors:

(a) it is a site which makes an important contribution to the resilience and ecological integrity of surrounding areas; or

(b) it is part of a network of sites that cumulatively provide important habitat for indigenous fauna or when aggregated make an important contribution to ecological function and integrity; or

(c) it is an example of an indigenous ecosystem, or habitat of indigenous fauna that is used by key species permanently or intermittently for an essential part of their life cycle, including migratory pathways, roosting or feeding areas; or

(d) it is an example of an ecosystem, indigenous vegetation or habitat of indigenous fauna, that is immediately adjacent to, and provides protection for, indigenous biodiversity in an existing protected natural area (established for the purposes of biodiversity protection for either terrestrial or marine

protection) or an area identified as significant under the ‘threat status and rarity’ or ‘uniqueness’ factor.

(6) REPRESENTATIVENESS

Sub-factors:

(a) it is an example of an indigenous marine ecosystem (including both intertidal and sub-tidal habitats, and including both faunal and floral components) that makes up part of at least 10% of the natural extent of each of Auckland’s original marine ecosystem types and reflecting the environmental gradients of the region; and

(b) it is an example of an indigenous marine ecosystem, or habitat of indigenous marine fauna (including both intertidal and sub-tidal habitats, and including both faunal and floral components), that is characteristic or typical of the natural marine ecosystem diversity of Auckland; or

(c) it is a habitat that is important to indigenous species of Auckland, either seasonally or permanently, including for migratory species and species at different stages of their life cycle (and including refuges from predation, or key habitat for feeding, breeding, spawning, roosting, resting, or haul out areas for marine mammals); or

(d) it is an ecosystem that contains an intact ecological sequence across an environmental gradient (e.g., intact intertidal vegetation sequence including seagrass, mangrove, saltmarsh, and terrestrial coastal vegetation); or

(e) it is an ecosystem that contains a large number of marine habitat types, with the full range of habitats represented that is typical for that depth and exposure within the Auckland region; or

(f) it is a habitat or ecosystem of particular importance for indigenous or migratory species.

Identified Significant Ecological Areas – Marine Overlay [rcp]

Areas that have been assessed against the above factors (and sub-factors) and determined as having significant ecological value – marine are identified on the Plan maps and the significant ecological values for each area is described in Schedule 4

Key to abbreviations:

SEA-M: Significant Ecological Area – Marine

SEA-M1: Areas which, due to their physical form, scale or inherent values, are considered to be the most vulnerable to any adverse effects of inappropriate subdivision, use and development.

SEA-M2: Areas are of regional, national or international significance which do not warrant an SEA-M1 identification as they are generally more robust.

SEA-M1w and SEA-M2w: Areas that are identified as significant wading bird areas.

ID	Name/ Location	Values of Significant Ecological Area - Marine	SEA-M type
1	**Port Albert**		
1w1	*Wading bird habitat*	Intertidal banks providing habitat and feeding ground for wading birds. Mangroves fringing inlet and wading bird habitat.	SEA-M2w
1b	Atiu Creek	Coastal regional park with intact sequences from native forest to mangroves and estuarine ecosystems in Mullet Creek, Atiu Creek and Takahe Creek. The native forest on the park includes stands of regenerating kanuka forest and scrubland, mature pohutukawa coastal forest, kauri forest on the ridges, and totara forest with broadleaved forest in the gullies. On the prominent Kauri Point there are sequences of totara forest on ridges to coastal pohutukawa- puriri forest and to mangroves in the estuary. Large old growth mangroves occur in Takahe Creek. The park has intact areas of coastal forest which are now rare nationally.	SEA-M1
1c	Oruawharo River – Port Albert	Shallow intertidal habitats dominated by mangrove communities with fringing saltmarsh providing habitat for banded rail. Contiguous coastal forest present in upper reaches, including Topunui River. Mangrove communities in Oruawharo	SEA-M2

		arm are different from other mangrove areas in Kaipara Harbour with small deposit-feeding bivalve and polychaete predators present.	
2	**Tapora Islands and Estuary**		
2a	Intertidal Areas including Gum Store Creek	Area of sand banks, bars and dunes opposite the mouth of the Kaipara Harbour forming a complex habitat for a variety of animal and plant communities. The intertidal sand banks are a feeding ground and important mid tide roost for thousands of international migratory and New Zealand endemic wading birds including a number of threatened species. There is an area of mangrove and saltmarsh within inlet at the mouth of Oruawharo River which is contiguous with surrounding coastal forest.	SEA-M1
2 b, c, d, e, f, g, h, i	Tapora Islands and estuary	The associated sand bars and islands (2b, 2g, 2j) provide a high tide roost for thousands of international migratory and New Zealand endemic wading birds including a number of threatened species and a variety of other coastal bird species. In the shelter of the sand islands and inlet mouths grow important areas of mangroves and saltmarsh (2c, 2d, 2e, 2f, 2h, 2i, 2j). The vegetation adjoining the islands grades from the mangroves and saltmarsh into coastal shrublands and dune vegetation above Mean High Water Springs. Similarly, in the inlet mouths, the saline vegetation grades into freshwater vegetation beyond the coastal marine area. The saline vegetation provides high quality habitat for threatened secretive coastal fringe birds particularly where it abuts terrestrial vegetation which provides shelter for the birds and potential nesting sites. The saltmarshes and dune vegetation include a number of threatened plant species, including pingao ('gradual decline').	SEA-M1

2j	Okahukura Peninsula Wetland	Estuarine wetland that is only inundated at extreme high tide, that provides habitat for threatened secretive wetland bird species. High plant species diversity, including good amounts of salt marsh ribbonwood with reeds and rushes grading into saltmarsh. Forms part of an ecological sequence from marine to freshwater backdune wetland.	SEA-M1
2k	Intertidal banks on north side of Big Sand Island	The Kaipara Harbour has been identified as an Important Bird Area (IBA) for its global significance for NZ fairy tern ('nationally critical'), black-billed gull ('nationally critical'), NZ dotterel ('nationally vulnerable'), and for its congregations of wading birds which migrate from their South Island breeding sites, and for species migrating from the northern hemisphere. The banks on the north side of Big Sand Island provide wading bird foraging habitat for wrybill ('nationally vulnerable'), South Island pied oystercatcher ('at risk – declining'), Eastern bar-tailed godwit (''at risk-declining') and red knot ('nationally vulnerable').	SEA-M1
2w1	*Wading bird habitat*	Feeding ground and mid tide roost for thousands of international migratory and New Zealand endemic wading birds including a number of threatened species. High tide roost for thousands of international migratory and New Zealand endemic wading birds including a number of threatened species and a variety of other coastal bird species.	SEA-M1w
949	SEA-terrestrial site below MHWS	Area of saltmarsh and shell banks contiguous with coastal shrubland and forest to east.	SEA-M2
3	**Tauhoa River**		
3a	Intertidal banks of Tauhoa River	Extensive area of intertidal banks associated with Tauhoa River, fringed with mangroves and supporting excellent saltmarsh and rich intertidal fauna.	SEA-M1

3b - d	Tauhoa Scientific Reserve	The Tauhoa Scientific Reserve (3b) is one of only two significant mangrove reserves in the country. The Department of Conservation has selected the Tauhoa Scientific Reserve and areas to the north (3b, 3c, 3d) as an Area of Significant Conservation Value (ASCV). The reserve comprises 291 hectares, 75-80% of which is dense mangrove forest. It was vested in the University of Auckland in 1949 and classified as a flora and fauna reserve. The reserve is considered to be of national importance.	SEA-M1
3c, e - g	Tauhoa River	An extensive area of intertidal banks fringed with mangroves and supporting excellent saltmarsh and rich intertidal fauna. Here the banks have built up to form low islands and the saline vegetation in the intertidal area grades into the terrestrial vegetation. The saline vegetation provides high quality habitat for threatened secretive coastal fringe birds. The areas of adjacent terrestrial vegetation also provide shelter for the birds and potential nesting sites. This is one of the two most extensive areas of saline vegetation in the Kaipara Harbour and is relatively unmodified by reclamation.	SEA-M1
3w1 - 4	*Wading bird habitat*	High quality habitat for threatened secretive coastal fringe birds.	SEA-M1w
4	Moturemu Island	Moturemu Island is a regionally important wildlife habitat as it supports a breeding colony of grey-faced petrel which is unusual for the west coast of the region. Supports nationally and regionally threatened plant species.	SEA-M1
183	Kakaraia Flats	The Kaipara Harbour has been identified as an Important Bird Area (IBA) for its global significance for NZ fairy tern ('nationally critical'), black-billed gull ('nationally critical'), NZ dotterel ('nationally vulnerable'), and for its congregations of wading birds which	SEA-M2

		migrate from their South Island breeding sites, and for species migrating from the northern hemisphere. The Kakaraia Flats provide wading bird foraging habitat for wrybill ('nationally vulnerable'), South Island pied oystercatcher ('at risk – declining'), Eastern bar-tailed godwit (''at risk-declining') and red knot ('nationally vulnerable')."	
174	Kaipara Harbour seagrass meadows	Seagrass meadows provide a number of important roles, including trapping and stabilising bottom sediments, nutrient recycling, the creation of high primary productivity, and the provision of habitat to a wide variety of plant and animal species, including invertebrates, fish and birds. Seagrass meadows tend to have greater numbers of fish and species diversity than adjacent non-vegetated habitats. Kaipara Harbour's vast seagrass meadows support a wide variety of fish and the harbour is the main source of juvenile snapper for the west coast of the North Island.	SEA-M1
180	Kakanui Point Flats	The Kaipara Harbour has been identified as an Important Bird Area (IBA) for its global significance for NZ fairy tern ('nationally critical'), black-billed gull ('nationally critical'), NZ dotterel ('nationally vulnerable'), and for its congregations of wading birds which migrate from their South Island breeding sites, and for species migrating from the northern hemisphere. The flats off Kakanui Point provide wading bird foraging habitat for wrybill ('nationally vulnerable'), South Island pied oystercatcher ('at risk – declining'), Eastern bar-tailed godwit (''at risk-declining') and red knot ('nationally vulnerable').	SEA-M2
5	**Mataia**		
5a		Along the coast in the southern part of this area, developing mangroves below Mean High Water Springs grade into	SEA-M1

		regenerating coastal kanuka forest. This type of connection is now rare in the main body of the Kaipara Harbour due to vegetation clearance and Reclamation around the harbour. Most other such gradations between natural saline and terrestrial vegetation in the Kaipara are found in the estuaries or rivers that flow into the harbour. Provides habitat for wading birds and secretive wetland birds.	
5b	Hoteo River	Mangroves and saltmarsh at mouth of Hoteo River. Provides habitat for banded rail.	SEA-M2
5c	Mataia Creek	Mangroves and saltmarsh in estuarine creek grading into coastal forest on northern side. Provides habitat for banded rail.	SEA-M2
5w1 - 2	*Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M1w
6	**Jordan's Farm, Oyster Point and Shelly Beach Island**		
6a	Intertidal banks	Area of intertidal banks, shellbanks and mangroves forming a complex habitat for a variety of animal and plant communities. The rich intertidal banks are a feeding ground for thousands of international migratory and New Zealand endemic wading birds including a number of threatened species. The Kaipara Harbour has been identified as an Important Bird Area (IBA) for its global significance for NZ fairy tern ('nationally critical'), black-billed gull ('nationally critical'), NZ dotterel ('nationally vulnerable'), and for its congregations of wading birds which migrate from their South Island breeding sites, and for species migrating from the northern hemisphere. The flats off Oyster Point provide wading bird foraging habitat for wrybill ('nationally	SEA-M2

		vulnerable'), South Island pied oystercatcher ('at risk – declining'), Eastern bar-tailed godwit (''at risk-declining') and red knot ('nationally vulnerable')."	
6b-d	South Kaipara roosts	Shelly Beach Island (6c) and nearby pasture on Jordan's Farm and Oyster Point collectively provide the numerically most important high tide roost on the Kaipara for these birds and a variety of other coastal bird species. Shelly Beach Island is a key area in the Kaipara Harbour for marine bird species. In recent years it has become a major nesting site for Caspian tern, a threatened coastal bird, with around 500 birds nesting on the island. In the shelter of the shellbanks at Shelly Beach Island and Oyster Point (6c, 6d) and in the mouth of the Makarau River (6b) grow important areas of mangroves and saltmarsh. The vegetation grades from the mangroves and saltmarsh into coastal shrublands above Mean High Water Springs at Shelly Beach Island and Oyster Point (6c, 6d) and into mature kanuka forest with emergent tanekaha and kauri at the Makarau River (6b). The saline vegetation provides high quality habitat for threatened secretive coastal fringe birds. The Department of Conservation has selected this area, with the addition of an area of intertidal bank to the north, as an Area of Significant Conservation Value (ASCV).	SEA-M1
6e	Kakanui Creek	Mangroves and saltmarsh in creek and coastline to north of Oyster Point. Habitat for banded rail.	SEA-M2
6f	Matawhero Stream	Mangroves and saltmarsh at mouth of Matawhero Stream, contiguous with coastal forest in Kapakapa Scientific Reserve. Habitat for banded rail.	SEA-M2
6w1-3	*Wading bird habitat*	Shellbanks form key roosting and nesting sites for shorebirds and there is extensive intertidal feeding habitat along this coastline.	SEA-M1w
168w	*Shelly Beach*	Beach and intertidal habitat in Kaipara Harbour providing a significant area for wading birds.	SEA-M2w

7	**Kaipara River Mouth**		
7a	Kaipara River West Bank	Very extensive area of mangroves within the coastal marine area which grades into areas of saltmarsh. These areas, in turn, grade into the terrestrial vegetation growing on the highest ground. The mangroves and saltmarsh vegetation provides habitat for threatened secretive coastal fringe birds. Areas of adjacent terrestrial vegetation provide shelter for the birds and potential nesting sites. The Kaipara Harbour has been identified as an Important Bird Area (IBA) for its global significance for NZ fairy tern ('nationally critical'), black-billed gull ('nationally critical'), NZ dotterel ('nationally vulnerable'), and for its congregations of wading birds which migrate from their South Island breeding sites, and for species migrating from the northern hemisphere. The flats on the east and west of Kaipara River provide wading bird foraging habitat for wrybill ('nationally vulnerable'), South Island pied oystercatcher ('at risk – declining'), Eastern bar-tailed godwit (''at risk-declining') and red knot ('nationally vulnerable').	SEA-M2
7b	Kaipara River (East Bank)	The southern part of the saline vegetation on the eastern bank of the Kaipara River is the largest single block of dense mangrove in the region and is in good condition and spreading. The saline vegetation provides habitat for threatened secretive coastal fringe birds. Areas of adjacent terrestrial vegetation provide shelter for the birds and potential nesting sites.	SEA-M1
8	**Puharakeke**		
8a	Intertidal banks	Extensive area of intertidal banks fringed with mangroves on the sheltered edges and with shellbanks on the more exposed parts. Supports a range of saltmarsh and mangrove vegetation. The mangroves and saltmarsh	SEA-M2

		vegetation provides habitat for threatened secretive coastal fringe birds. This is one of two areas containing the most extensive saline vegetation in the Kaipara Harbour and has been relatively unmodified by reclamation in the last 40 years.	
8b-d	Islands and shellbanks	Many of the banks (8b, 8c, 8d) have built up to form low islands and the saline vegetation in the intertidal area grades into the terrestrial vegetation growing above Mean High Water Springs. The saline vegetation provides habitat for threatened secretive coastal fringe birds. This is one of two areas containing the most extensive saline vegetation in the Kaipara Harbour and has been relatively unmodified by reclamation in the last 40 years.	SEA-M1
8e	Puharakeke Stream and intertidal flats	The Kaipara Harbour has been identified as an Important Bird Area (IBA) for its global significance for NZ fairy tern ('nationally critical'), black-billed gull ('nationally critical'), NZ dotterel ('nationally vulnerable'), and for its congregations of wading birds which migrate from their South Island breeding sites, and for species migrating from the northern hemisphere. Puharakeke Stream, in the south Kaipara Harbour, is a known feeding area for NZ fairy tern, particularly in the post-breeding months, and they are roost at nearby Tuparekura on neap high tides	SEA-M2
8w1	*Wading bird habitat*	Shellbanks form key roosting and nesting sites for shorebirds and there is extensive intertidal feeding habitat for waders along this coastline.	SEA-M2w
9	**Omokoiti**		
9a	Saltmarsh and intertidal flats	Large and diverse area of saltmarsh and mangrove vegetation contiguous with 9b and with the intertidal banks (9w1) which are a feeding ground for the thousands of waders that roost at Omokoiti.	SEA-M2

9b	Saltmarsh	Large and diverse area of saltmarsh and mangrove vegetation comprised mainly of a sizeable area of mud and glasswort to landward of a broad band of mangroves. This glasswort flat provides a high tide roosting site for thousands of international migratory and New Zealand endemic wading birds and a variety of other coastal bird species, including a number of threatened species. Most importantly, four or five black stilts, or about 10% of the entire population of this endangered species, spend the winter at this site. The saline vegetation is a habitat for threatened secretive coastal fringe birds.	SEA-M1
9w1	*Wading bird habitat*	The intertidal banks are a feeding ground for the thousands of waders that roost at Omokoiti.	SEA-M2w
9w2	*Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M1w
10	**South Kaipara Head**		
10a, b	Waionui Inlet	Wainui Inlet is a large estuarine ecosystem (10a) that is an important feeding ground and high tide roost for a large number of wading birds, including threatened species. In the southernmost parts of the inlet (10b) there are sizeable areas of mangroves and saltmarshes which form notable ecotones with the surrounding terrestrial vegetation. On the eastern side these grade into mature manuka – kanuka forest, while on the western side they are bordered by duneland and seasonal wetland, both of which provide a habitat for a variety of threatened plants. Secretive and threatened coastal fringe birds use the margins of the lagoon habitat, particularly where terrestrial vegetation offers shelter for roosting and breeding. Bar-tailed godwit; Lesser knot; South Island pied oystercatcher; New Zealand dotterel ('nationally vulnerable');	SEA-M1

		Variable oystercatcher; Wrybill ('nationally vulnerable'); Turnstone; Red-necked stint. One of few estuary areas in Kaipara Harbour without a pastoral catchment.	
10c	Papakanui Spit	Papakanui Spit is a 3 kilometre long active sand spit almost enclosing Wainui Inlet. The spit is also used as a high tide roost by thousands of international migratory and New Zealand endemic wading birds including a number of threatened species. The large sand spit is one of the largest nesting areas in New Zealand for white fronted terns. Major breeding site for wading birds on the Kaipara harbour, in particular New Zealand dotterels (‘nationally vulnerable’) and variable oystercatchers. Is one of only three sites in New Zealand where New Zealand fairy tern (’nationally critical’) breed. New Zealand dotterel, variable oystercatcher, banded dotterel, black-backed gulls (northern-mostcolony) nest on the spit.	SEA-M1
10d	Dune fields	A large area of mobile dune fields. Extensive areas of pingao-spinifex on active dunes, while kanuka colonising more stable dune areas. Very rare and endangered vegetation type in New Zealand and a high priority for biodiversity protection.	SEA-M1
10w1	*Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M1w
11	Oaia Island	Oaia Island is one of four sites near Muriwai that support breeding colonies of the Australasian gannet. It is also used regularly as ahaulout site by New Zealand fur seals. Cooks scurvey grass, a nationally threatened plant has been recorded from the island. Rare ecosystem type.	SEA-M1

12	Muriwai	Representative stretch of exposed sandy beach supporting a typical range of bivalves which live burrowed deeply into the sand around extreme low water springs. Muriwai and Rangitira Beaches are the only locations in Auckland where toheroa are found.	SEA-M2
13	**West Coast (Muriwai to Karekare)**		
13a		The rocky shores support a diverse range of marine algae and invertebrates and, under the influence of cool currents, show affinities with marine ecosystems to the south. From O'Neill Bay to Piha is the only part of the region in which bull kelp, a marine alga of cooler waters, is found in significant quantities. The least accessible, and therefore least modified stretch of coast is from Maori Bay to Te Henga. The rocky coast also provides a variety of habitats for animals and plants, including an important array of threatened cliff-dwelling plants. In most places, the marine ecosystem grades into areas of natural coastal vegetation, some of which is considered to be amongst the best in the Waitakere ecological district (13a, 13c, 13h, 13i, 13k, 13m). A variety of coastal and sea birds breed on the cliffs and islands and feed in the surrounding waters (13c, 13i). In several places, large sandy beaches have accumulated and, in combination with the rocky shores, these provide a variety of habitats for animals and plants, including pingao, a threatened plant of mobile sand areas.	SEA-M2
13c		The marine ecosystem grades into areas of natural coastal vegetation, some of which is considered to be amongst the best in the Waitakere ecological district (13a, 13c, 13h, 13i,	SEA-M1

		13k, 13m). A variety of coastal and sea birds breed on the cliffs and islands and feed in the surrounding waters (13c, 13i). Area contains best and only area of coastal shrubland in Waitakere Ecological District, on the gentle slopeat the base of the cliff at Maori Bay. There is a considerable variety of coastal vegetation types in this area. The Muriwai gannet colony is the northern most mainland breeding colony. The 4km section of coast which extends from Bartrum Bay in the north to the northern end of O'Neill Bay in the south contains high intertidal biodiversity values. This section is dominated by rocky shores, with a number of large reefs projecting out into the Tasman Sea. The rocky shore is broken in a few places by mobile and partly stable gravel beaches (especially at Te Waharoa, and pocket sand beaches. The northern half of this section is composed of softer sandstone and the southern half by harder volcanic conglomerate and even andesite flows in the back of O'Neill Bay. Two special, more sheltered habitats are located on the north side of Tirikohua Pt. and inside the northern end of O'Neill Bay. On the north side of Tirikohua Pt, large sandstone reefs stretch 50m offshore and provide considerable shelter to large mid to high tide pools tucked in behind, which support beds of Neptune's necklace with some unusual grazers for the exposed west coast, such as *Cominella maculosa*. The north end of O'Neill Bay has a mixed mobile and stable gravel beach, partly sheltered by the rocky Te Raitahinga Point. A combination of the more stable boulders and additional shelter, provides habitat for several unusual west coast	

		gastropods, such as *Diloma nigerrima*. This length of coast has the most diverse range of habitats on the west coast and as a result the most diverse biota. The high diversity recorded for north Te Henga and O'Neill Bay is partly inflated by the level of historic study its seaweeds have received.	
13h		The marine ecosystem grades into areas of natural coastal vegetation, some of which is considered to be amongst the best in the Waitakere ecological district (13a, 13c, 13h, 13i, 13k, 13m). This area contains the best and only example of coastal flax-manuka scrub on exposed rocky coast in the Waitakere Ecological District on the steep cliff faces at northern end of O'Neill Bay.	SEA-M1
13i	Erangi Point, Ihumoana Island, Kauwahaia Island	The marine ecosystem grades into areas of natural coastal vegetation, some of which is considered to be amongst the best in the Waitakere ecological district (13a, 13c, 13h, 13i, 13k, 13m). A variety of coastal and sea birds breed on the cliffs and islands and feed in the surrounding waters (13c, 13i). Erangi Point is the site of a breeding colony of spotted shag, an endemic species with restricted distribution on the West Coast of Auckland. Kauwahaia Island contains a high diversity of sea bird species. Bird species breeding includegrey-faced petrel, sooty shearwater, diving petrel, and possibly flesh-footed shearwater. Ihumoana Island has remnant grey-faced petrelcolony. One of the best areas of pohutukawa forest on exposed rocky coast occurs on Erangi Point and Ihumoana Island. The best and one of only two examples of karo-houpara forest on exposed rocky coast present on Kauwahaia and Ihumoana Islands.	SEA-M1

13k		The marine ecosystem grades into areas of natural coastal vegetation, some of which is considered to be amongst the best in the Waitakere ecological district (13a, 13c, 13h, 13i, 13k, 13m). Contains the best and only areas of coastal herbfield and coastal shrubland with toetoe and houpara on exposed rocky coast in the Waitakere Ecological District.	SEA-M1
13m		The marine ecosystem grades into areas of natural coastal vegetation, some of which is considered to be amongst the best in the Waitakere ecological district (13a, 13c, 13h, 13i, 13k, 13m). Grey-faced petrel nest on cliff tops south of Piha and above Union Bay at Karekare. Blue penguin also nest along the coastline. Contains best coastal flaxland on exposed rocky coast in ecological district area, and best and one of only two examples of coastal sea-cliff rockland on exposed rocky coast. The 1.5km stretch of coast from Paikea Bay to the north end of Anawhata Beach contains high intertidal biodiversity values. It consists of a large expanse of exposed sandy Anawhata beach with rocky shores on either side, and some areas of stable boulder beach, particularly in Paikea Bay and in the shelter of Keyhole Rock. Particular attributes of the Anawhata coast are the habitat diversity attributable to the presence of the sandy beach, the shelter provided in the lee of Keyhole Rock, and the deep low tide guts with bright sponge gardens on the point at the north end of the beach.	SEA-M1
14	Whatipu	A large area of mobile dunes which is the best example of recent (mostly 1900 to 1930) coastal progradation in New Zealand, leaving many sea caves stranded in the hills behind. It is	SEA-M1

		considered to be a nationally important landform and is also an important and complex habitat for a variety of animal and plant communities. Relatively high numbers of threatened and bird species roost in the mobile sand areas and feed in the surrounding waters and intertidal areas. Some species breed in the area; this is an important nesting area for white-fronted terns. In most places, the marine ecosystem grades into areas of natural coastal vegetation, including natural pingao and spinifex communities in the more mobile, freshwater wetland vegetation in the damp depressions and around the lakes, flaxlands at the base of the cliffs and forests on the cliffs themselves. Much of this vegetation is considered to be amongst the best in the Waitakere ecological district and much of it is habitat for a range of threatened plants. Secretive and threatened coastal fringe birds use the freshwater habitats, as do a variety of coastal bird species.	
15a	Omanawanui	Because of the combination of strong, cool lateral currents and erosion-resistant rocks, this stretch of coast supports a diverse and rich marine fauna which shows open coast, harbour, and southern affinities. The encrusting fauna – sponges, bryozoans, ascidians, and hydroids – is uncommon elsewhere on the west coast of the North Island and, in fact, some species have not been found anywhere else in New Zealand. The 4km section of coast from Wonga Wonga Bay to Sawyers Pt, on the north side of the Manukau Harbour entrance is an area with high intertidal biodiversity values. It consists of moderately sheltered, hard volcanic breccia rocky shores, with stable	SEA-M1

		cobble and boulder beaches at Boulder Bay, Makaka Bay (Destruction Gully) and Waterfall Bay. Boulder Bay and Destruction Gully contains the greatest diversity of intertidal life of any section of similar length along the coast. The composition of the biota along this section is a mix of exposed west coast species that extend into the harbour entrance, and sheltered harbour species, that do not extend out into the Tasman Sea. In addition, there are 19 species that have only been found alive around Waitakere on this coastal section (e.g. bivalve *Pseudarcopagia disculus*, brittlestar *Ophionereis fasciata*, suckerfish *Trachylochismus melobesia*, 8micromolluscs, and 4 seaweeds). This section of coast appears to be excellent habitat for colourful low tidal nudibranchs, with 6 species recorded. Reportedly the subtidal ecosystems along this section of the Waitakere coast are rich and diverse. The combination of subtidal and intertidal values gives this coastal section additional significance. In most places, the marine ecosystem grades into areas of natural coastal vegetation, some of which is considered to be amongst the best in the Waitakere ecological district. Steep vegetated hillslopes rise approximately 200 metres above the harbour and show a gradient from coastal fringe to slope to ridge top vegetation. This area is an integral part of the Manukau Harbour, which is an internationally important wetland selected in its entirety by the Department of Conservation as an Area of Significant Conservation Value (ASCV).	

16	**Huia to Cornwallis**		
16a		This area is comparable to the Omanawanui area having rich and diverse fauna which reflects the similarly strong, cool lateral currents anderosion-resistant rocks. Close to Huia, the marine ecosystem grades into an area of coastal pohutukawa forest on the cliffs and manuka gumland vegetation higher up. Both of these are considered to be the best in the Waitakere ecological district.	SEA-M1
16b, e		A combination of marine habitats is found in this area. The western area (16b) is comparable to the Omanawanui area having rich and diverse fauna which reflects the similarly strong, cool lateral currents and erosion-resistant rocks. Contiguous with the intertidal area of Huia Bay 16e is an important bird feeding area, including for reef herons ('nationally vulnerable').	SEA-M2
16c, d		The direction and strength of the current changes and boulder beaches become important at the eastern end (16c, 16d). Kakamatua Streamflows from the Waitakere Ranges into the western side of Kakamatua Bay. Freshwater swamp remnants with flax occur on the flood plain and flats to the east of the inlet. The 2.5 km section of coast around the end of Puponga Point, from Cornwallis wharf to the south-east corner of Kakamatua Inlet contains high intertidal biodiversity values. It consists predominantly of rough volcanic breccia rocky shores. Around the point there are several small pocket beaches of sand or stable cobbles, and there is a small sandy beach between the rocks and Cornwallis wharf. The rocks and large boulders around the end of Puponga Point are swept by extremely	SEA-M1

		strong tidal currents, which keep silt from settling. Here at spring low tide, and especially beneath the edges of giant boulders, are the richest intertidal sponge gardens around the Waitakere coast. A minimum of 14 species of sponge occur around the point, and two species of the relatively rare *Calliostoma* snail, feed on the sponges.	
17	**Big Muddy Creek**		
17a	Intertidal flats	Within and surrounding this small estuarine inlet there are a variety of habitats with notable gradients and links between them. The lower intertidal flats support dense populations of soft shore fauna and *Zostera* beds. These grade into dense algal beds in the mid-tidal zone, which in turn grade into extensive mangrove areas in the upper intertidal area. There are also important links between the marine and terrestrial environments.	SEA-M2
17b	Intact sequence from zostera to mangrove to coastal forest	Coastal forest adjoins the mangroves in the more sheltered areas and shoreline rock shelves and shelly beaches in the more exposed areas. The direct connections between terrestrial and saline vegetation benefit the threatened secretive coastal fringe bird species which are found in this inlet which feed in the intertidal areas and nest and roost under the continuous cover on the land. Excellent example of intact sequence from mangrove forest to coastal pohutukawa forest to puriri forest to coastal kanuka forest on southern foothills (best of only two examples in the ecological district)	SEA-M1
17c	Lawry Point Coast	The 2 km stretch of coast extending from the north-east side of Mill Bay to the south-west side of Armour Bay contains high intertidal biodiversity values. It consists of silt- mantled sandstone reefs, and sandstone and	SEA-M1

		andesite boulders at all tidal levels, interspersed with pocket beaches of muddy, sandy and gravelly sediment. Special features of the Lawry Point area include: a) the presence of live, low tide populations of the now rather rare ranellid trumpet shells, – *Cabestana spengleri* and *Cymateum parthenopeum*, and historic records of *Cabestana tabulata* and *Ranella australasia*, two species that could still very well be present or able to recolonise; b) the presence of several colourful nudibranchs on the same low tidal, scurfy- weed covered sandstone reefs as the trumpet shells – yellow *Dendrodoris citrina*, and orange-red *Rostanga muscula*; c) a highly unusual low tide area, just north of Lawry Point, with stable cobbles heavily encrusted with the shelly tube worm *Spirobranchus cariniferus*, sitting on sandy mud. The sides and undersides of these cobbles support a diverse fauna, including perhaps the richest sea squirt habitat on the north Manukau Harbour coast.	
18	Little Muddy Creek	Similar to Big Muddy Creek, this small estuarine inlet contains a variety of intertidal habitats ranging from mudflats to rocky reefs. There is an uninterrupted sequence from algal beds in the mid-tidal area, to an extensive mangrove marsh in the upper tidal areas into good stands of coastal forest.	SEA-M2
19	Cape Horn	Important ecological corridor of coastal forest remnants which adjoin the coastal marine area along this stretch of coast. Firm papa reefs below the cliff grade quickly into a muddy intertidal flat near the channel edge. The bays also support a diversity of fauna. Waders and coastal birds feed throughout the area.	SEA-M1

		This stretch of steep sandstone sea cliffs along the northern side of the Manukau Harbour contains mature broadleaved coastal forest (pohutukawa, puriri, kowhai, kohekohe and mahoe) on the steeper slopes and patches of regenerating manuka gumland on the gentle slopes. Important ecological corridor from Waitakere Ranges to forest patches in Auckland isthmus. Pied shags ('nationally vulnerable') roost in pohutukawa trees and kaka have been recorded in area. The dwarf mistletoe (*Korthasella salicornioides*) (‘naturally uncommon') grows on manuka in the Manukau Domain. Pohutukawa dominates the steepest cliffs which are roost sites for little shags ('naturally uncommon'). Waikowhai Coastal Forest is a steep, south-facing slope with coastal forest which differs from the north facing and inland forest remnants. Has a unique stand of kowhai-kohekohe-pohutukawa forest at Wesley Bay.	
173	Green Bay Coastline	Stretch of steep sandstone sea cliffs along the northern side of the Manukau Harbour with mature coastal broadleaved forest (pohutukawa, puriri, kowhai, kohekohe and mahoe) on the steeper slopes and patches of regenerating manuka gumland scrub on the gentler topography. Important ecological corridor from the Waitakere Ranges to the forest patches on the Auckland Isthmus. Pied shags roost in the pohutukawatrees and kaka have been recorded in the area. At Green Bay, coastal broadleaf-podocarp forest exists on undulating lowland hills dominated by kahikatea and kanuka in places. The regionally rare Green Bay kiokio is recorded here and pohutukawa dominates the steepest	SEA-M2

		cliffs which are a roost sites for little shags.	
21	Ann’s Creek	Ann's Creek includes a mosaic of vegetation types in an ecological sequence including basalt lava shrubland, freshwater wetlands, saltmarsh, and mangroves. The freshwater wetland comprises an area of deep aquifer-fed water dominated by raupo and stream (Ann’s Creek) which is dominated by grasses and sedges. The saltwater wetlands include a range of habitat types distributed along the salinity gradient. These include marsh clubrush (in brackish water – where salt and freshwater meet), glasswort, oioi, ribbonwood and mangrove communities. The lava substrate supports a shrubland community with a patchy distribution of native shrubs but the rocky substrate prevents a thick shrub cover leaving open patches of lava for herbs and ferns. Ann’s Creek is the only site in the region where a suite of native herbs remain growing together on lava, indicative of much of the vegetation cover of early Auckland. These include three threatened Geraniums (*G. retrorsum* (‘nationally vulnerable’), *G. solanderi* and *Pelargonium inodorum*). The lava field at Ann’s Creek isalso the type locality for the shrub *Coprosma crassifolia* collected there by William Colenso in 1846. Mature inanga (*Galaxias maculatus*) spawn there and both Australasian bittern ('nationally endangered') and banded rail ('naturally uncommon') are present.	SEA-M1
21w1	Mangere Inlet *Wading bird habitat*	Wading bird habitat contiguous with ecological sequences from saltmarsh to freshwater wetland in Ann’s Creek (21) and with mangrove ecosystems along the coastline (23a).	SEA-M2w

22	**South East Mangere Inlet**		
22a		Small upper intertidal area supporting a high diversity of native saline vegetation. Seawards is a diverse area of mangroves and saltmarsh, and small raised banks of clean sand supporting several species of plants characteristic of such areas. In the intertidal areas below the vegetated areas are extensive upper intertidal mudflats with dense populations of characteristic species.	SEA-M2
22b		Small upper intertidal area supporting a high diversity of native saline vegetation. In the south-east corner is a 0.25ha meadow of batchelor's button, *Cotula coronopifolia*.	SEA-M1
23	**Ambury**		
23a, c	Intertidal flats	The associated intertidal banks (23a, 23c) are a feeding ground for thousands of international migratory and New Zealand endemic wading birds and a variety of other coastal bird species, including a number of threatened species. Mangroves fringe the mouth of the Mangere Inlet (23a) and mangroves on lava flows fringe the Ambury coastline.	SEA-M2
23b		This modified shoreline is used as a high tide roost by thousands of international migratory and New Zealand endemic wading birds including a number of threatened species. It is the most important winter roost on the Manukau Harbour for South Island Pied Oystercatchers. The Manukau Foreshore including Ambury, is one of the most important roosting area for seabirds and wading birds on the Manukau Harbour. Over the last 30 years, 86 species have been sighted in the area, many of which are overseas migrants, with numbers of total waders	SEA-M1

		steadily increasing since 1960 from 15,000 to over 50,000. Species which breed here or can be seen year-round include the white-faced heron, bandedrail, shoveler duck, pied stilt, pied oystercatcher, royal spoonbill, New Zealand dotterel, black-backed gull and welcome swallow. The feeding grounds are used seasonally by national and international migrant waders such as the South Island pied oystercatcher, wrybill, banded dotterel, eastern bar-tailed godwit, lesser knot, turnstone, curlew sandpiper, and golden plover. The upper Manukau Harbour is still the stronghold for this species in the Auckland region with approximately 2,000 in the area. Dabchicks, paradise ducks, white herons, little egrets and black-fronted dotterels are seen occasionally, with 122 spoonbills reported in 2006. Rare visitors include the black-fronted tern, black stilt, black-billed gull and the occasional New Zealand fur seal.	
23w1-3	*Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M1w
23w4, 5	*Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
305w1	Mangere Lagoon *Wading bird habitat*	Mangere Lagoon is a sea invaded maar with a tiny scoria cone. Once filled with sludge from the Mangere Waste Water Treatment Plant, the lagoon has been returned to its natural state and is now an important feeding ground for wrybills.	SEA-M2w
24	Te Tau Bank East	This intertidal sandbank contains large numbers of shellfish, including edible species and species uncommon elsewhere in the Manukau Harbour. It is an important feeding area for wading birds.	SEA-M2
25	Puketutu Island	The island is used as a high tide roost by a variety of wading birds including several threatened species. Bird	SEA-M2

		species which utilise the island include stilt ('declining'), oyster catcher ('at risk declining'), spoonbill ('naturally uncommon'), dotterel ('nationallyvulnerable') and wrybill ('nationally vulnerable'). Saltmarsh vegetation adjoining the island includes low mangrove forest on lava flows and salt meadow communities.	
25w1	*Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
181	Motukaraka Bank	The Manukau Harbour has been identified as an Important Bird Area for its global significance for black-billed gull (‘nationally critical’), NZ dotterel (‘nationally vulnerable’), and for its congregations of wading birds which migrate from their South Island breeding sites, and for species migrating from the northern hemisphere. The Motukaraka bank provides wading bird foraging habitat for wrybill (‘nationally vulnerable’), South Island pied oystercatcher (‘at risk – declining’), Eastern bar-tailed godwit (‘’at risk-declining’) and red knot (‘nationally vulnerable’)	SEA_M2
24b	Te Tau Bank West	The Manukau Harbour has been identified as an Important Bird Area for its global significance for black-billed gull (‘nationally critical’), NZ dotterel (‘nationally vulnerable’), and for its congregations of wading birds which migrate from their South Island breeding sites, and for species migrating from the northern hemisphere. The Te Tau Bank West provides wading bird foraging habitat for wrybill (‘nationally vulnerable’), South Island pied oystercatcher (‘at risk – declining’), Eastern bar-tailed godwit (‘’at risk-declining’) and red knot (‘nationally vulnerable’).	SEA-M2
182	Karore Bank West	The Manukau Harbour has been identified as an Important Bird Area for its global significance for black-billed gull (‘nationally critical’), NZ dotterel (‘nationally vulnerable’), and for its congregations of wading birds which migrate from their South Island breeding sites, and for species migrating from the northern hemisphere. The Karore Bank West provides wading bird foraging habitat for wrybill (‘nationally vulnerable’), South Island pied oystercatcher (‘at risk –	SEA-M2

		declining'), Eastern bar-tailed godwit (''at risk-declining') and red knot ('nationally vulnerable').	
26	**Ihumatao**		
26a	Sandbank, Ihumatao coastline and Oruarangi Creek	The Karore intertidal sandbank is a particularly rich area which provides a variety of sand flat habitats between high tide and low springtide marks. On it grows the most extensive area of eelgrass (*Zostera*) remaining in the Manukau Harbour. Large numbers of fish and wading birds feed on the Karore Bank, with particularly high densities of some common waders feeding in and around the remaining eelgrass beds. Waterfowl, such as black swans and ducks, feed on the eelgrass itself. The Manukau Harbour has been identified as an Important Bird Area for its global significance for black-billed gull ('nationally critical'), NZ dotterel ('nationally vulnerable'), and for its congregations of wading birds which migrate from their South Island breeding sites, and for species migrating from the northern hemisphere. The Karore Bank provides wading bird foraging habitat for wrybill ('nationally vulnerable'), South Island pied oystercatcher ('at risk – declining'), Eastern bar-tailed godwit (''at risk-declining') and red knot ('nationally vulnerable'). The coastline around Ihumatao and Otuataua Stonefields contains coastal vegetation, including in places mangroves and saltmarsh grading into freshwater springs. Oruarangi Creek has been opened up to the tide in 2005 as a result of the Mangere Foreshore restoration project. The Otuataua Stonefields historic reserve and waahi tapu site lies inland. Small remnants of volcanic coastal broadleaf forest hug rock spines and slopes within the reserve. Pohutukawa occurs near the	SEA-M2

		shore and other dominant trees include titoki, karaka, with some puriri, pigeonwood, ngaio and mahoe.	
26w1	*Wading bird habitat* - Otuataua	Significant area for wading birds. A rich area which provides a variety of sand flat habitats between high tide and low spring tide marks. On it grows the most extensive area of eelgrass (*Zostera*) remaining in the Manukau Harbour. Large numbers of fish and wading birds feed on the Karore Bank, with particularly high densities of some common waders feeding in and around the remaining eelgrass beds. Waterfowl, such as black swans and ducks, feed on the eelgrass itself. There is also an artificial bird roost within this area.	SEA-M2w
171w	Pahurehure Coastline	Extensive areas of feeding habitat for waders along this coastline.	SEA-M2
171	Pahurehure Coastline	Mangroves on outer coastline of Pahurehure Inlet, adjoining wading bird habitat (171w) to west of motorway causeway.	
27	**Puhinui**		
27a	Sand flats, Puhinui Creek	Area of intertidal banks and shellbanks forming a complex habitat for a variety of animal and plant communities. The extensive gently-graded sand flats support dense populations of intertidal sand flat organisms and are an excellent feeding ground for thousands of international migratory and New Zealand endemic wading birds including a number of threatened species. Much of the intertidal area consists of extensive gently-graded sand flats, inhabited by dense populations of invertebrates. Thousands of international migratory birds and New Zealand endemic waders feed on the sand flats. In the shelter of the Puhinui, Pukaki, and Waokauri Creeks are significant areas of mangroves. Those in the Puhinui Creek are some of the oldest mangroves in the	SEA-M2

		harbour and have batchelor's button meadows on the fringe inplaces. Banded rail, fernbird and marsh crake.	
27b	Wiroa Island	An artificial roost has been constructed at Wiroa Island and this is widely used by coastal birds. Waders also use this roost, which is the major roost on the Manukau Harbour.	SEA-M1
27c	Shellbanks	The associated shellbanks at Puhinui are used as a high tide roost by thousands of international migratory birds and New Zealand endemic waders. The saltmarsh is impounded behind the shellbanks and is one of the biggest and least disturbed areas of saltmarsh remaining in the Manukau Harbour. Banded rail, and fern bird inhabit the saltmarsh, and the regionally threatened herb *Nertera scapanioides* ('regionally critical') and nationally threatened Maori musk *Mimulus repens* ('naturally uncommon') have been reported here. There are intact vegetation ecotones between the shellbank vegetation, the saltmarsh vegetation and into the kanuka forest with kahikatea and rimu on the shore.	SEA-M1
27w1	*Wading bird habitat*	See 27b and c. Wading bird habitat which includes ecotones from shellbank to saltmarsh to terrestrial vegetation.	SEA-M1w
27w2	*Wading bird habitat*	See 27a Shellbanks form key roosting and nesting sites for shorebirds and there is extensive intertidal feeding habitat for waders along this coastline.	SEA-M2w
29	**Drury**		
29a	Creeks and intertidal habitats	This area is comprised of a variety of intertidal habitats ranging from sandy mud intertidal flats, to current-exposed rocky reefs and avariety of saline vegetation. Healthy and often expanding areas of mangroves grow in the shelter of the Whangamaire Stream, and Drury and Whangapouri Creeks and in the	SEA-M2

		southern half of the Whangapouri Creek are notable eelgrass (*Zostera*) beds. Drury Creek is comprised of a variety of intertidal habitats ranging from sandy mud intertidal flats to current-exposed rocky reefs and a variety of saline vegetation. Wading bird roosting area, including important area for pied stilt.	
29b	Upper reaches Drury Creek	Within the upper tidal reaches of Drury Creek there are a variety of marshes, grading from mangroves through to extensive areas of jointed rush-dominated saltmarsh, to freshwater vegetation in response to salinity changes. This same area is a migration pathway between marine and freshwater habitats for a number of different species of native freshwater fishes.	SEA-M1
29w1-2	*Wading bird habitat*	Wading bird habitat including important area for pied stilt (see 29a).	SEA-M2w
30	**Clarks Beach to Karaka Point**		
30a	Seagrove - intertidal banks	Area of intertidal banks and shellbanks forming a complex habitat for a variety of animal and plant communities. The extensive gently-graded predominantly fine sand flats support the greatest diversity and abundance of intertidal sand flat organisms in the Manukau Harbour. They are an excellent feeding ground for many thousands of international migratory and New Zealand endemic wading birds including a number of threatened species.	SEA-M2
30b	Karaka roosts – shellbanks; Seagrove coastline and Clarks Creek	Several shellbanks have developed just offshore at Karaka since the early to mid 1980's and are now numerically the most important roost on the Manukau Harbour, most notably for waders, but also for a variety of coastal birds. There are a number of other roosts along the shore, most notably near	SEA-M1

		Seagrove, the second most important roosting site on the harbour. These are used during most high tides, but during high spring tides at Seagrove, the birds move onto adjacent pasture. There is a variety of saline vegetation within this area. The intertidal flats between Clarks Beach and Seagrove were the site of very extensive beds of eelgrass. Eelgrass beds declined sharply, but have been reappearing around the region in recent years. The Department of Conservation has selected the roosts and closely adjacent intertidal banks as an Area of Significant Conservation Value (ASCV).Along the shores there are fringes of saltmarsh, which reach their greatest extent and best condition along the northern shore of Seagrove Peninsula. Within the creek itself, at Seagrove, there are areas of healthy areas of mangroves.	
30w1	*Wading bird habitat*	Several shellbanks offshore at Karaka are numerically the most important roost on the Manukau Harbour, most notably for waders, but also for a variety of coastal birds. There are a number of other roosts along the shore, most notably near Seagrove, the second most important roosting site on the harbour. These are used during most high tides, but during high spring tides at Seagrove, the birds move onto adjacent pasture. There is a variety of saline vegetation within this area. The intertidal flats between Clarks Beach and Seagrove were the site of very extensive beds of eelgrass. Eelgrass beds declined sharply, but have been reappearing around the region in recent years. The Department of Conservation has selected the roosts and closely adjacent intertidal banks as an Area of Significant Conservation Value(ASCV)	SEA-M1w

30w2	*Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
31	Taihiki River	This inlet is comprised of a diversity of sheltered harbour habitats ranging from predominantly sandy intertidal flats, to mangroves and to pockets of saltmarsh. It is considered to be an important nursery area for young flounder and grey mullet. Provides habitat for banded rail, and is a wading bird roosting area. This remains one of the least impacted of harbour habitats in the Manukau because of the lack of major inputs of sediment from the catchment and vegetated shoreline.	SEA-M2
31w1	*Wading bird habitat*	*See 31* Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
32	**Waipipi**		
32a	Saltmarsh and intertidal flats	Waders congregate on the adjacent intertidal flats (32a) before moving onto the roost. This is one of the smaller of the major high tide wader roosts on the Manukau Harbour. Saltmarsh and mangroves fringe the tidal creeks and inlets in Waiuku River providing habitat for banded rail.	SEA-M2
32b	Waipipi roosts	Shell and sand banks at the entrance to Waipipi Creek (32b) which are isolated from the shore at high tide are used as a high tide roost by a variety of coastal birds and several hundred to a few thousand international migratory and New Zealand endemic wading birds including a number of threatened species. This is one of the smaller of the major high tide wader roosts on the Manukau Harbour. The Department of Conservation has selected the roosts and closely adjacent intertidal banks as an Area of Significant Conservation Value (ASCV).	SEA-M1
32w1	*Wading bird habitat*	See 32a Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
32w2	*Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M1w

319w1	Waiuku *Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
34	**Pollock Spit**		
34a	Intertidal flats	Waders congregate on the intertidal flats before moving onto the roost. Saltmarsh habitats join the spit with fairly extensive intertidal mangrove areas in Rangiriri Creek. The Department of Conservation has selected the roosts and closely adjacent intertidal banks as an Area of Significant Conservation Value (ASCV).	SEA-M2
34b	Sand bank	Sand bank formed into a spit is a high tide roost used by a variety of coastal birds and thousands of international migratory and New Zealand endemic wading birds including a number of threatened species.	SEA-M1
34w1	*Wading bird habitat*	See 34a Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
34w2	*Wading bird habitat*	Sand bank with associated adjoining mangroves formed into a spit is a high tide roost used by a variety of coastal birds and thousands of international migratory and New Zealand endemic wading birds including a number of threatened species.	SEA-M1w
35	Awhitu	A range of shoreline habitats are found along the shores of Awhitu Regional Park and in the Kauritutahi Stream. These support a large range of wading and coastal birds in addition to a number of threatened coastal fringe and wetland birds that dwell in the saline vegetation. Contains intact sequences from shoreline habitats to mangrove, estuarine and freshwater wetlands. Banded rail and North Island fern bird inhabit wetlands and coastal margins. The area is an integral part of the Manukau Harbour, an internationally important wetland selected by the Department of Conservation as an Area	SEA-M2

		of Significant Conservation Value (ASCV).	
36	Awhitu South Head to Big Bay	This area is subjected to strong, cool lateral currents similar to those at Omanawanui on the opposite side of the harbour mouth. Consequently, this stretch of coast also supports a diverse and rich marine fauna which shows open coast, harbour, and southern affinities. The south head contrasts with the north because of the softer rocks and platform reefs which mean that the biota differs and is less diverse and abundant. Remnants of coastal cliff pohutukawa and scrub present at Orua Bay and northern end of Big Bay. Remnants of coastal scrubland and forest on steep coastal dunes.	SEA-M2
37	West Coast of Awhitu Peninsula	Expansive windswept coastline with steep eroding coastal cliffs and dunes. Remnants of coastal flaxland and coastal broadleaved pohutukawa forest, including groves of large remnant pohutukawa. A series of dune lakes occur along the western side of the peninsula. The most extensive area of coastal cliff pohutukawa forest on the west coast of Awhitu Ecological District is present within the stewardship area at Cochranes Gap. The marine ecosystem at Kariotahi grades into areas of coastal vegetation, within which a range of threatened plants grow.	SEA-M2
40	**Kawakawa to Matingarahi**		
40a, g, i		The section of coast from Raukura Point to Orere Point is one of the richest areas in the region for rocky shore and sandy beach flora and fauna. In some places, the marine ecosystem grades into areas of natural coastal vegetation, some of which is considered to be amongst the best in the Hunua ecological district (40a) and at Papanui	SEA-M2

		Point (40h) there are a number of threatened plant species within this vegetation. A thin strip of pohutukawa forest occurs along the cliff top between Tapapakanga and Orere. Contains one of the best areas of pohutukawa forest on coastal sediments.	
40f		The marine ecosystem grades into areas of natural coastal vegetation, which is considered to be amongst the best in the Hunua ecologicaldistrict. Best coastal pohutukawa forest on alluvial sediments, at Orere Beach Domain.	SEA-M1
40h		The marine ecosystem grades into areas of natural coastal vegetation, which is considered to be amongst the best in the Hunua ecological district and at Papanui Point there are a number of threatened plant species within this vegetation. Best coastal mapou forest withemergent kanuka, tanekaha and pohutukawa, on coastal sediments in the ecological district, on coastal hillslopes adjacent to Tawhitokino Beach. Coastal bird species, including shags, terns and gulls roost in the coastal trees and adjoining rocks. Little blue penguins probably also nest here.	SEA-M1
200w1	Kawakawa Bay *Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
41	**Wairoa River and Estuary**		
41a	Wairoa River Estuary	Largest east coast river in the region with a complex of intertidal flats and shellbanks that have accumulated at the mouth. These provide a varied habitat for a wide range of animal and plant communities. The intertidal banks are a very rich feeding ground and important mid tide roost for a few thousand international migratory and New Zealand endemic wading birds including a	SEA-M2

		number of threatened species. Moderate numbers of wading birds feed on the mudflats, including godwit, knot, whimbrel, variable oystercatcher, and banded dotterel. Banded rail and fern bird are associated with mangroves and vegetated margins of estuary. 55 bird species have been recorded from the estuary.	
41b	Kauri Bay, Wairoa Estuary	The shellbank at Kauri Bay is important as a breeding ground for the threatened New Zealand dotterel. In the shelter of the shellbanks and the estuarine stretches of the river grow important areas of mangroves and saltmarsh (41b - j) much of it judged to be the best in the ecological district. There is a gradation from saline vegetation into freshwater vegetation beyond the coastal marine area with decreasing salinity moving upstream from the sea. Banded dotterel nest here, and the area provides habitat for banded rail, Caspian tern, fernbird, variable oystercatcher, and golden plover. The saline vegetation provides high quality habitat for threatened secretive coastal fringe birds particularly in saltmarshes where there is terrestrial vegetation which provides roosts for the birds and potential nesting sites.	SEA-M1
41c, e, i, f		Contains the best mangrove forest in the Hunua Ecological District. The area is composed of a number of areas of mangroves which occur from the mouth of the Wairoa River at Poutu Point upstream for approx 3km. Along the river bank mangroves are dense and can reach 6m in height. The total area of mangroves in the estuary is approx. 60ha. 41e grades into the best example of coastal marsh ribbonwood/oioi-sea rush rushland in the ecological district.	SEA-M1
41d		Contains the best example of coastal	SEA-M1

		glasswort herbfield in the Hunua Ecological District.	
41g		Contains the only area of coastal flax-purua grass-marsh ribbonwood flaxland in the Hunua Ecological District.	SEA-M1
41h	Duders wetland	A complex saltmarsh system which is one of the least modified in the ecological district, and includes the best examples of saltmarsh wetland types in the district. Contains coastal tawa forest as well as one of the two best areas of pohutukawa forest in the district, is present on Whakakaiwhara peninsula.	SEA-M1
41w1, 4	*Wading bird habitat*	See 41b, 41h Extensive areas of feeding habitat for waders along this coastline.	SEA-M1w
41w2, 3	*Wading bird habitat*	See 41aExtensive areas of feeding habitat for waders along this coastline.	SEA-M2w
169	Maraetai Beach	Sandy beach and extensive areas of feeding habitat for waders along this coastline.	SEA-M2
169w1	*Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
42	**Omana**		
42a	Mudflats and sand flats	A variety of shoreline habitats in microcosm are found within the Te Puru Creek and along the shores to the east, ranging from mud flats within the creek to sandy silt flats (42a) surrounding a wide rocky shore platform outside the creek. These provide a habitat for a wide variety of animal and plant communities. Intact sequences from mangroves and estuarine wetland to freshwater wetland occur in Te Puru Creek.	SEA-M2
42b	Te Puru Stream estuary - saline vegetation	A variety of shoreline habitats in microcosm are found within the Te Puru Creek and along the shores to the east. These provide a habitat for a wide variety of animal and plant communities. Most notable is the saline vegetation growing on the mudflats (42b). Here, in association with mangrove and raupo, is an unusual area of Scirpus sedgeland. This site	SEA-M1

		includes a variety of shoreline habitats, saline vegetation on mudflats, clubrush (*Schoenoplectus*) sedgeland in association with mangrove and raupo. The shoreline habitats grade into pohutukawa forest on cliffs and coastal forest areas. Native revegetation is enhancing the natural values of this area. There are two areas of coastal forest: one dominated by mature tanekaha and the other by large puriri and taraire. Both have been fenced from stock. The forest is home to native birds such as fantails, grey warblers, tui and kereru. South Island pied oystercatchers ('at risk declining'), Caspian tern ('nationally vulnerable'), pied shags ('nationally vulnerable') and kingfishers are present on the foreshore and shags rooston pohutukawa. The vegetation is ranked as a Hunua ED Priority Vegetation Site and contains an intact ecological sequence from estuarine to freshwater. Banded rail. The Te Puru Estuary is a Site of Special Wildlife Interest (SSWI) of moderate value.	
43	**Turanga Creek Estuary**		
43a		Three distinct tidal creeks (Maungamaungaroa, Turanga, and Waikopua) flowing into one large bay, within which a complex of intertidal mud, sand, and shell flats have accumulated. This physical variety provides a similarly varied range of habitats for an assortment of animal and plant communities. The intertidal banks are a very rich feeding ground and important mid tide roost for many hundreds of a variety of international migratory and New Zealand endemic wading birds including a number of threatened species. Turanga Creek is	SEA-M2

		the largest estuarine habitat, including mangrove shrubland ecosystems, in the Hunua Ecological District. The Department of Conservation has selected this area as an Area of Significant Conservation Value (ASCV).	
43b, c, e, f	Shellbanks	Large shellbanks at various locations at creek mouths (43c, 43f), behind the beach (43e), or near Motukaraka Island (43b) are used (or have been used in the past) as high tide roosts by these birds and a variety of other coastal bird species. Moderate numbers of wading birds roost on the shellbanks including godwit, SIPO, whimbrel, reef heron, variable oystercatcher and banded dotterel. The Department of Conservation has selected this area as an Area of Significant Conservation Value (ASCV).	SEA-M1
43d		Contains the best areas of mangrove/oioi rushland and marsh ribbonwood/sea rush rushland in the ecological district.	SEA-M1
43g, h	Mangroves, coastal forest, saltmarsh, islands	There are two major gradations from saline vegetation into terrestrial vegetation. One (43h) is from mangroves into the best coastal pongaand taraire forests on coastal sediments in the ecological district which in turn grades into kowhai forest. The second (43g) grades from mangroves into saltmarsh into coastal shrublands on islands in the Turanga Creek. The saline vegetation fringing the creeks provides high quality habitat for threatened secretive coastal fringe birds particularly where it abuts terrestrial vegetation which provides roosts for the birds and potential nesting sites. These intact sequences from mangrove forest to saltmarsh to coastal shrubland contain the best and only remaining areas of coastal	SEA-M1

		shrubland and coastal forest on estuarine island in the ecological district. The Department of Conservation has selected this area as an Area of Significant Conservation Value (ASCV).	
43w1	*Wading bird habitat*	See 43a Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
43w2-4	*Wading bird habitat*	See 43f, e, c Extensive areas of feeding habitat for waders along this coastline.	SEA-M1w
45	**Pakuranga Creek and Roost**		
45a	Roosting sites	Pakuranga Creek roost is one of the roosting sites used by some of the hundreds of wading birds that feed within the Tamaki Estuary. It is a large river estuary where considerable areas of intertidal flats have accumulated. The whole of the Tamaki Estuary is a regionally important wildlife habitat and has been selected by the Department of Conservation as an Area of Significant Conservation Value (ASCV).This roost is associated with the values of SEA-M 47, 48, and 49 and forms an integral part of the wildlife habitat values of the estuary. There are a number of roosting sites (notably Pakuranga Creek Roost and the Tamaki River East Roost), which are used by hundreds of wading birds which feed in the estuary.	SEA-M1
45b	Mangroves	The mangrove areas of Pakuranga Creek are regarded as the best example of mangrove habitat in the Tamaki Estuary.	SEA-M2
45c	Otahuhu Creek	Extensive areas of feeding habitat for waders along this coastline.	SEA-M2
45w1-2	*Wading bird habitat*	See 45a - c Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
2908	Southern arm of Tamaki River (west of Highbrook Drive)	Area of mangroves and intertidal flats in southern arm of Tamaki River. Intertidal flats providing habitat and feeding ground for wading birds.	SEA-M2
47	Tamaki River East Roost	Tamaki Estuary is a regionally important wildlife habitat. Tamaki River	SEA-M1

		East Roost is one of the roosting sites used by some of the hundreds of wading birds that feed within the Tamaki Estuary. This roost is associated with the values of SEA-M 45, 48, and 49. There are a number of other roosting sites (notably Pakuranga Creek Roost and the Tamaki River East Roost), which are used by hundreds of wading birds which feed in the estuary. Intertidal banks (such as the Tamaki East Bank) contain extensive beds of shellfish and are important feeding grounds for these birds.	
48	Tamaki East Bank	This intertidal bank is a feeding ground for the hundreds of wading birds that use the Tamaki Estuary. This feeding ground is associated with the values of SEA-M 45, 47, and 49. This area also includes part of the Farm Cove ignimbrite, most of which is above MHWS. Significant mangrove, saltmarsh and salt meadow sequences are present in Wakaaranga Creek.	SEA-M2
49	**Tamaki Estuary West**		
49a	Intertidal banks	Large river estuary where considerable areas of intertidal flats have accumulated and a sand-shell spit has built up near the entrance. The spit has been modified to create a variety of freshwater and estuarine habitats. Saltmarsh and mangrove habitats fringe the estuary. The intertidal banks contain extensive beds of shellfish and are a feeding ground for these birds. The spit and associated northern and southern intertidal banks, together comprise a wildlife habitat of regional importance. This area is associated with the values of SEA-M45, 47, and 48.	SEA-M2
49c	Tahuna Torea	The Tahuna Torea spit ('the gathering place of the oystercatcher') has been	SEA-M1

		modified to create a variety of freshwater and estuarine habitats. The estuarine area behind the spit has been dammed and developed by the Tamaki Estuary Protection Society, as a brackish pond for feeding and roosting birds. A freshwater wetland has also been developed as a breeding and feeding area. The area provides an interesting complex of marine, intertidal, freshwater and terrestrial habitats for a wide range of birds. It has added value because of its proximity to, and ready access for, a large number of people. Birds which frequent the area include the South Island pied oystercatcher, variable oyster catcher, Caspian tern, grey teal, pied stilt, godwit, knot, turnstone, golden plover, banded dotterel, New Zealand dotterel, wrybill, black-backed gulls, red-billed gulls, caspian terns, pied shags and little shags; white-faced heron and blue reef heron also feed on the tidal flats.	
49d	High tide roost	Large river estuary where considerable areas of intertidal flats have accumulated and a sand-shell spit has built up near the entrance. The spit has been modified to create a variety of freshwater and estuarine habitats. Hundreds of mainly New Zealand endemic wading birds, including a number of threatened species, use the spit and a stretch of coast nearer the entrance as high tide roosts.	SEA-M1
49w1, 3, 4	*Wading bird habitat*	*See 49a* Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
50	**Musick Point**		
50a	Rocky intertidal habitat	Area of rocky intertidal marine habitat which is easily accessible and in reasonably good condition	SEA-M2
51	**Hobson Bay – Orakei Basin**		
51a, b	Orakei Basin and Hobson Bay	This area is a breeding area for a variety of shag species. Orakei Basin	SEA-M2

		and Hobson Bay are feeding areas used by these birds along with a variety of other coastal and wading birds, including white-fronted terns ('at risk, declining'), gulls, kingfishers, white-faced herons,pied stilts ('at risk, declining').	
51c	Purewa Stream	Some of the largest mangroves in the ecological district grow in the Purewa Stream area. The value of these mangroves is enhanced by the gradation from mangrove forest into the coastal forest of Purewa Reserve. Purewa Valley contains remnants of coastal forest and one of the finest examples of mangrove forest in the Auckland area with some trees up to 4m in height. Several patches of eelgrass, now a rather uncommon species in the Waitemata Harbour since its devastation by disease in the 1950s, are found on the tidal flats. There are some old kanuka, cabbage trees, kowhai and pohutukawa. The Council and community groups have undertaken the protection and enhancement of this area. Birds of the area include mallard ducks, pied stilts, kingfishers, blue reef herons, grey warblers, tui and pukeko. Banded kokopu have been reported in the gully streams. An undescribed leaf miner was discovered on Pseudopanax lessonii in this bush in 2007 (ARPS). Ecological sequence from mangroves to coastal forest.	SEA-M1
51w1	*Wading bird habitat*	See 51a Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
52	**Te Tokoroa Reef**		
52a	Te Tokoroa Reef saline vegetation	Te Tokoroa Reef is a basaltic lava flow which extends into the Waitemata Harbour and provides a range of habitats and flora and fauna which is unique both within the Waitemata Harbour and throughout New Zealand,	SEA-M1

		and nationally recognised originally rare ecosystem type. The hard surface presented by the lava flow is unusual within the Waitemata Harbour and the diverse marine biota it supports, particularly sponges and bryozoans, is correspondingly unusual. The reef is a significant area for wading birds. There are extensive salt marshes and mangrove communities associated with the reef.	
52w1, 2	*Wading bird habitat*	Te Tokoroa Reef provides key roosting and nesting site for shorebirds and there are extensive areas of feeding habitat for waders along this coastline.	SEA-M1w
53	Pollen Island	Pollen and Traherne Islands are low-lying islands with extensive shell banks, mangroves and salt marshes, and estuarine and harbour mudflats, and comprise an important wildlife area in the Waitemata Harbour. It is the best remaining largely unmodified area of its type in the Waitemata Harbour and is considered to be of national importance. It forms a complex habitat for a variety of animal and plant communities. Pollen and Traherne Islands and the surrounding shellbanks are the major high tide roost on the Waitemata Harbour for thousands of international migratory and New Zealand endemic wading birds as well as a variety of coastal birds. This includes a number of threatened species. They are also an important breeding and flocking area for the threatened New Zealand Dotterel on the Waitemata Harbour. The surrounding intertidal banks and waters are a feeding ground for all of these birds. The biggest and least disturbed area of saltmarsh remaining in the Waitemata Harbour grows in the shelter of Pollen Island. Here is found an important intergrading of vegetation from	SEA-M1

		intertidal flats up onto shellbank. Mangroves give way to glasswort herbfields which in turn are replaced by rush and sedge saltmarsh which grades into saltmarsh ribbonwood shrubland on Pollen Island itself. The saline vegetation is an important habitat for a variety of threatened secretive coastal fringe birds. It provides a key habitat for fern bird. The habitat quality is enhanced by the adjoining thick low saltmarsh ribbonwood vegetation on the Island which provides shelter for the birds and offers potential nesting sites. Here is found a valuable population of the regionally threatened fern bird. The majority of this area was protected as the Motu Manawa (Pollen Island) Marine Reserve in late 1995. The Department of Conservation has selected this area as an Area of Significant Conservation Value (ASCV). Traherne Island is also an important roosting area for birds and is the main roost for banded dotterel and wrybill in the Waitemata Harbour. New Zealand dotterel and fern bird nest in the area. The south end of Pollen Island is the only known locality in New Zealand of the minute ant, Mayriella abstinens; it is also the type of locality for a new species of psyllid, Anomalopsylle which is less than 1mm long. The Pollen Island locality is a marine reserve and is considered to be of national importance.	
53w1-2	*Wading bird habitat*	See 53 Shellbanks form key roosting and nesting sites for shorebirds and there is extensive intertidal feeding habitat for waders along this coastline.	SEA-M1w
54	Whau River	The Whau River contains substantial quantities of mangrove ecosystems and saline vegetation. There are around 40 hectares of mangroves with the taller trees growing in the lower intertidal areas and mangroves of smaller stature	SEA-M2

		growing in the firmer high intertidal regions. These in turn grade into a fringe of saltmarsh lining the coast. The saline vegetation is an important habitat for threatened secretive coastal fringe birds particularly where it abuts terrestrial vegetation which provides roosts for the birds at high tide and potential nesting sites. Kingfisher, pied stilt, white-faced heron, red-billed gull, black-backed gull, pied shag, black shag, welcome swallow, and pukeko are among the birds seen in the area.	
55	**Te Atatu – Henderson Creek**		
55a	Henderson Creek and Te Atatu	This is an area of saltmarsh, mangroves, shellbanks, and estuarine and harbour intertidal banks forming a complex habitat for a variety of animal and plant communities. The intertidal area to the east of the Te Atatu Peninsula is a major wading bird feeding ground. Harbour view Reserve (Te Atatu Peninsula) contains an ecotone from saline to brackish to freshwater wetland and provides habitat for fern bird and banded rail. The eastern side of the Te Atatu peninsula contains extensive high-tidal sand flats, healthy mangroves, a prominent shell bank and a high-tidal salt marsh along the shoreline. Such a combination is unusual to find in the Waitemata Harbour. Gulls, terns, pied stilt, white-faced heron and kingfisher are seen in this area.	SEA-M2
55b,c	High tide roost, shellbank	Nearby extensive clean high-tidal sand flats and a prominent shellbank (55b) offer a high tide roost for some of these wading birds and a variety of coastal birds, as do a series of small shellbanks off the north end of the Te Atatu Peninsula (55c). The latter are considered to be a major roosting area for waders in the Waitemata Harbour	SEA-M1

		and are also a breeding ground used by a range of coastal and wading birds, including a number of threatened species. Large and significant areas of saline vegetation grow in the shelter of these shellbanks. At Te Atatu East (55b) the extensive shell barriers protect high level mangroves with a healthy sedge, rush and glasswort saltmarsh on the shore fringe. At Te Atatu North (55c) there is a large area in which there is either pure mangrove swamp or bare sand flat. Saline vegetation also grows in the shelter of Henderson Creek. Here the edges of the creek are lined with mature mangroves which grow in association with areas of saltmarsh at the mouth of the creek and sedges and eelgrass further up the creek. In one place (55d) there is an important gradation between saline vegetation in the intertidal area and native towai forest on the slopes above. On part of the coast at Te Atatu North (55c) are found remnants of swamp and estuarine vegetation of Pleistocene age now exposed at intertidal levels.	
55d	Henderson Creek	There is an important gradation between saline vegetation in the intertidal area and native towai forest on the slopes above. An extensive and ecologically healthy area of mangrove and salt marshes can be found in the Henderson Creek. Kingfisher, pied stilt, white-faced heron, red-billed gull, black-backed gull, pied shag, black shag, welcome swallow, and pukeko are among the birds seen in the area.	SEA-M1
55w1, 3, 6	*Wading bird habitat*	See 55b, 55cExtensive feeding habitat for waders along this coastline.	SEA-M1w
55w2, 4, 5	*Wading bird habitat*	*See 55a* Shellbanks form key roosting and nesting sites for shorebirds and there is extensive intertidal feeding habitat for waders along this coastline.	SEA-M2w

56	**Hobsonville Peninsula**		
56a	Intertidal	Contains wide intertidal mudflats and mangrove shrublands. Wading birds, including threatened species feed in the intertidal area to the east of the peninsula (56a).	SEA-M2
56b	*Wading bird roost*	At the mouth of Nimrod Inlet and Bomb Bay is a shellbank (56b) that is one of the two major roosts on the Waitemata Harbour for wading birds, including threatened species.	SEA-M1
57b	Herald Island to Lucas Creek	This area is the best example of the muddy, mangrove- lined inlets of the inner Waitemata Harbour. The diversity and productivity of the flora and fauna is generally large with extensive beds of shellfish and abundances of birds and fish. Gradations between the marine environment and either natural freshwater or natural terrestrial systems are a major characteristic of the ramifying arms of the system. These arms are also important as pathways for migration by native freshwater fish. The mangroves and saline vegetation is an important habitat for threatened secretive coastal fringe birds, particularly where it abuts terrestrial vegetation, which provides roosts and potential nest sites for birds. Brighams, Rangitopuni, Paremoremo, Lucas and Hellyers creeks in the upper reaches of the Waitemata Harbour offer largely un spoilt tidal inlets with hill sides of regenerating native forest in the area of Lucas and Paremoremo Creeks. The forest cover here consists of kauri on the ridges with puriri and kahikatea dominant on the slopes and in the gullies. The coastal forest is comprised of pohutukawa, kowhai and karaka. The	SEA-M2

		extensive sheltered intertidal areas retain large quantities of soft sediment derived from the watershed. The mangroves and salt marshes are important as wildlife habitats. Birds which can be found in the area include black shag, kingfisher and white-fronted tern. A large area of regenerating kauri/ tanekaha-broadleaved forest occurs on the northern Lucas Creek escarpment. It forms part of the largest block of continuous forest in the Tamaki Ecological District. Pohutukawa line the coastal edge of Paremoremo Creek mouth, and significant remnants of coastal forest grade into mangroves.	
57a	Lucas Creek	Mangroves grade into coastal forest on western side of Lucas Creek. The saline vegetation is an important habitat for threatened secretive coastal fringe birds, particularly where it abuts terrestrial vegetation, which provides roosts and potential nest sites for birds. The forest cover here consists of kauri on the ridges with puriri and kahikatea dominant on the slopes and in the gullies. The coastal forest is comprised of pohutukawa, kowhai and karaka. A large area of regenerating kauri/ tanekaha-broadleaved forest occurs on the northern Lucas Creek escarpment. It forms part of the largest block of continuous forest in the Tamaki Ecological District.	SEA-M1
58a	Hellyers Creek	The most significant areas where mangroves grade into coastal forest. Hellyers Creek is important because of the extensive natural connections between the marine and terrestrial environments. Almost all of the block of land to the south of View Road on the northern side of Hellyers Creek is covered with forest (kahikatea, kauri, kohekohe, puriri, taraire, kowhai, and	SEA-M1

		kanuka). This natural vegetation adjoins mangroves which occupy large areas of the upper shore. There is a continuous corridor of regenerating coastal kauri-tanekaha-kanuka-pohutukawa broadleaved forest from the head of Hellyers Creek to Greenhithe, on the northern side of the creek, with intact sequences from mangrove to kauri forest on the ridge. Hard beech is also found along the Hellyers Creek escarpment.	
58b	Hellyers Creek	Hellyers Creek is important because of the extensive natural connections between the marine and terrestrial environments. Almost the entire block of land to the south of View Road on the northern side of Hellyers Creek is covered with forest (kahikatea, kauri, kohekohe, puriri, taraire, kowhai, and kanuka). This natural vegetation adjoins mangroves which occupy large areas of the upper shore. There is a continuous corridor of regenerating coastal kauri-tanekaha-kanuka-pohutukawa broadleaved forest from the head of Hellyers Creek to Greenhithe, on the northern side of the creek, with intact sequences from mangrove to kauri forest on the ridge. Hard beech is also found along the Hellyers Creek escarpment.	SEA-M2
59	Soldiers Bay	Soldiers Bay has the only intact ecological sequence of mangroves, saline wetland through freshwater to mature native forest in the Tamaki Ecological District and therefore has great ecological value. Pied stilt ('at risk declining'), white-faced heron, kingfisher, gulls, white-fronted tern ('at risk declining'), caspian tern ('nationally vulnerable') and, occasionally, gannet can be seen in the area. Within this	SEA-M1

		bay a variety of intertidal substrates provide a variety of habitats for a range of plants and animals. There are fine firm sandy sediments on the lower shore, softer sediments and shell barrier at the head of the bay, reefs of sandstone extending from the points and accumulations of boulders beneath the cliffs. The intertidal areas provide a feeding area for a variety of coastal birds which roost on the shell barrier. A complex of mangroves and saltmarsh grow in the shelter of the shellbanks and these grade into a sizeable freshwater raupo wetland and into swamp forest with kahikatea and swamp maire ('gradual decline').	
201w	Little Shoal Bay *Wading bird habitat*	Extensive areas of feeding habitat for waders along this coastline.	SEA-M2w
60	**Shoal Bay – Ngataringa Bay**		
60a, b	Shoal Bay - intertidal area, Ngataringa Bay intertidal area	Shoal Bay, north of a line east of the Northcote motorway interchange, is an important feeding and roosting area. Caspian tern, New Zealand dotterel, pied stilt, white-faced heron, pukeko, kingfisher and gulls can be seen in the area. Within this area are extensive areas of shellbanks and intertidal sand and mud, which together form a complex habitat for a variety of animal and plant communities. The intertidal area (60a, 60b) is an important wading bird feeding ground. Saltmarsh and mangrove communities grow on the margins of this area (60a, 60b), protected by the shellbanks nearer the mouths of the bays. These areas of saline vegetation offer a good habitat to secretive coastal fringe birds. The coastal vegetation is an outstanding example of a saline community, and includes ecotone sequences from mangroves to saltmarsh/salt meadow to	SEA-M2

		shellbanks to Bolboschoenus/raupo wetlands. Remnants of pohutukawa occur on the fringes of Shoal Bay and Ngataringa Bay.	
60c, d, e, g	Shell banks	Associated shellbanks (60c, 60d, 60e, 60g) are used as a high tide roost by wading birds and a variety of coastal birds. The City of Cork shellbanks and the reconstructed shellbanks created as part of the North Shore Busway are used as a breeding site for New Zealand dotterel. The City of Cork shellbank supports the best example of Stipa-saltmarsh ribbonwood in the Ecological District. The shellbanks beside the motorway are the only roosting area used by the New Zealand dotterel between Traherne Island and Browns Island, and is a nesting area for the New Zealand dotterel, caspian tern and pied stilt.	SEA-M1
60f	Tank Farm	Mangrove and saltmarsh grow within the shelter of the Tank Farm Explosion Crater (60f) and provide important fish and bird habitats. The rich volcanic red-brown loams of this area support remnants of lush broadleaved forest, dominated by old growth kohekohe (uncommon in the Tamaki Ecological District) and lesser amounts of karaka, with stands of pohutukawa, making these one of the few remnants of broadleaved forest on volcanic soils on the North Shore. Together with Onepoto Basin to the west, the forest, lake, freshwater and saline wetland complex supports a diverse range of bird species include pukeko, white-faced heron, black-backed gull, red-billed gull, various species of shag, welcome swallow, fantail, kingfisher, Caspian tern, tui, pigeon, harrier hawk, grey duck, paradise shell duck, grey warbler and shining cuckoo. Grey teal	SEA-M1

		and brown teal have been recorded here on occasion.	
60w1	*Wading bird habitat*	See 60a, 60b Extensive feeding habitat for waders along this coastline.	SEA-M2w
60w2-4	*Wading bird habitat*	See 60d, 60e, 60g Shellbanks form key roosting and nesting sites for shorebirds and there is extensive feeding habitat for waders along this coastline.	SEA-M1w
61	North Head to Takapuna	This stretch of coast consists of a series of rocky headlands of soft Waitemata series rocks with sandy beaches in between. At the southern end of this area is North Head, a volcano of which the rock at intertidal level is bedded volcanic ash called “tuff”. This wide variety of substrates provides a large range of habitats for plant and animal communities. The wave exposure increases from south to north in this area and this is reflected in the composition of the marine communities found along the coast. There are rich faunal assemblages in the areas of soft sediments near the low tide marks of all of these beaches, but at the sheltered Cheltenham, the principal species is the cockle, whereas at the more exposed Takapuna Beach the tuatua dominates. The flora and fauna of the hard substrata, particularly the sponges, are very rich and diverse. Fragments of pohutukawa occur on the cliffs, with a significant remnant of coastal forest at St Leonards Beach, and coastal pohutukawa shrubland at North Head.	SEA-M2
62	Takapuna and Thorne Bay Fossil Forests	The area supports a particularly diverse association of marine flora and fauna. Small remnant of original pohutukawa trees (Te Uru Tapu,"the sacred grove") occurs at the northern end of Takapuna beach, with scattered pohutukawa trees along the coast, and saltmeadow, saltmarsh species and mangrove	SEA-M2

		individuals in sheltered areas.	
170	Wairau Creek Estuary	Estuary at Milford with mangroves grading into saltmarsh with oioi and saltmarsh ribbonwood. Catchment is highly urbanised.	SEA-M2
64	**Long Bay and Okura Estuary**		
64a	Intertidal	Within this area are a considerable variety of intertidal substrates which together form a complex array of habitats which support a variety of animal and plant communities. The communities living on the wave-cut platforms, cliffs, and beaches at Long Bay have been studied over a long period and are in reasonably good condition. This is a known location of pingao, a threatened plant of mobile sand areas. The intertidal areas within the Okura Estuary and outside its entrance range from fine mud to sand and are used as a feeding ground by several hundred wading birds. Many of these birds roost on the sandy area at the entrance to the estuary at high tide. A variety of other coastal birds feed and roost within this area. Areas of saltmarsh and mangrove line the estuary and are used by banded rail, a threatened secretive coastal fringe bird. The adjoining terrestrial vegetation which provides shelter for the birds and offers potential nesting sites. This saline vegetation and other intertidal areas grade into coastal pohutukawa forest on sheltered cliffs, then into taraire forest on coastal hill country, and finally into kanuka forest on a headland. Both of the latter are considered to be the best examples of their types in the ecological district. At Karepiro Creek, the marine environment grades into significant coastal saltmarsh on	SEA-M1

		stabilised sand above Mean High Water Springs. Okura estuary is part of the Long Bay Okura Marine Reserve. The Okura River provides habitat for giant kokopu and long-finned eel. The Department of Conservation has selected this area as an Area of Significant Conservation Value (ASCV).	
64b		Saline vegetation and other intertidal areas grade into coastal pohutukawa forest on sheltered cliffs, then into taraire forest on coastal hill country, and finally into kanuka forest on a headland. Both of the latter are considered to be the best examples of their types in the ecological district. At Karepiro Creek, the marine environment grades into significant coastal saltmarsh on stabilised sand above Mean HighWater Springs. The Department of Conservation has selected this area as an Area of Significant Conservation Value (ASCV).	SEA-M1
64w1	*Wading bird habitat*	See 64a, 65a, 65b Extensive intertidal feeding habitat for waders along this coastline.	SEA-M1
65	**Weiti Estuary**		
65a	Intertidal	Wading birds feed in the adjacent intertidal areas to the south of the shell spits. The estuary also provides a good habitat for the coastal birds. There are also intact ecological sequences from mangroves and saline vegetation grading into coastal forest on the northern slopes of the Wade River. Here coastal broadleaved forest and shrubland forms a narrow continuous corridor from the mouth of the river to the upper reaches.	SEA-M2
65b	Shell spits	The most notable feature of this small estuary is the series of chenier-type shell spits which have formed within the estuary. These have been used to derive a sea level curve for the last 10,000	SEA-M1

		years and are considered to be internationally significant landforms. The shellspits are a good high tide roosting site for the wading birds that feed in the adjacent intertidal areas to the south and for the coastal birds that use the estuary itself. The most seaward shellbank is particularly important as it is one of the key breeding grounds in the region for the threatened New Zealand Dotterel.	
65c		Saline vegetation in the estuary grades into manuka- kanuka shrubland on hills, significant within the ecological district.	SEA-M1
66	Hobbs Bay intertidal area and adjacent coastal vegetation	The shore platform and the adjacent intertidal area to the west grades into notable coastal broadleaved forest and coastal manuka-kanuka shrubland on headland or peninsula.	SEA-M2
67	Whangaparaoa Peninsula, Whangaparaoa Headland cliffs and intertidal platforms	The Whangaparaoa Headland provides a valuable ecological linkage between the Auckland mainland and Tiritiri Matangi Island. Native bird species dispersing from the island include bellbirds, kaka and kakariki. The large, restored freshwater and saline wetlands within Shakespear Regional Park and bays surrounding the headland provide habitat for threatened native birds including spotless crake, fernbird, New Zealand dotterel, white-faced heron and pied stilt. The cliffs and intertidal platforms of the rocky coastline at the end of the Whangaparaoa Peninsula are made up of sedimentary Waitemata Group rocks that were deposited during the Miocene. The rocky shores and the intertidal and subtidal sediments on the southern side of the peninsula offer a complex of habitats for a variety of plant and animal communities. The rocky shores support large populations of reef-fish, kina and other invertebrates,	SEA-M1

		and a rich variety of marine algae. On one part of the shore platform the marine ecosystem grades into a significant area of natural terrestrial vegetation; a small area of complex shrubland on a headland or peninsula. The sediments of the bays on the south of the peninsula is the habitat of extensive beds of molluscs and in the north- eastern corner of Okoromai Bay grade into a saltmarsh which is a significant migration pathway for native freshwater fishes. Remnant coastal forest has been enhanced by restoration plantings within Shakespear Regional Park and large scrubland areas on the headland provide habitat for the threatened Moko and ornate skink. An Open Sanctuary has been created on the Whangaparaoa Headland with the installation of a predator proof fence in 2010.	
67w1	*Wading bird habitat*	Extensive intertidal feeding habitat for waders along this coastline.	SEA-M1w
72	Orewa Estuary	Moderate to small sized estuary with a variety of habitats for plant and animal communities in the marine area. The harbour contains significant areas of intertidal banks where migratory wading birds feed and use this estuary as a stepping stone in their travels. A range of coastal birds, particularly shags, also feed within the estuary as do a number of species of waterfowl that utilise the estuary and the adjacent oxidation ponds on the southern margin. The mangroves and saltmarsh that occupy the remaining parts of the estuary are a habitat for banded rail particularly where adjoining terrestrial vegetation provides shelter for the birds at high tide and offers potential nesting sites. A remnant of riverine kowhai-hinau-hard beech forest occurs on the northern edge of the	SEA-M2

		Orewa River.	
72w1	*Wading bird habitat*	See 72 Extensive intertidal feeding habitat for waders in this estuary.	SEA-M2w
73	Waiwera Hill Ecotone	An area of foreshore and seabed that forms the marine part of an uninterrupted ecotone sequence that extends into coastal pohutukawa tree land and forest at southern end of Waiwera Hill.	SEA-M2
74	**Waiwera**		
74	Waiwera marine to coastal forest ecotone	The foreshore and seabed grades into significant coastal pohutukawa - puriri forest on the headland at Waiwera. This is a representative example of the original forest type which would have covered significant areas of the east coast of Rodney Ecological District and of the region.	SEA-M1
75	**Waiwera, Wenderholm, and Puhoi**		
75a, c		Within the Wenderholm, Puhoi and Waiwera area are a considerable variety of intertidal substrates which together form a complex array of mangrove and estuarine habitats which support a variety of animal and plant communities. The intertidal flats within the Waiwera and Puhoi Estuaries (75a, 75c) are used as a feeding ground by a variety of wading birds, many of which use these estuaries as a stepping stone in their travels. Many of these birds roost on the sandy area at the entrance to the Waiwera Estuary (75a) at high tide. A variety of other coastal birds feed and roost within this area. The coastal area provides habitat for species such as the New Zealand dotterel ('nationally vulnerable'), variable oystercatcher ('at risk' 'recovering') and the blue reef heron ('nationally vulnerable').The Department of Conservation has selected the two estuaries as Areas of Significant	SEA-M2

		Conservation Value (ASCVs).	
75b		The communities living on the wave-cut platforms at Wenderholm have been found to be diverse and in good condition. Along the hard shoreshere, the natural marine area adjoins a significant area of coastal taraire forest on a headland, and which is one of the best examples in the Rodney Ecological District. The area provides habitat for native species including kereru, long-tailed cuckoo (’gradual decline’), bellbird and North Island robins, and occasionally kaka (’nationally endangered’) and red- crowned parakeet visit.	SEA-M1
75d-h	Saline vegetation in Puhoi estuary	The saline vegetation areas in the Puhoi estuary are more substantial and are some of the best in the ecological district (75d-h). North Island fern bird ('at risk') and banded rail ('naturally uncommon') inhabit the estuary particularly where adjoining terrestrial vegetation which provides shelter for the birds and offers potential nesting sites. The upper Puhoi Estuary has a diverse range of habitats including estuary, stream and freshwater wetland. Australasian bittern ('nationally endangered') reported.	SEA-M1
75i	Open beach	The open beach at Wenderholm with mobile substrates which means that benthic organisms tend to be confined to subtidal areas.	SEA-M2
75w1	*Wading bird habitat*	See 75b Extensive intertidal feeding habitat for waders along this coastline.	SEA-M1w
75w2	*Wading bird habitat*	See 75a Extensive intertidal feeding habitat for waders along this coastline.	SEA-M2w
75w3	*Wading bird habitat*	See 75i, 75c Extensive intertidal feeding habitat for waders along this coastline.	SEA-M2w
76	**Mahurangi Harbour**		
76a	Intertidal flats	The Mahurangi Harbour is a classic example of a ria or drowned coastline. Within the harbour there are large areas	SEA-M2

		of intertidal mud and sand. Outside the mouth of the harbour there are a variety of more exposed shores ranging from broad rock platforms to small sandy beaches. This physical variety provides a similarly varied range of habitats for an assortment of animal and plant communities. The large sheltered harbour is one of the best wading bird habitats in the Rodney ecological district, with banded rail and godwit recorded. The northern and upper reaches of the harbour contain intact sequences from mangroves to terrestrial forest. There are also significant areas of fringing pohutukawa forest on Mahurangi East peninsula and Mahurangi Regional Park. The Department of Conservation has selected the inner harbour area as an Area of Significant Conservation Value (ASCV). The former Auckland Regional Council (now Auckland Council) has undertaken a long-term environmental and water quality monitoring of the harbours intertidal and subtidal benthic communities since 1984. The Mahurangi Action Plan was set up in 2004 in response indications that the water quality of the harbour was in decline, due to increased sedimentation.	
76b-j, p	Mangroves	In the shelter of the harbour grow extensive areas of mangroves. Some of these areas are judged to be amongst the best in the ecological district (76b - j, 76p). The saline vegetation provides high quality habitat for threatened secretive coastal fringe birds particularly where it abuts terrestrial vegetation which provides roosts for the birds and potential nesting sites. There are significant ecological sequences from mangroves into terrestrial forest in the upper Mahurangi River areas.	SEA-M1

		Mangroves at the river margin grade through puriri, kowhai and taraire forest to stands of young kauri and totara.	
76f	Dyers Creek	At Dyers Creek, a large expanse of mangroves adjoins a highly diverse and large area of regenerating coastal kauri – tanekaha forest on lowland hills.	SEA-M1
76k	Cudlip Point	At Cudlip Point, the moderately exposed rock platforms grade into an important area of regenerating totara forest on a headland or peninsula.	SEA-M1
76l	Big Bay	At Big Bay, the representative open rocky Hormosira flats, boulders, and rock pools and the open fine sandy shores grade into a coastal complex forest of pohutukawa, taraire, kohekohe, mahoe, puriri and kowhai on cliffs and hillslopes. This type of forest is now relatively uncommon on the mainland.	SEA-M1
76m,n	Saddle Island	The marine area around Te Haupa (or Saddle) Island (76m, n) supports a particularly rich and diverse biota. Here too there are gradations between the marine and terrestrial ecosystems.	SEA-M1
76w1, 3	*Wading bird habitat*	See 76a Extensive intertidal feeding habitat for waders in this harbour.	SEA-M2w
76w2, 4, 5, 6	*Wading bird habitat*	See 76g, i, j Extensive intertidal feeding habitat for waders along this coastline.	SEA-M1w
76	SEA-terrestrial data deficient	Sandy beach and headland with rock platforms bordering Mahurangi Regional Park. Intact ecological sequences from marine ecosystems to broadleaved coastal forest on the headland at the mouth of the Puhoi River. This forms part of a network of areas of coastal forest on the northern side of Puhoi River.	SEA-M2
77	Martins Bay Ecotone	An area of foreshore and seabed that forms the marine part of an uninterrupted ecotone sequence that grades into an important coastal complex forest.	SEA-M1
78	Mullet Point	At Mullet Point the representative rocky and sandy shores grade into a coastal	SEA-M1

		complex forest of pohutukawa, taraire, kohekohe, mahoe, puriri and kowhai on cliffs which is now relatively uncommon on the mainland.	
3235	Snells Beach	Beach, foreshore and seabed at Snells Beach. At the northern and southern ends of Snells Beach the marine ecosystem grades into a fringe of coastal pohutukawa forest. From Brick Bay north there are intact sequences from the coast to significant catchments of coastal forest.	SEA-M2
3235b	Eelgrass	Extensive bed of *Zostera* in intertidal area at Snells Beach	SEA-M1
3262 and 3779	Matakana River and Sandspit	Complex of mangroves, saltmarsh and intertidal flats in Matakana River and its tidal inlets. Intact sequences from mangroves to coastal forest at Tongue Point. Intact sequences from mangroves into regenerating coastal kanuka-manuka shrublands within Sandspit catchment.	SEA-M2
3262w1	Wading bird habitat	Intertidal areas with exposed sand flats and shellfish beds where waders feed in the inner estuary. The area contains a complex of saltmarsh, mangrove and intertidal flats which provide feeding grounds for wading birds and habitat for shorebirds, including south island pied oystercatchers, pied stilts, NZ dotterel, banded dotterel and banded rail.	SEA-M2w
80	Matakana River Mouth	On the northern coast of the Matakana River Mouth the marine ecosystem grades into an important area of coastal forest on cliffs with kauri and kanuka grading into puriri forest on coastal headlands. This is highly representative of coastal forest on the east coast which is now much reduced from its former extent.	SEA-M1
80w1	*Wading bird habitat*	Extensive intertidal feeding habitat for waders along this coastline.	SEA-M1w
167	Millons Bay, Baddeleys Beach	Significant gradients from foreshore and seabed into coastal forest,	SEA-M2

	and Campbells Beach	including coastal pohutukawa.	
167w1	*Wading bird habitat*	Extensive intertidal feeding habitat for waders along this coastline.	SEA-M2w
81	Motutara Point	At Motutara Point an area of foreshore and seabed that is part of an uninterrupted ecotone sequence extends into one of the best areas ofcoastal pohutukawa forest in the ecological district.	SEA-M1
82	**Tawharanui Peninsula**		
82a		The Tawharanui peninsula contains the best examples of open rocky intertidal and subtidal marine habitats on the coast of the Outer Hauraki Gulf. The southern side of the peninsula (82a) is representative of more sheltered rocky shores and stony beaches. In contrast to the Whangaparaoa Peninsula to the south, the Tawharanui Peninsula still has some extensive areas of natural terrestrial vegetation. The adjacent Tawharanui Open Sanctuary is subject to an extensive restoration programme including pest control and re-introduction of threatened species including pateke (brown teal) and NI brown kiwi. It contains the best examples in the Rodney Ecological District of manuka, taraire, kauri and pohutukawa forests on a peninsula landform and also contains freshwater wetlands. The marine ecosystem on the south of the peninsula in particular, grades into manuka forest and one of two areas of notable pohutukawa forest on coastal cliffs.	SEA-M1
82 b		The Tawharanui peninsula contains the best examples of open rocky intertidal and subtidal marine habitats on the coast of the Outer Hauraki Gulf. The adjacent Tawharanui Open Sanctuary is subject to an extensive restoration	SEA-M1

		programme including pest control and re-introduction of threatened species including pateke (brown teal) and NI brown kiwi. It contains the best examples in the Rodney Ecological District of manuka, taraire, kauri and pohutukawa forests on a peninsula landform and also contains freshwater wetlands. The open sandy beaches and mobile sands are an important New Zealand dotterel breeding area as well as being a threatened plant habitat. The majority of this area is included within the marine reserve associated with the Tawharanui Regional Park. The Marine Reserve was gazetted in 2011 and includes a diverse coastline with a range of subtidal habitats, such as reefs with overhangs, tunnels and caves. Schools of red moki, blue maomao, spotty, red mullet and koheru are common in the marine reserve. In the Jones Bay swamp, long finned eel and giant kokopu (NIWA fish database) are present. The stream that runs into Anchor Bay on the north is a high quality freshwater fish habitat and the mouth of this stream needs to be considered as a migration pathway.	
83	**Whangateau Harbour**		
83a		An important east coast harbour characterised by a sequence of depositional sands including a large unconsolidated Holocene barrier sand spit which provide a number of different habitats for a variety of animal and plant communities. The estuary and tidal river and intertidal flats are of moderate-high wildlife value The intertidal sand banks are a rich feeding ground for many international migratory and New Zealand endemic wading birds	SEA-M2

		including Caspian tern ('nationally vulnerable'), white-faced heron, bar-tailed godwit, New Zealand dotterel ('nationally vulnerable'), South Island pied oystercatcher ('at risk declining'), variable oystercatcher ('at risk recovering'),little egret, reef heron ('nationally vulnerable'), pied stilt ('at risk declining'), banded dotterel ('nationally vulnerable') and vagrant international migrants. The harbour is an important stepping stone in migratory species journeys. The waters of the harbour are a feeding ground for a variety of coastal birds. The Department of Conservation has selected this area as an Area of Significant Conservation Value(ASCV).	
83b		The tip of the large barrier sand spit is a high tide roost for the wading and coastal birds, a key breeding ground for the threatened New Zealand Dotterel, and a threatened plant habitat. In the lee of the sand spit grow areas of saline vegetation including eelgrass, which appears to be spreading. The tip of the large barrier sand spit has a number of important natural values. It is a high tide roost for the wading and coastal birds, a key breeding ground for the threatened New Zealand Dotterel ('nationally vulnerable'), and a threatened plant habitat. In the lee of the sand spit grow areas of saline vegetation including eelgrass, which appears to be spreading.	SEA-M1
83c		South of the causeway there are important areas of mangroves and saltmarsh much of it judged to be amongst the best in the ecological district. There is an important gradation from this significant saline vegetation into a large and rare area of coastal kahikatea swamp forest beyond the	SEA-M1

		coastal marine area. The saline vegetation both here and in other parts of the harbour provides high quality habitat for threatened secretive coastal fringe birds, such as banded rail ('naturally uncommon") and fern bird ('at risk declining'), particularly in saltmarshes where there is terrestrial vegetation which provides roosts for the birds and potential nesting sites.	
83d	Ti Point	Ti Point includes scattered pohutukawa forests around the cliffs. Broadleaved taraire forests are present on the headland area. Threatened species present include the regionally rare *Ranunculus urvilleanus* ('serious decline'), the nationally threatened Calystegia marginata ('declining'). Ti Point is a buffer to Whangateau Harbour. The reefs offer habitat for the threatened reef heron ('nationally vulnerable'). The rocky coastline from Ti Point north to Mathesons Bay includes breeding habitat for little blue penguin (‘declining’).	SEA-M1
83e	Horseshoe Island and pied shag colony	Horseshoe Island, and the sand flats and shell banks to the northeast and southeast provide a breeding site for a colony of Caspian tern (‘nationally vulnerable’). A pied shag (‘nationally vulnerable’) colony is present on the coast north of Ti Point.	SEA-M1
83f	Omaha River and northern stream estuaries	The Omaha River and northern stream estuaries contain older stands of mangroves and saltmarsh which will provide habitat for banded rail. This estuarine vegetation is contiguous with coastal forest in a number of places.	SEA-M1
83w1	*Wading bird habitat*	See 83c Extensive intertidal feeding habitat for waders in harbour to south of causeway	SEA-M1w
83w2	*Wading bird habitat*	See 83a Extensive intertidal feeding habitat for waders in harbour.	SEA-M2w
85	Leigh Reef and Panetiki Island	Leigh Reef and Panetiki Island are important for their representation of the	SEA-M1

		rocky shores and reefs of the region. Leigh Reef is the only large subtidal reef in the region and, due to the strong movements of water across it, contains a unique assemblage of encrusting organisms. It also occasionally contains subtropical species of fish. Panetiki Island is significant for the rich fauna and flora of its reef slope.	
85b	Leigh Reef to Cape Rodney	The rocky coastline from Okakari Point (Goat Island) marine reserve south to Leigh Reef includes breeding habitat for little blue penguin (‘declining’).	SEA-M1 85b
86	**Cape Rodney to Okakari Point Marine Reserve**		
86a		The Goat Island Marine Reserve was gazetted in 1975 as New Zealand’s first marine reserve. The reserve and the wider area is a complex of soft shore and hard shore habitats with a variety of exposure ratings. It provides habitat for great diversity of species. The area contains sequences from marine habitats to coastal pohutukawa broadleaved -podocarp forest. The area is the location of the University of Auckland’s marine laboratory.	SEA-M1
86b		Around Goat Island, a significant ecotone grades from marine algae to terrestrial coastal forest. This marine reserve is considered to be of national importance. Goat Island itself is a Scientific Reserve that has no animal pests (other than Argentine ant) and supports coastal shrubland with flax, karo, mapou, kanuka and a pohutukawa fringe - an association considered rare in the Rodney Ecological District. It is a nesting site for black- backed and red-billed gulls ('nationally vulnerable'), white- fronted terns ('nationally vulnerable'), petrels and shearwaters.	SEA-M1
87	**Pakiri Beach**		

87a	Pakiri Beach	Pakiri Beach is the only exposed mainland east coast surf beach free of housing and backed by extensive sand dunes and dune lakes, and is of regional significance. The endemic threatened sedge, pingao *(Ficinia spiralis*) ('relict'), is found on the dunes along the Pakiri coast. Regionally significant populations of the threatened sand copromsa (*Coprosma acerosa*) ('Declining') are also presenton the backdunes. Mangawhai is a breeding area for the largest flock of New Zealand dotterels ('nationally vulnerable') in the Auckland Region and is one of only three nesting sites in the country for the 'nationally critical' New Zealand fairy tern. Other birds in the Pakiri area include white-faced heron, blue reef heron ('nationally vulnerable'), banded rail ('naturally uncommon'), pied stilt('declining') and variable oystercatcher ('declining'). The beach exhibits a gradation in the type of sediment and associated fauna from the shore out to the edge of the off-shore sand-body. The fauna diversity decreases getting closer to the shore because of the decreasing stability of the substrate, but the population densities increase. The sands of the beach are an important habitat for a variety of plants and animals. The areas of natural vegetation include important areas of pingao/spinifex, Muehlenbeckia shrubland, manuka scrub, and pohutukawa forest. The Department of Conservation has selected this area as an Area of Significant Conservation Value (ASCV). Pakiri Beach and River has been identified as an Important Bird Area for NZ fairy tern and NZ dotterel. The NZ fairy tern forage both within the Pakiri	SEA-M2

		River and up to 2km out to sea.	
87b		The mouth of the Pakiri River is a particularly important part of this habitat. The Pakiri River is a tidal stream with a small estuary and bordering saltmarsh that grades into the adjacent natural sand dune plant community. The Pakiri River supports a range of wading, coastal, and secretive threatened coastal fringe birds. Many of the waders and coastal birds roost on the mobile sands at the river mouth, and some, including a range of threatened species nest there. The secretive coastal fringe birds use the saline vegetation and their habitat is enhanced by the presence of adjacent terrestrial vegetation which provides roosts for the birds and potential nesting sites. The Department of Conservation has selected this area as an Area of Significant Conservation Value (ASCV). Te Arai Stream is nationally important for NZ dotterel ('nationally vulnerable') and Poutawa Stream is a breeding site for NZ dotterel and variable oystercatchers ('at risk – recovering'). Te Arai Stream is also a post breeding flock site for NZ fairy tern ('nationally critical') and a future nesting site for the species.	SEA-M1
87c	Poutawa stream mouth	Poutawa Stream is a breeding site for NZ dotterel ('nationally vulnerable') and variable oystercatchers ('at risk – recovering').	SEA-M1 87d
87d	Te Arai stream mouth	Te Arai Stream is nationally important for NZ dotterel ('nationally vulnerable'). Te Arai Stream is also a post breeding flock site and foraging site for NZ fairy tern ('nationally critical'), and a future nesting site for the species.	SEA-M1 87d
161, 162, 163,	Kawau Island	The upper reaches of North Cove and Bon Accord Harbour contain estuarine	SEA-M2

164, 165		habitats with saltmarsh and mangroves grading into freshwater habitat and into secondary kanuka forest. These area provide habitat for banded rail.	
91	Beehive Island, Kawau	Small 'old hat' island surrounded by large intertidal platform with contrasting white shell sand high tide beach. The term 'old hat' is used because the broad intertidal rock platforms that surround the island look like the brim of a hat and the island itself resembles the hat crown. This island is considered to be a landform of regional geological importance. The shell sand beach is a breeding and roosting area for threatened coastal birds.	SEA-M1
95	Rangitoto and Motutapu	Rangitoto Island is of international significance as a volcanic landform because each stage, from the initial colonisation of raw basalt and scoria to the formation of scrub to immature forest, can be seen. It is the youngest and largest of the Auckland volcanoes having be enactive at least within the last 400 years. More than 200 species of native ferns and flowering plants grow on the island. Dominant among the trees is pohutukawa. Kohekohe, mangeao, puriri, rewarewa, rata, puka, five-finger and manuka are also found. The island supports the largest stand of pohutukawa forest in New Zealand. The regionally uncommon ferns Pellaea calidirupium ('range restricted') and Psilotumnudum ('sparse') are present on Rangitoto. A wide range of species more commonly found as epiphytes on the mainland are found growing on the ground at Rangitoto, e.g. Griselinia lucida and Kirk's daisy. The rare Cook's scurvy grass Lepidium flexicaule was re-introduced to the island in 2000. Birds found on the island include fantail, hawk, silvereye, grey warbler, blue reef	SEA-M1

		heron, Caspian tern, kingfisher, pipit, white-faced heron, New Zealand dotterel, white-fronted tern and nests of the little blue penguin. North Island tomtits were spotted on the island in 1999. There are a number of breeding colonies of black-backed gull scattered in the bare lava. It is also habitat for shore skink. Motutapu Island is predominantly pasture fringed with coastal forest around the margin. Motutapu Restoration Society is leading an extensive ecological restoration project to re-establish coastal forest in areas previously cleared for farming and to enhance existing coastal forest remnants that are degraded by weed infestations. Threatened coastal bird species including white-fronted terns, red-billedgulls, reef herons and New Zealand dotterels breed along coastal areas, particularly on the western side of the island adjoining Rangitoto Island. In 2009 Department of Conservation undertook a pest eradication programme to remove remaining pests from Rangitoto and Motutapu Islands. These islands are part of the Hauraki Gulf Marine Park and are close to the mainland.	
96	Motukorea (Brown's Island)	Motukorea is free of animal pests and home to the threatened plant, sand spurge (*Euphorbia glauca*) ('declining'). The regionally threatened herb *Geranium solanderi* (Gradual Decline) is also present on the island. Pohutukawa forest is scattered along the volcanic tuff cliffs and headlands. There is also a small dune area with range of species growing on it including spinifex, wiwi, ngaio and pohuehue. The New Zealand dotterel ('nationally vulnerable'), variable oystercatcher ('recovering') and black-backed gulls breed on the island.	SEA-M2

		Caspian tern and reef heron (both 'nationally vulnerable') also use the island. The island is administered by the Department of Conservation and has been selected by the Department of Conservation as an Area of Significant Conservation Value (ASCV).	
97	Motuihe Island	This island is under restoration by the Motuihe Island Trust in partnership with the Department of Conservation. Remnant vegetation covers gully and steep coastal faces and includes pohutukawa around the coastal fringe. A relatively large area of remnant coastal forest remains on the island. The island is an important breeding site for a variety of sea and shore birds and provides habitat for threatened plant species. Ohinerau Bay is an important flock and breeding site for northern New Zealand dotterels (‘nationally vulnerable’). Reef heron(‘nationally vulnerable’), Caspian tern (‘nationally vulnerable’) and variable oystercatcher (‘recovering’) also frequent the bay.	SEA-M1
98	Crusoe Island (Papakohatu Island)	Papakohatu (Crusoe) Island is one of a number of small offshore islands from Waiheke used as breeding sites for coastal birds. It is an important breeding site for white- fronted tern, reef heron (‘nationally vulnerable’), blue penguins (‘gradual decline’), endemic variable oystercatchers, and pied and little shags.	SEA-M1
99	Motukaha Island and Fossil Bay	Motukaha Island is one of a number of small offshore islands from Waiheke used as breeding sites for coastal birds. It is an important seabird breeding site for reef herons (‘nationally vulnerable’), variable oystercatchers (endemic) and pied shags.	SEA-M1
101	Okahuiti Bay	A sheltered inlet, while enclosed by road, this area is one of the few places	SEA-M1

		on Waiheke Island where an ecotone from mangrove forest through freshwater wetlands to terrestrial forest exist. The coastal forest contains pohutukawa, taraire, matai and kowhai.	
157	Putiki Bay	A complex of saline wetlands grading from mangroves to saltmarsh and in places into freshwater wetland. The coastal edge of the estuary is fringed by pohutukawa. Banded rail are present in the estuary.	SEA-M2
102	Koi Island	Koi Island is one of a number of small offshore islands from Waiheke used as breeding sites for coastal birds. It is an important sea bird breeding site for Caspian terns ('nationally vulnerable'), white-fronted terns, red-billed gulls, black-backed gulls, pied shags, little shags, reef herons ('nationally vulnerable') and the endemic variable oystercatchers.	SEA-M1
151	Te Whau Point	A wide belt of coastal pohutukawa forest, and one of the largest remaining on Waiheke Island.	SEA-M2
103	Whakanewha	The sheltered beach, shellbank, and associated saltmarsh of Whakanewha provide a variety of habitats for a range of plants and animals. The sheltered beach includes an extent of intertidal flats that support a variety of invertebrates. The shellbank areas support a variety of coastal herbs and shrubs. The coastal margins provide habitat for New Zealand dotterel, Caspian tern and reef herons (all 'nationally vulnerable'), the endemic variable oystercatcher and other shorebirds. Secretive and threatened coastal fringe birds use the saltmarshes and associated wetlands, particularly as regenerating terrestrial vegetation abuts these areas, providing roosts for the birds at high tide and potential nesting sites. The Whakanewha Stream system and catchment is almost entirely clothed	SEA-M1

		in native vegetation in contrast to the other three major stream systems in this part of Waiheke Island. The forested catchment contains a complex of regenerating kanuka and tree fern scrub with mature forest remnants including taraire and tawa forest in the gullies and pohutukawa forest on the coastal slopes. Poukaraka Wetland (also known as Rocky Bay Wetland) is large, well buffered by the surrounding forest, and extends from forest valleys upstream to the coast. The main body of the wetland is dominated by raupo with freshwater club rush (Bolboschoenus fluviatilis) and a wide variety of other wetland species are present also, distributed according to hydrological and salinity tolerances. The wetland provides habitat for Australasian bittern ('nationally endangered') and the New Zealand fern bird, banded rail and spotless crake (all classified as 'sparse'). The stream is likely to be an important freshwater fish habitat and the stream mouth and saltmarsh are therefore probably significant migratory pathways and possibly breeding areas.	
103w1	*Wading bird habitat*	Shellbanks form key roosting and nesting sites for shorebirds and there is extensive intertidal feeding habitat for waders long this coastline.	SEA-M1w
104	**Awaawaroa Bay**		
104 a		Awaawaroa Bay is an estuarine area on the sheltered southern side of Waiheke. There are extensive intertidal areas (104a) which are a feeding ground for a relatively large number of a variety of wading bird species.	SEA-M2
104 b-d		The shellbanks in Awaawaroa Bay (104b-d) are roosting sites at high tide for wading birds, along with a range of coastal birds which feed in the waters of the area. The area is also an important	SEA-M1

		habitat for a number of threatened coastal birds. The bay is the second most important breeding site on Waiheke Island for New Zealand dotterel ('nationally vulnerable'). Caspian tern ('nationally vulnerable'), piedshag ('nationally vulnerable') and variable oystercatcher ('at risk recovering') also breed here.	
104 e		In the shelter of the upper reaches of the Awaawaroa Bay estuary (104e) there are substantial areas of mangroves and saltmarsh. The saline vegetation grades into substantial freshwater raupo wetlands at the head of the estuary. The wetlands are habitat for North Island fern bird ('at risk declining'), banded rail ('naturally uncommon'), spotless crake ('data deficient relict') and Australasian bittern ('nationally endangered').	SEA-M1
104w1	*Wading bird habitat*	See 104a, b, c Shellbanks form key roosting and nesting sites for shorebirds and there is extensive intertidal feeding habitat for waders in bay.	SEA-M1/2 w
105	**Te Matuku Bay**		
105a, d		Te Matuku Bay (Te Matuku Marine Reserve) is an estuarine area on the sheltered southern side of Waiheke. The extensive intertidal flats, shell banks, and low-lying islands offer a variety of habitats for a range of plant and animal communities. The extensive intertidal areas are a rich feeding ground for large numbers of international migratory and New Zealand endemic wading birds, including substantial numbers of a considerable variety of threatened species. Species include: New Zealand dotterel, banded dotterel, bar-tailed godwit, caspian tern, white fronted tern, reef heron, variable and South Island pied oystercatcher, sandpiper,	SEA-M1

		turnstone and wrybill. The wetland and islands provide habitat for spotless crake and bittern. The Department of Conservation has selected this area as an Area of Significant Conservation Value (ASCV).	
105b		Te Matuku Bay (Te Matuku Marine Reserve) is an estuarine area on the sheltered southern side of Waiheke. The extensive intertidal flats, shell banks, and low-lying islands offer a variety of habitats for a range of plant and animal communities. Large numbers of international migratory and New Zealand endemic wading birds, including substantial numbers of a considerable variety of threatened species roost on the shell spit in the outer reaches of the bay at high tide, along with a variety of other coastal birds which feed in the waters of the bay. Species include: New Zealand dotterel, banded dotterel, bar-tailed godwit, caspian tern, white fronted tern, reef heron, variable and South Island pied oystercatcher, sandpiper, turnstone and wrybill. New Zealand dotterel nest along the shell spit opposite the Te Matuku Scenic Reserve. The wetland and islands provide habitat for spotless crake and bittern. The Department of Conservation has selected this area as an Area of Significant Conservation Value (ASCV).	SEA-M1
105c		Te Matuku Bay (Te Matuku Marine Reserve) is an estuarine area on the sheltered southern side of Waiheke. The extensive intertidal flats, shell banks, and low-lying islands offer a variety of habitats for a range of plant and animal communities. In the shelter of the upper reaches of the estuary there are extensive areas of mangroves	SEA-M1

		and saltmarsh growing in association with terrestrial vegetation on the low-lying islands and in the catchment. There is a natural ecotone sequence from saline vegetation grading into freshwater raupo wetland and into kauri-tanekaha forest with hard beech, and taraire tawa forest in the gullies. These forest values are heightened because Waiheke Island (including this area) has never had possums. Forest areas support a good number of common forest birds. Bellbirds have been released recently in the adjacent Royal Forest and Bird Protection Society Goodwin Reserve. The saline vegetation and associated freshwater vegetation provide high quality habitat for threatened wetland birds and secretive coastal fringe birds particularly where the wetlands abut terrestrial vegetation which provides roosts for the birds and potential nesting sites. The wetland and islands provide habitat for spotless crake, fern bird and bittern. The Department of Conservation has selected this area as an Area of Significant Conservation Value (ASCV).	
105w1	*Wading bird habitat*	See 105a Shellbanks form key roosting and nesting sites for shorebirds and there is extensive intertidal feeding habitat for waders in the bay.	SEA-M1w
105w2	*Wading bird habitat*	See 105b Shellbanks form key roosting and nesting sites for shorebirds and there is extensive intertidal feeding habitat for waders in the bay.	SEA-M1w
106	Motukahakaha ('Unnamed Islet')	Motukahakaha Island is located north of Ponui Island and is one of a number of small offshore islands used as breeding sites for coastal birds. It is an important seabird breeding site for reef herons ('nationally vulnerable'), variable oystercatchers (endemic) and pied shags.	SEA-M1

107	Frenchmans Cap	Kahakaha Island (Frenchmans Cap) is one of a number of small offshore islands around Waiheke used as breeding sites for coastal birds. It is a nesting site of the blue reef heron ('nationally vulnerable'). Black-backed gulls, white- fronted terns, Caspian terns, New Zealand dotterel and variable oystercatcher are also known to breed here.	SEA-M1
108	Tarahiki Island	Tarahiki Island is the biggest and most important breeding area in the Hauraki Gulf (and possibly the country) for the endemic spotted shag. Other birds including blue penguin, grey-faced petrel and reef heron (‘nationally vulnerable’) also breed on this island. The vegetation on the island contains turepo (*Streblus banksii*) (‘regionally critical’) and provides habitat for Pacific gecko (‘declining’) and common gecko. This island is part of a nationally important wildlife habitat selected by DOC as an Area of Significant Conservation Value (ASCV).	SEA-M1
109	Horuhoru Island	Horuhoru Island (Gannet Rock) is one of New Zealand's key seabird breeding sites and a nationally important site for Australasian gannets. Spotted shag (’naturally uncommon’) and white-fronted terns (‘declining’) also breed on Horuhoru Island. Other threatened fauna recorded from the island include red-billed gull (’nationally vulnerable’), pied shag (‘nationally vulnerable’) and variable oystercatcher (‘recovering’). The island has been selected by DOC as an Area of Significant Conservation Value (ASCV).	SEA-M1
110	Onetangi to Hooks Bay	This area is one of the best examples of exposed rocky reef habitat in the Inner Hauraki Gulf. There are significant remnants of coastal forest along the coastline dominated by pohutukawa	SEA-M2

		with titoki, turepo (*Strebilus banksii*) ('regionally threatened'), whau, tawapou. Owhiti Bay contains significant ecological sequences from sand dunes with pingao, to brackish and freshwater wetlands. It is an important breeding site for New Zealand dotterel. New Zealand pipit and variable oystercatcher also breed around the Bay. Between Anita Bay and Hooks Bay are two breeding colonies for spotted shag. Reef herons are also present on the rocky coast.	
111a, b	Woodlands Bay	The natural marine ecosystem just to the west of the Onetangi to Hooks Bay area here grades into diverse areas of coastal forest on Waiheke Island. This forest comprises coastal pohutukawa forest grading into taraire-puriri forest, with tawapou.	SEA-M1
112	Onetangi Beach	This small section of Onetangi Beach is the habitat of pingao, a threatened plant of mobile sand.	
172	Nani Island	A small offshore island to east of Palm Beach, Waiheke Island. An important breeding site for white fronted tern. Variable oystercatcher and red billed gull also breed here.	SEA-M1
159	Takapu Island (Passage Rock)	Between Ponui and Waiheke Islands. Reef herons, and pied and little shags breed here.	SEA-M1
156	Man O War Bay	An area of estuarine saltmarsh grades into freshwater wetland, swamp forest and the largest area of mature indigenous forest on Waiheke island. The wetlands and saltmarsh provide habitat for banded rail and spotless crake.	SEA-M2
153	Waikopoua Bay and Awakiripapa Bay	Remnant coastal broadleaved forest with taraire, kohekohe, tawa and pohutukawa grading into kauri- tanekaha- hard beech on ridges at Waikopoua Bay. Extensive area of coastal kanuka and manuka regenerating forests and shrublands, with broadleaved forest in gullies, with sequences from the coast inland at	SEA-M2

		Awakiripapa Bay.	
154	Rangitawhiri Point	Prominent coastal forest remnant with pohutukawa, tanekaha, mangeao and kowhai.	SEA-M2
152	Opopo Bay-House Bay	Very extensive area of coastal regenerating forest grading from the coast inland. The forest contains kanuka, manuka, kauri, taraire, puriri and mangaeao. Pohutukawa grow on the coast. Reef herons are present and variable oystercatchers breed along the coast.	SEA-M2
166	Pakatoa Island	The island contains a diversity of coastal forest and shrublands. Tall pohutukawa forest grows on the southern cliffs, with karo, houpara, coastal astelia, rengarenga lily.	SEA-M2
158	Te Kawau Bay Islet	Small islet to north of Ponui Island. White fronted tern and red billed gull breed here.	SEA-M1
150a, b	Rotoroa Island	Fragments of coastal forest and shrubland with pohutukawa fringe the island. Variable oystercatcher and reef heron are present. The Rotoroa Island Trust is restoring and replanting the island.	SEA-M2
160	Scully Reef	White fronted tern, variable oystercatcher and New Zealand dotterel nest here. Hundreds of spotted shags roost here and reef heron are also present.	SEA-M1
114a-c	Mokohinau Islands	This island group is a series of small rugged offshore islands of volcanic origin including a number of steep stacks. They contain a large diversity of marine habitats including broken rock, boulder beaches, sandy bottoms, drop-offs and kelp forests. These contain a large diversity of marine species, particularly of encrusting invertebrates and fish. This group is the closest to Auckland to contain a subtropical element in the marine biota. A number of species of coastal birds,	SEA-M1

		and sea birds breed on most of the islands and stacks in the group. The cliff vegetation within the coastal environment is the habitat of several threatened plant species. This island group has been selected by the Department of Conservation as an Area of Significant Conservation Value (ASCV).	
115	Simpson Rock	Simpson Rock is an isolated outcrop surrounded by deep water. Although closer to the Mokohinau Islands, the rich encrusting fauna present is more similar to that of the northern tip of Great Barrier Island. A number of new species of sponges and other encrusting taxa have been recorded here.	SEA-M1
116	Little Barrier Island	The coast of this steep, rugged island of volcanic origin, contains a variety of marine habitats. These include a series of unique boulder beaches on the southern side of the island which stretch from hundreds of metres above Mean High Water Springs into the subtidal area. The boulder area supports a rich subtidal algal flora and in one place is considered to be a site of geological importance. This is the regionally significant Te Titoki Point Cuspate Foreland where two boulder barriers have connected to form a triangular shaped 25 hectare in filled flat. There are two other regionally important geological sites; the large rock fall at Pohutukawa Flat (Hingaia) and the Queens flow banded dacite; both of which are below Mean High Water Springs and in the shore above. The natural marine ecosystem grades into a highly natural terrestrial ecosystem. Some of the best forests in the Region grow here, free from the ravages of possums and the cliffs and	SEA-M1

		stony beaches offer a variety of habitat for a considerable number of threatened plant species. Little Barrier Island is also a nature reserve of international significance, being the habitat of several endemic endangered bird species which breed and nest there, the most notable being the Kakapo. The island has been selected by the Department of Conservation as an Area of Significant Conservation Value (ASCV).	
117 a-e	Northern Great Barrier Island	The northern part of Great Barrier Island is one of the important wilderness areas in the region. Here there are long stretches of rocky shore, a number of inshore and offshore islands, and a highly natural harbour formed by a barrier sand spit. These offer a large range of habitats to a considerable variety of plant and animal communities. It is on the rocky coast that the important geological sites are to be found. Off Ora Point, Rakitu Island, in the intertidal area is a basalt flow within a rhyolitic sequence. This is the only known basalt in the Great Barrier region and as such is considered to be of regional significance. Another regionally significant geological site is the obsidian breccia on the coast of Rakitu Island (117c). This is above Mean High Water Springs, but is likely to be affected by activities within the coastal marine area. The marine biota of the rocky coast is also of high value, with diverse and dense communities of reef organisms. Components of this complex coast are representative of different parts of the north-east coast of New Zealand. Several subtropical species are present, due to the occasional influence of the warm East Auckland	117a = SEA-M2 117b - e = SEA-M1

		current. Rangiwhakaea Bay, in particular, has been found to support one of the highest diversities of fish species in the region, comparable to that of Mokohinau Islands. An area of bull kelp, a marine alga of colder waters, is found at the Needles itself. This is an unusual species to find in this somewhat sub tropically influenced marine ecosystem. The marine ecosystem grades into a naturally forested terrestrial system along most parts of the north of this coast and many parts of the coast of Rakitu Island (117b). A notable area of vegetation is the unmodified vegetation on Unknown Island, which, because of its separation from the mainland, has remained free of pigs and goats. The cliffs of the coastal environment of the entire area offer a habitat for a variety of threatened plants, as do the small areas of saline herbfield in the mouths of some of the streams entering Rangiwhakaea Bay (117f-i) which is a stronghold for a number of species of reef organisms. The Whangapoua Harbour (117a, 117d) is an important east coast harbour characterised by a large unconsolidated barrier sand spit. The varying degrees of shelter offered in the harbour and along the shores of the sand spit provide a number of different habitats for a variety of animal and plant communities. The intertidal sand banks within the harbour (117a) are a rich feeding ground for many international migratory and New Zealand endemic wading birds including a number of threatened species for which this is a major overwintering site. The estuary (117a) and the mangrove area (117d) are an important fish breeding and juvenile fish habitat. The large barrier sand spit (117d) has a	

		number of important natural values. It is a high tide roost for the wading birds and a key breeding ground for the threatened New Zealand Dotterel and rare Variable Oystercatcher. It is also an important area of mobile sand vegetation being, in the absence of marram, one of the few places in which the three native sand binding plants; spinifex, pingao and sand tussock, grow together. In the lee of the sand spit grow highly natural areas of mangroves and saltmarsh (117d). There is an important gradation from this significant saline vegetation (117d) into areas of freshwater wetland and native forest beyond the coastal marine area. The saline vegetation and the associated freshwater areas provide high quality habitat for a large proportion of the entire population of brown teal, an endangered waterfowl. The brown teal are particularly numerous in the upper estuary (117d), but are also found at Harataonga Stream (117e) and, in substantial numbers, at Mabey's Farm Stream (117d). The Department of Conservation has selected the area of the proposed marine reserve at Whangapoua and Rakitu Island as an Area of Significant Conservation Value (ASCV).	
117w1	*Wading bird habitat*	See 117a Extensive nesting and roosting sites for shorebirds and intertidal feeding habitat for waders in Whangapoua harbour, sand spit and estuary	SEA-M2w
117w2	*Wading bird habitat*	See 117d Extensive nesting and roosting sites for shorebirds and intertidal feeding habitat for waders in Whangapoua harbour, sand spit and estuary	SEA-M1w
118	Awana Stream	This is a tidal stream which in conjunction with the freshwater areas,	SEA-M1

		scrub areas, and roosting sites in the coastal environment above Mean High Water Springs, is an internationally significant habitat for brown teal, an endangered waterfowl. The stream provides the best feeding area on Great Barrier Island for the species.	
119 a	Kaitoke	Kaitoke Beach is an important area of mobile sand vegetation, being one of only two places in the region in which the three native sand binding plants, spinifex, pingao and the sand tussock grow together. The latter two species are considered to be threatened plants.	SEA-M2
119b,c		Kaitoke Stream (119b) is a tidal stream which, in conjunction with the associated freshwater swamp, scrub areas, and roosting sites in the coastal environment above Mean High Water Springs, is an internationally significant habitat for brown teal, an endangered waterfowl. Brown teal are also found at Kaitoke Beach South Stream (Blackwells Creek) (119c) which is considered to be in its own right, a nationally important site.	SEA-M1
120 and 121	Medlands Beach North, Great Barrier (Sugarloaf Creek)	These are tidal streams which, in conjunction with the freshwater areas, scrub areas, and roosting sites in the coastal environment above Mean High Water Springs, are internationally significant habitats for brown teal, an endangered waterfowl.	SEA-M1
	Mitchener Road Creek, Great Barrier (Saltwater Creek)	These are tidal streams which, in conjunction with the freshwater areas, scrub areas, and roosting sites in the coastal environment above Mean High Water Springs, are internationally significant habitats for brown teal, an endangered waterfowl.	SEA-M1
122 a-b	Southern Great Barrier Island	The rocky marine habitats (122a) of this section of coast are less exposed	122a = SEA- M2

		than those of the northern and eastern coasts of the island. Here there are banks of boulders as well as kelp forests and rocky barrens. The fish fauna is more similar to that of the mainland coast and includes fewer subtropical species than the more exposed coasts. Near Cape Barrier (122b), the natural marine ecosystem grades into the best coastal forest on Great Barrier arranged in the most intact beach to ridge top forest sequence in the southern part of the island.	122b = SEA- M1
123, 124 and 125	Shoal Bay Stream	These are tidal stream mouths which, in conjunction with the freshwater areas, scrub areas, and roosting sites in the coastal environment above Mean High Water Springs, are habitats of at least regional significance for brown teal, an endangered waterfowl.	SEA-M1
	Par Beach South Stream	These are tidal stream mouths which, in conjunction with the freshwater areas, scrub areas, and roosting sites in the coastal environment above Mean High Water Springs, are habitats of at least regional significance for brown teal, an endangered waterfowl.	SEA-M1
	Par Beach North Stream	These are tidal stream mouths which, in conjunction with the freshwater areas, scrub areas, and roosting sites in the coastal environment above Mean High Water Springs, are habitats of at least regional significance for brown teal, an endangered waterfowl.	SEA-M1
123w1	*Wading bird habitat*	Extensive intertidal feeding habitat for waders along this coastline.	SEA-M1w
126	Tryphena Stream	This is a tidal stream mouth which, in conjunction with the freshwater areas, pastures, scrub areas, and roosting sites in the coastal environment above Mean High Water Springs, is a habitat of national significance for brown teal, an endangered waterfowl.	SEA-M1

127	Whangaparapara Stream	This is a tidal stream mouth which, in conjunction with the freshwater area, scrub areas, and roosting sites in the coastal environment above Mean High Water Springs, is a habitat of at least regional significance for brown teal, an endangered waterfowl. The threatened coastal fringe bird, the banded rail, has also been recorded using the wetland area in the Whangaparapara Harbour.	SEA-M1
128	Mahuki Gannetry	The eastern tip of Mahuki Island in the Broken (Pig) Island group is the site of one of the major breeding colonies of the Australasian gannet in the region.	SEA-M1
129	Unnamed Stack, Broken (Pig) Islands	This unnamed stack in the Broken (or Pig) Island Group is the only rat-free island in the Broken Island group. Large numbers of geckoes occupy this island and diving petrels and fluttering shearwaters breed in the scrub. The marine ecosystem grades into important coastal vegetation, most of which is petrel-induced coastal scrub mainly of taupata (*Coprosma repens*).	SEA-M1
130 a	Port Fitzroy	In contrast to the barrier estuaries on the eastern side of the island, this deep estuary is formed from a drowned valley. None of the other offshore islands in the region contain estuaries. This is an important fish feeding and shellfish habitat.	SEA-M2
130b, c		Forestry HQ Bay Stream (130b) and Wairahi Stream (130c) are tidal stream mouths which, in conjunction with the freshwater areas, scrub areas, and roosting sites in the coastal environment above Mean High Water Springs, are habitats of at least regional significance for brown teal, an endangered waterfowl. This area is also a habitat for secretive coastal fringe birds such as the threatened banded rail. These two areas (130b, 130c) make up part of the area chosen by the	SEA-M1

		Department of Conservation as an Area of Significant Conservation Value (ASCV).	
130d		Kiwiriki Bay is an important ecotone grading from marine vegetation through to protected terrestrial forest areas.	SEA-M1
131 and 132	Karaka Bay	These are tidal stream mouths which, in conjunction with the freshwater area, scrub areas and roosting sites in the coastal environment above Mean High Water Springs, are habitats of at least regional significance for brown teal, an endangered waterfowl.	SEA-M1
	Motairehe Bay and Swamp	These are tidal stream mouths which, in conjunction with the freshwater area, scrub areas and roosting sites in the coastal environment above Mean High Water Springs, are habitats of at least regional significance for brown teal, an endangered waterfowl.	SEA-M1
133 a - f	The Noises	Group of small rocky islands which support a diverse and abundant range of coastal and sea birds. The reef heron, a threatened endemic wading bird is also commonly seen on the islands. Maria Island (133a) is one of the few breeding sites in the region of the spotted shagand the white-faced storm petrel.	SEA-M1
134	Mawhitipana Headland and Foredune	This area of beach contains dune lands with pingao, a threatened plant (‘recovering') of mobile sand, one of the few sites remaining sites for the species on Waiheke Island.	SEA-M1