

Appendix 1d

Schedule of sites of ecological significance - inner islands

Contents	Page
1.0 Introduction	3
2.0 Disclaimer for all diagrams in appendix 1d	3
3.0 Diagrams of scheduled sites of ecological significance.....	4

Plan modification annotations

  indicates where content is affected by proposed plan modification x. refer to plan modification folder or website for details.

  indicates where the content is part of plan modification x, which is subject to appeal.

Underlined content to be inserted.

~~Struck through~~ content to be deleted.

1.0 Introduction

This appendix contains key information about scheduled sites of ecological significance (also known as SESs). In particular it identifies the location of scheduled sites.

Scheduled sites of ecological significance are shown on the planning maps. [Part 7 - Heritage](#) contains the objectives, policies and rules applying to such sites.

[Section 3.0](#) of this appendix contains diagrams of individual sites. The diagrams are ordered according to their planning map reference number.

The criteria for scheduling sites of ecological significance is contained in [appendix 4 - Criteria for scheduling heritage items](#).

2.0 Disclaimer for all diagrams in appendix 1d

The diagrams show a green polygon (or several polygons) around the scheduled site. The polygon (or polygons) forms the definitive identity and location of the scheduled site.

Some diagrams may include parts of a site extending below mean high water springs (MHWS). Areas below MHWS fall within the jurisdiction of the Auckland Regional Council, and are therefore outside the jurisdiction of this Plan. Any areas below MHWS are indicative and shown for information purposes only.

3.0 Diagrams of scheduled sites of ecological significance

Legend



2 Boundary of scheduled item



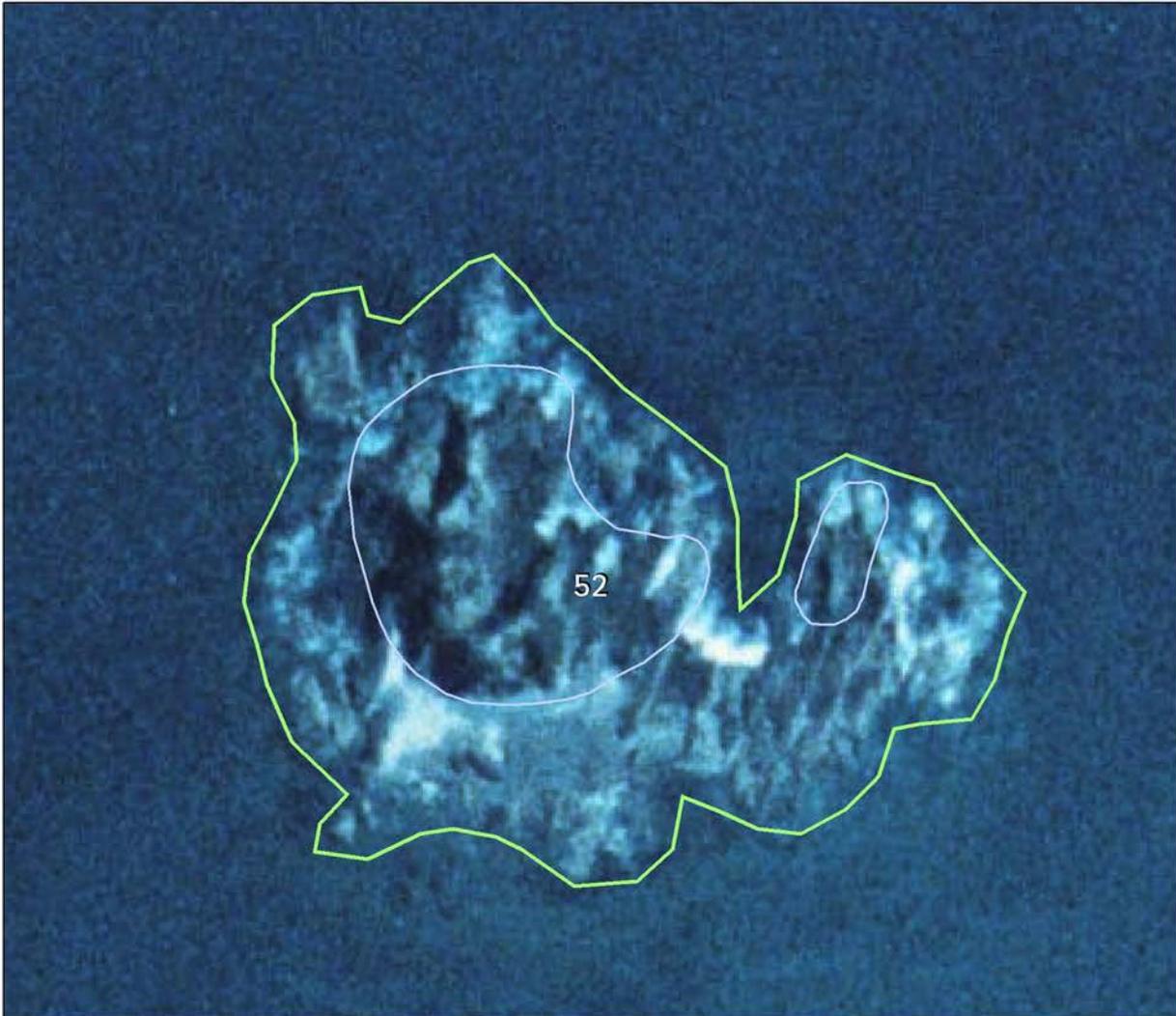
Ecology	Name of item: Mawhitipana Headland	Map reference: 4-10
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Island: Waiheke	SES 6 (Site of Ecological Significance)	
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Description of Item

One of the two last known locations of the threatened dune sand-binding plant, pingao (*Desmoschoenus spiralis*), on Waiheke. This species requires free-moving sand for survival and tends to occupy the most mobile parts of sand dune areas.





Ecology	Name of item: Nani Island	Map reference: 4-11
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Island: Nani	SES 52 (Site of Ecological Significance)	
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Description of Item

This site is of international importance to a threatened species, the white-fronted tern, with more than 1% of the total population breeding here. Another threatened seabird, the red-billed gull (which is in gradual decline nationally) also breeds here. The endemic variable oystercatcher nests here.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Woodlands Bay Forest	Map reference: 5-8
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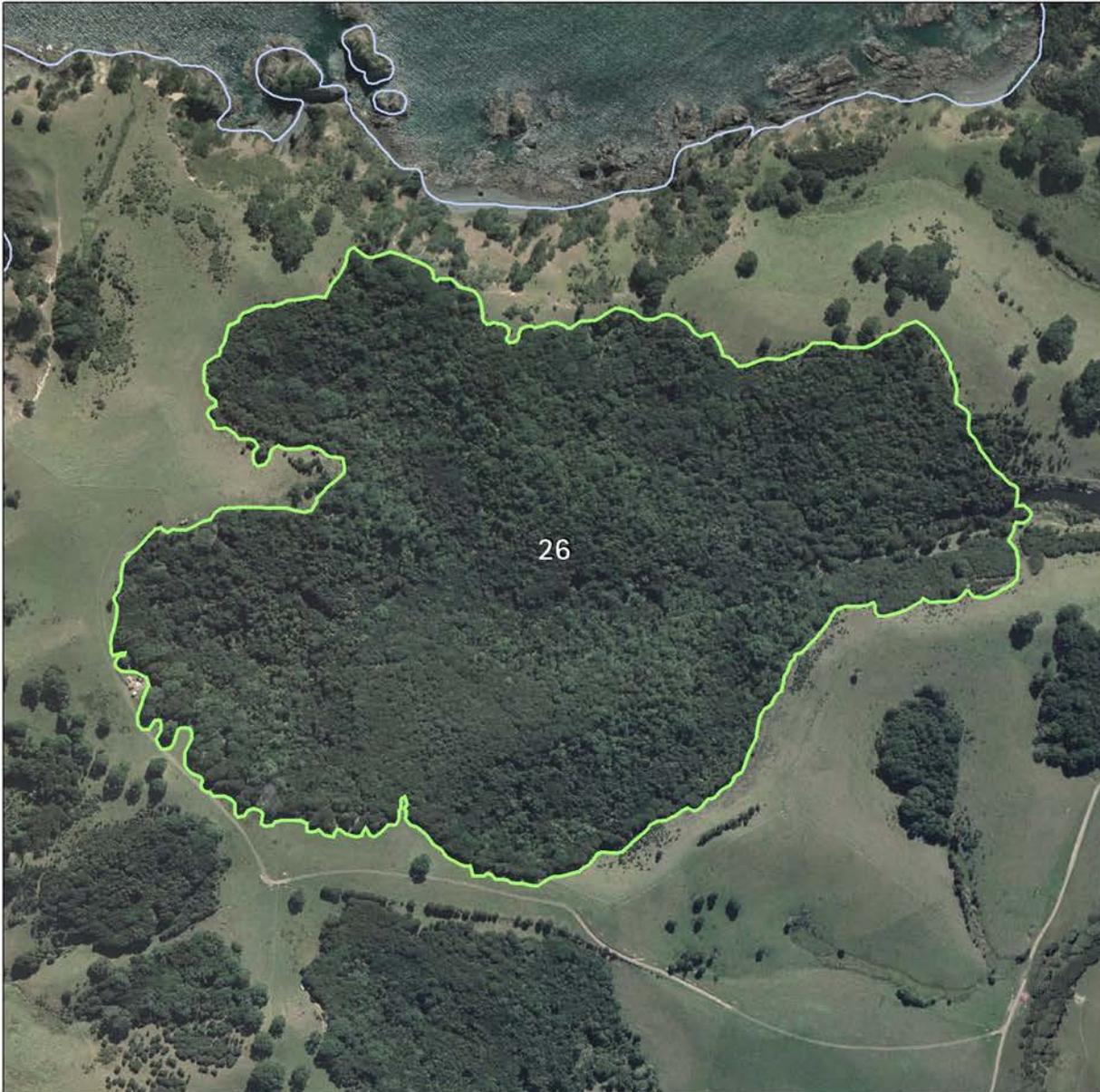
Island: Waiheke	SES 15 (Site of Ecological Significance)	
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Description of Item

An area of very diverse coastal broadleaved forest with tall taraire and puriri. Tawa, kohekohe, totara, karaka and kowhai are present along with lots of tawapou, a chronically threatened species that is in gradual decline throughout the Auckland Region. This species has become less common than it once was because of the clearance of much of New Zealand's coastal forests. Native birds are abundant in the bush, including kereru (NZ pigeon), another species that is considered to be in gradual decline. Nearer the coast, the mix of broadleaved trees becomes dominated by pohutukawa. Manuka scrub grows on the upper hillslopes and ridges. Closer to the coast there are some pohutukawa growing up through the scrub.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Matapihi Point Forest	Map reference: 5-9
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Island: Waiheke	SES 26 (Site of Ecological Significance)	<p>1:7,000</p>
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Description of Item

One of the larger remnants of coastal forest in the inner gulf islands, this area of coastal taraire-puriri forest grows in a valley near the coast, sheltered behind the first steep ridge that runs between Waihihi and Matapihi Point. It is characterised by a diverse range of species, including a considerable amount of kohekohe. The forest has been fenced and the understorey is well developed. A special feature is the presence of considerable amounts of tawapou, a chronically threatened species that is in gradual decline throughout the Auckland Region. This species has become less common than it once was because of the clearance of much of New Zealand's coastal forests. An area of manuka gumland grows on a ridge within the forest. A thin band of manuka, kanuka and totara protects the coastal forest along its southern edge.



Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Motukaha Island	Map reference: 7-10
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Island: Motukaha	SES 47 (Site of Ecological Significance)	
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Description of Item

Reef herons, which are considered nationally vulnerable to extinction, breed here. The endemic variable oystercatcher breeds here, as do pied shags.



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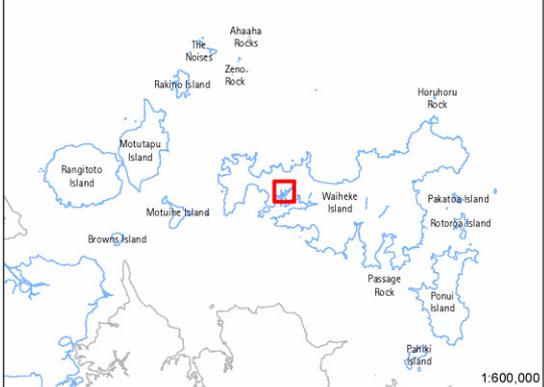


Ecology	Name of item: Okahuiti Creek	Map reference: 9-19
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Island: Waiheke	SES 10 (Site of Ecological Significance)	
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Description of Item

Okahuiti Creek has both saline and freshwater wetlands. A forest of coastal and streamside species, including pohutukawa, kowhai, taraire and matai, grows along the edge. This is one of only a very few areas in the inner gulf islands where these three types of vegetation grow together in their natural pattern. The coastal edge vegetation helps to protect the wetlands and can also help to stabilise the coastline and slow erosion.



Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Tawaipareira Creek	Map reference: 10-9
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Island: Waiheke	<p>SES 8 (Site of Ecological Significance)</p>	
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Description of Item

Freshwater wetland dominated by raupo, with a small area of cabbage tree (ti kouka) forest, a type of vegetation that has almost disappeared from the inner gulf islands. A variety of other rushes and sedges grow in parts of the wetland, including jointed twig rush (*Baumea articulata*), lake clubrush (*Schoenoplectus tabernaemontani*) and giant umbrella sedge (*Cyperus ustulatus*).



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Putiki Bay	Map reference: 10-10
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Island: Waiheke	SES 9 (Site of Ecological Significance)	
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Description of Item

A complex of saline wetlands often grading from mangroves up into saltmarshes and then into terrestrial vegetation on the edges. In some places, the saline wetlands grade into freshwater wetlands. Much of the coastal edge is fringed by pohutukawa forest or other native vegetation. The coastal edge vegetation helps to protect the saline wetlands and can also help to stabilise the coastline and slow erosion. A threatened wetland bird, the banded rail (nationally sparse), is reported to use the estuary.



Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Omiha-Te Whau Point Shrubland	Map reference: 10-11
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Island: Waiheke	SES 32 (Site of Ecological Significance)	
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<p>Description of Item</p> <p>An extensive area of shrubland that is regenerating to native forest. The vegetation is mainly manuka scrub with species such as mamangi growing up through it. Otherwise it is regenerating broadleaved forest with species such as young taraire, tawa, kohekohe and karaka growing amongst kanuka. In some places there are wetland areas within the vegetation. Much of the vegetation is protected by covenant. Kereru (NZ pigeon) are present, they are considered to be declining nationally.</p>	
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Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: King Fern Remnant	Map reference: 11-13
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Island: Waiheke	SES 7 (Site of Ecological Significance)	
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Description of Item

This forested gully was reported to have king ferns, or para (*Marattia salicina*). They grow on steep banks along the stream near a waterfall and rely on the presence of forest in the gully to maintain the cool damp conditions they prefer. This spectacular species of fern is in gradual decline in the Auckland Region, but nationally is in serious decline.



Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Onetangi Reserve	Map reference: 11-14
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Island: Waiheke	SES 13 (Site of Ecological Significance)	
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Description of Item

This is the largest area of intact forest on the northern coast of Waiheke. It includes diverse vegetation types, ranging from ridge top forests down to valley bottom wetlands. This reserve has not been grazed since 1962 and so there is a high diversity of species present, with around 150 different species of native trees, shrubs, ferns, orchids, vines, grasses, sedges, rushes and herbaceous plants thought to grow naturally within the reserve. These include miro, hinau, mangeao and kaikomako. Kereru (NZ pigeon, in gradual decline nationally), forest gecko, green gecko (in gradual decline nationally), copper skink and native land snails are present.



Refer to the disclaimer at the beginning of this appendix.

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Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Piemelon Bay	Map reference: 12-8
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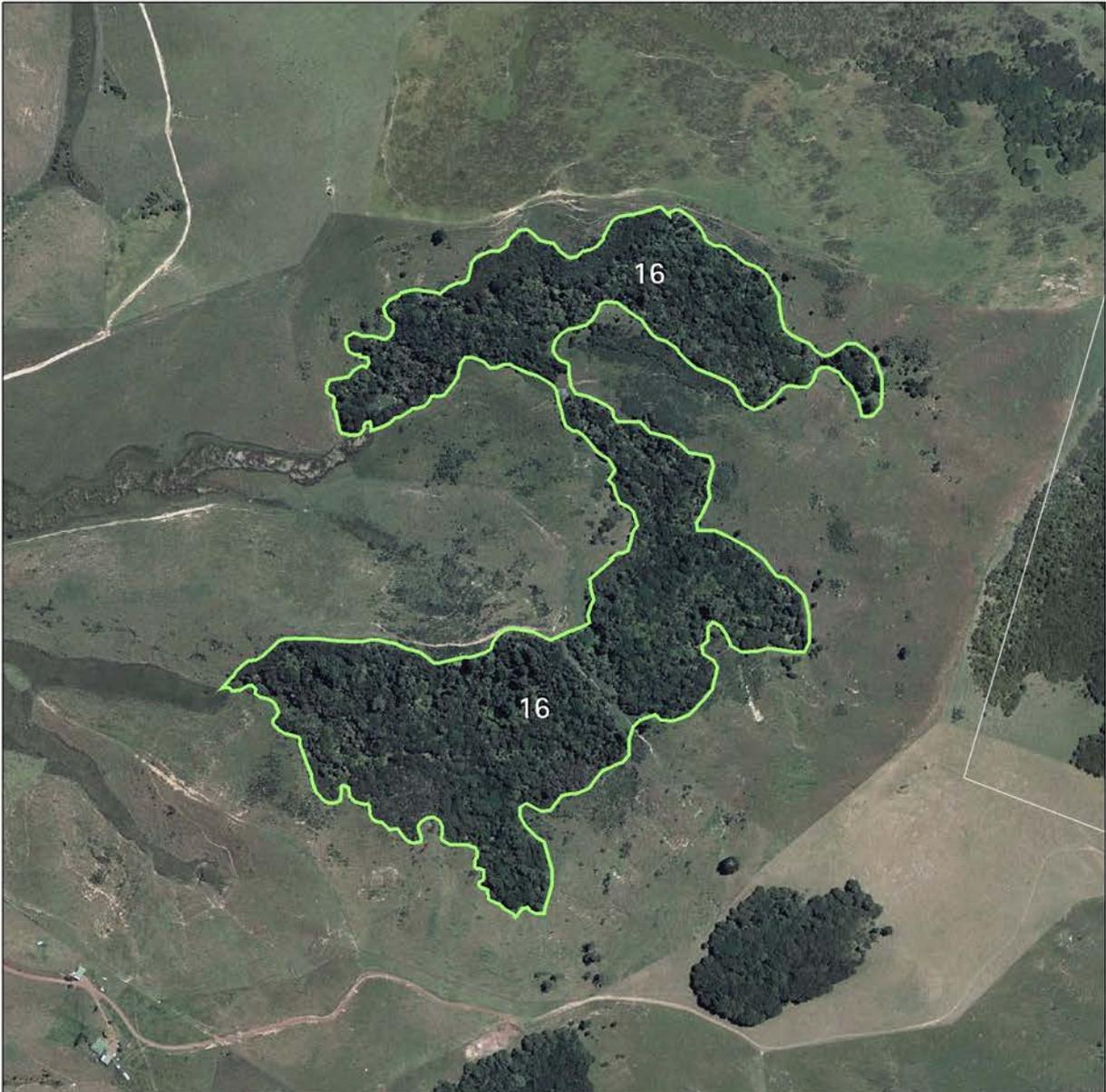
Island: Waiheke	SES 24 (Site of Ecological Significance)	
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Description of Item

Diverse remnants of mainly broadleaved forest. Taraire is the major species; however there is an obvious coastal influence, with many pohutukawa present. There is also a wide range of conifers, including a very large remnant kauri tree that towers above the surrounding canopy. These areas have been fenced for a considerable time and there has been great improvement, with many species regenerating beneath the trees. There are some buffering and connecting areas of manuka scrub. Kereru (NZ pigeon) are present.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Puke Ridge Forest	Map reference: 13-6
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Island: Waiheke	SES 16 (Site of Ecological Significance)	
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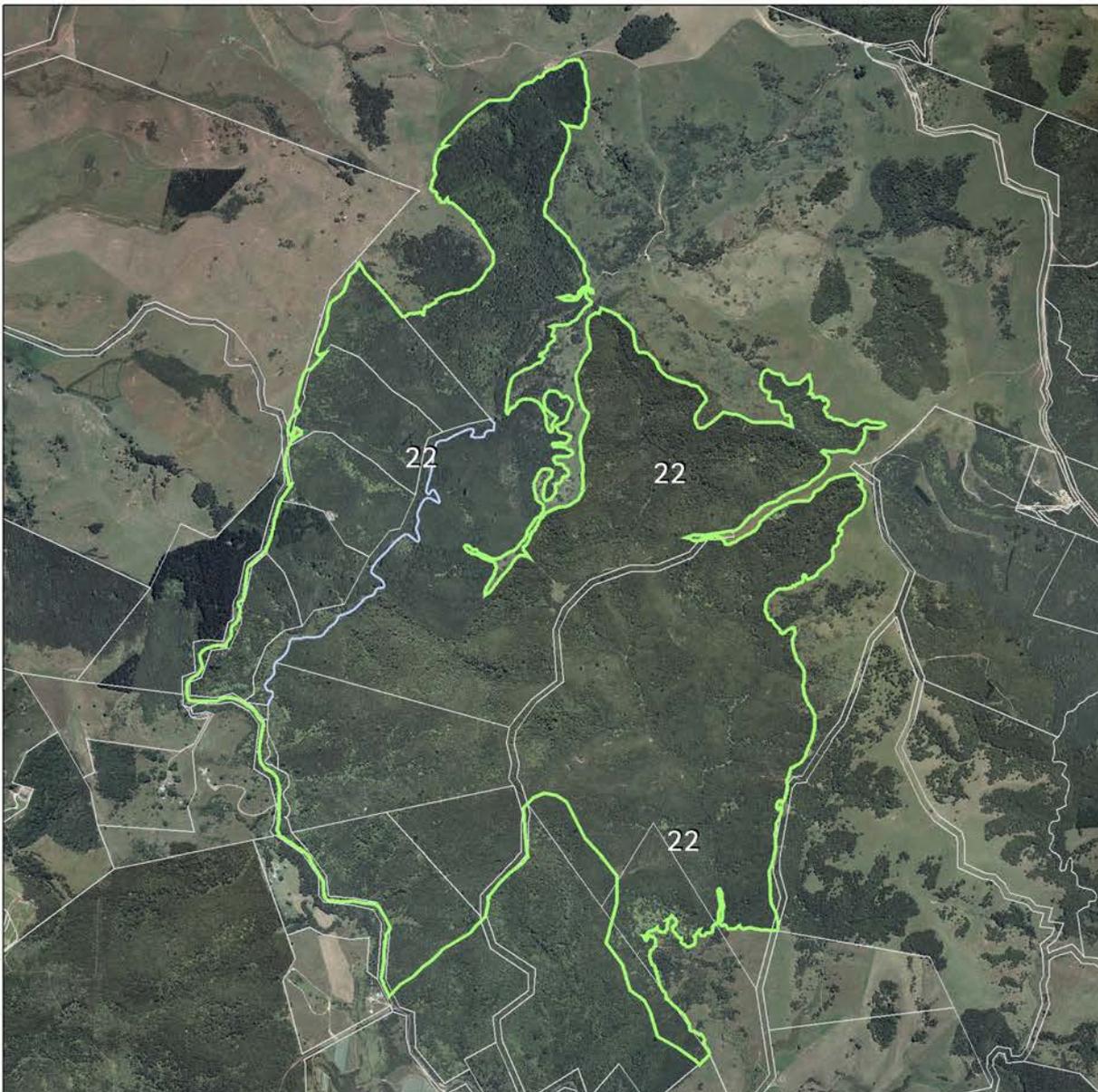
Description of Item

The forests in this area tend to be relatively young, but have some very large old remnant trees within them. Tanekaha and kauri grow on the ridges and upper slopes, whereas tawa, taraire, puriri, kohekohe and nikau are found on the lower slopes and in the gullies. In some of the damp gullies there are stands of swamp maire, an uncommon species in the inner gulf islands. There are a number of large trees that are hybrids between pohutukawa and northern rata. There is also a really large kahikatea in the bottom of the gully in the northern-most part of the forest. Very big kauri and miro are found in the forest.



Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Orapiu Road Complex	Map reference: 13-7
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Island: Waiheke	SES 22 (Site of Ecological Significance)	<p>1:22,000 metres</p>
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Description of Item

Large area of regenerating forest with some remnant mature forests. The young forests and scrub are manuka, kanuka and treefern, with some gumlands and some areas of young podocarp-broadleaved forest, including areas of kauri rickers. The young forest on the ridges tends to be of young to middle-aged trees, but there are some extremely large trees still present, mostly kauri, but also other species, such as hard beech. There are many pockets of remnant broadleaved forests in the gullies, typically taraire, but also some puriri and large remnant kahikatea. Threatened land snails and *Peripatus* (velvet worms) are present in the forest.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Te Whau Point	Map reference: 14-4
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Island: Waiheke	SES 23 (Site of Ecological Significance)	
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Description of Item

An area of pohutukawa forest growing on the coastal edge. This is an unusually wide belt of coastal fringe forest and is one of the larger remaining on the island. The vegetation is mainly pohutukawa, with significant amounts of kowhai and kanuka.



Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Kuakarau Bay	Map reference: 15-8
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Island: Waiheke	SES 11 (Site of Ecological Significance)	
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Description of Item

This is a large area of tall mature forest. In the valleys and on the slopes, the forest tends to be of taraire and tawa, with kohekohe, karaka and nikau, along with some scattered very large puriri. Up on the ridges the vegetation is mainly kanuka and manuka with some kowhai and a variety of ridgetop species.



Refer to the disclaimer at the beginning of this appendix.

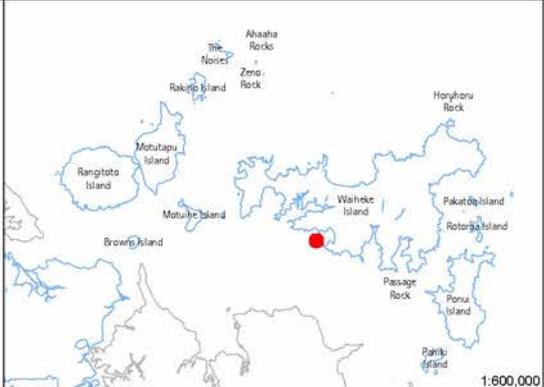


Ecology	Name of item: Koi Island	Map reference: 15-9
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Island: Koi	SES 45 (Site of Ecological Significance)	
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Description of Item

Six species of seabird breed on Koi: Caspian terns (nationally vulnerable to extinction), white-fronted terns (in gradual decline nationally), red-billed gulls (in gradual decline nationally), black-backed gulls, pied shags, and little shags. Reef herons, which are nationally vulnerable to extinction, also breed here, as do variable oystercatchers (an endemic species).



Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Poukaraka Wetlands	Map reference: 16-6
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Island: Waiheke	SES 12 (Site of Ecological Significance)	
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Description of Item

A large and broad wetland with mangroves and saltmarsh growing in salty conditions near the coast, and increasingly freshwater conditions further inland and upstream. The main body of the wetland is of raupo and freshwater club rush (*Bolboschoenus fluviatilis*). A wide variety of other species grow in response to the pattern of saltiness and hydrological conditions across the site. The wetland is home to four threatened wetland bird species: the banded rail (which is classed as sparse nationally), the North Island fernbird (which is also classed as sparse), the spotless crane (also sparse) and the Australasian bittern (which is nationally endangered). A relatively unusual shrub species, *Pomaderris rugosa*, grows on a rocky island out in the wetland.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Whakanewha (Rocky Bay)	Map reference: 16-7
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Island: Waiheke	SES 33 (Site of Ecological Significance)	
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Description of Item

The Whakanewha area contains a complex of regenerating kanuka and treefern scrub with mature forest remnants. Taraire and tawa forests grow in the gullies, while pohutukawa grow on coastal slopes. Kereru (NZ pigeon) live in the forest, but are in gradual decline nationally. On the coast, there are shellbank areas behind a sandy beach. Here, a number of characteristic native plants grow. The coastal area is also an important habitat for shorebirds, such as the northern New Zealand dotterel, which is considered to be a nationally vulnerable species. The endemic variable oystercatcher breeds here. Reef herons and Caspian terns (which are both nationally vulnerable species) use the foreshore.



Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Awaawarua Bay	Map reference: 17-12
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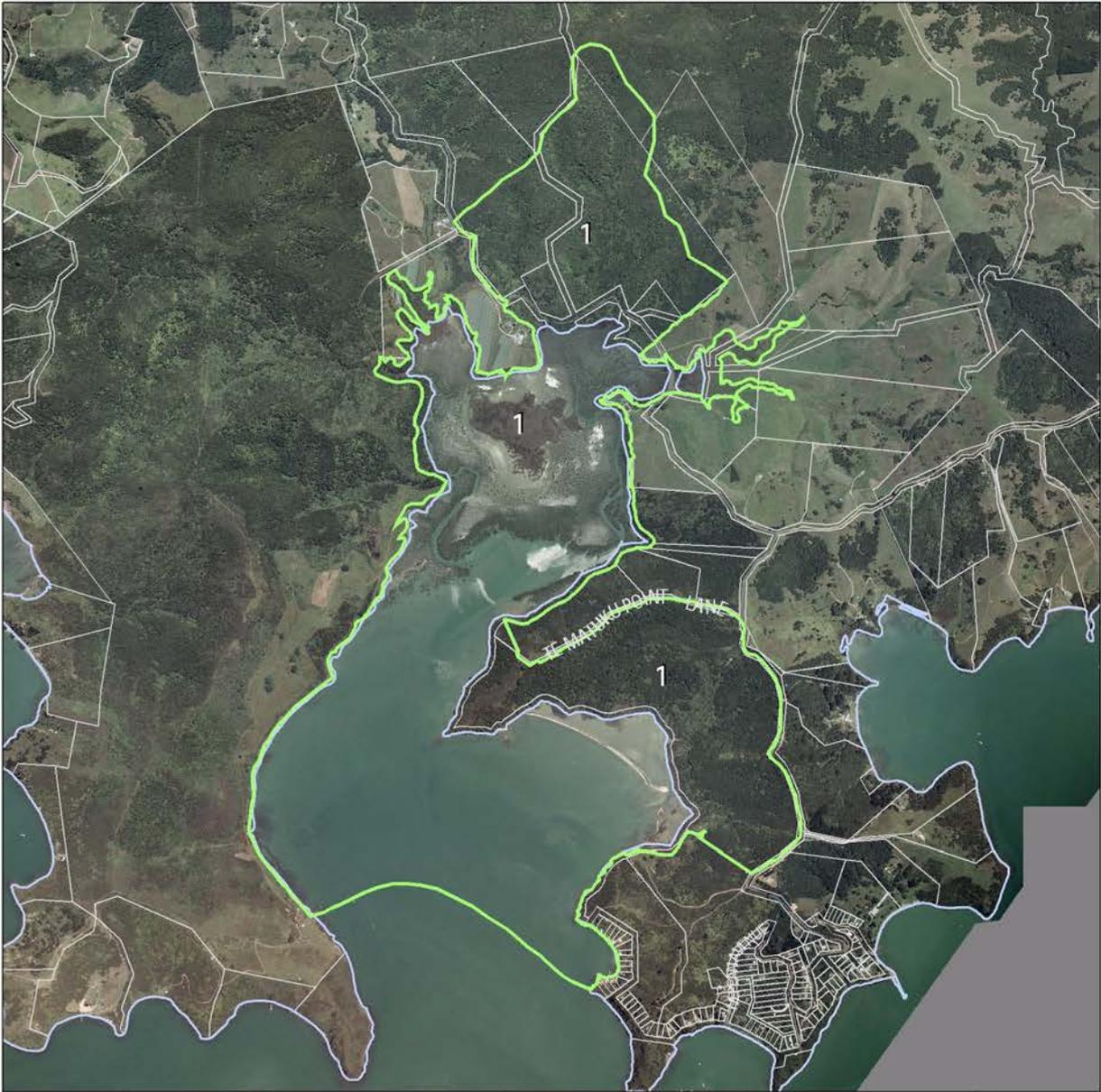
Island: Waiheke	SES 14 (Site of Ecological Significance)	
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Description of Item

Like Te Matuku Bay, this estuary has a shell spit. Awaawarua is the second-most important breeding site for New Zealand dotterels on Waiheke (northern New Zealand dotterels are a nationally vulnerable species). Caspian terns (which are also a nationally vulnerable species) breed here, as does the endemic variable oystercatcher. There is also a pied shag breeding colony. Four threatened species are found in the wetlands: North Island fernbirds (nationally sparse), banded rails (nationally sparse), spotless crakes (nationally sparse) and Australasian bitterns (nationally endangered). The wetlands range from mangroves and saltmarshes to substantial raupo wetlands at the head of the estuary.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Te Matuku Bay Complex	Map reference: 18-9
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Island: Waiheke	SES 1 (Site of Ecological Significance)	
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Description of Item

Te Matuku Bay is a flock site of international importance for northern New Zealand dotterels (which are classed as nationally vulnerable). The NZ dotterels also breed here. The threatened Caspian tern (nationally vulnerable) breeds here. Variable oystercatchers, an endemic species, nest along the coast. The coastal areas are used by reef herons, a nationally vulnerable species. In summer, several hundred Arctic migrants, such as the bar-tailed godwit or kuaka, feed on the tidal flats at low tide or roost along the beaches at high tide. The wetlands are home to two species that are sparse nationally, the spotless crane and the banded rail. The coastal and wetland systems grade into a forested catchment, which supports a variety of forests ranging from taraire and kohekohe forest in the gullies up to kauri / tanekaha forests with hard beech on the ridges.



Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Passage Rock (Three Sisters or Takapu)	Map reference: 20-4
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Island: Passage Rock (Takapu)	SES 48 (Site of Ecological Significance)	<p>1:2,000</p>
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Description of Item

Reef herons, which are considered nationally vulnerable, breed here. Pied and little shags also breed here.



Refer to the disclaimer at the beginning of this appendix.



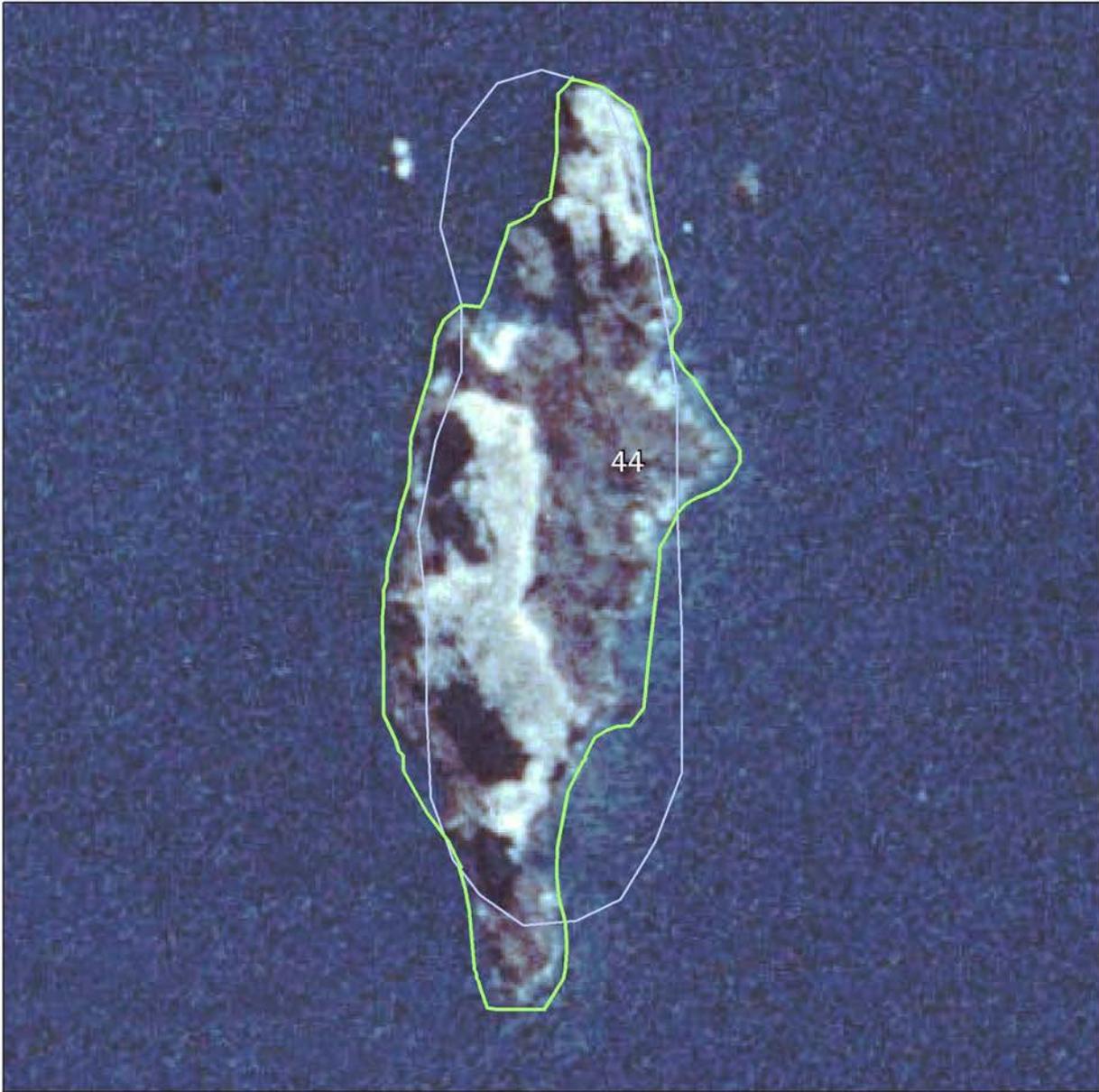
Ecology	Name of item: Owhiti Bay Remnants	Map reference: 21-6
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Island: Waiheke	SES 25 (Site of Ecological Significance)	
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Description of Item

These remnants of coastal forest and coastal shrublands extend along the coast between Carey Bay and Hooks Bay. They are generally dominated by pohutukawa, often with totara and kanuka, but a wide variety of coastal shrubs and herbs also grow in these areas. These include some threatened and unusual species, such as tawapou (*Pouteria costata*), sickle fern (*Pellaea falcata*), coastal mahoe (*Melicactus novae-zelandiae*) and shore buttercup (*Ranunculus acaulis*). Tawa is common further from the coast. Owhiti Bay itself is numerically the third most important breeding site for northern New Zealand dotterels (a nationally vulnerable species) on Waiheke. Two endemic birds, the New Zealand pipit and the variable oystercatcher also breed around the bay.





Ecology	Name of item: Horuhoru (Gannet) Rock	Map reference: 21-7
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Island: Horuhoru Rock (Gannet Rock)	SES 44 (Site of Ecological Significance)	
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Description of Item

This is one of New Zealand's key seabird breeding sites. It is a nationally important site for Australasian gannets. Spotted shags and white-fronted terns also breed here. White-fronted terns are in gradual decline nationally.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Hooks Bay Wetland	Map reference: 21-8
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Island: Waiheke	SES 55 (Site of Ecological Significance)	
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Description of Item

A rather degraded wetland that nonetheless represents a nationally threatened ecosystem. Typical wetland plants exist here including *raupo*, native umbrella sedge, batchelor's button and *Bolboschoenus* and *Schoenus* sedge species. Surrounding habitats include *kanuka/manuka* scrub and mature broadleaf/podocarp forest remnants, which support *kereru*, a nationally declining species.



Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Anita Bay to Hooks Bay Coast	Map reference: 22-3
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Island: Waiheke	SES 4 (Site of Ecological Significance)	
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Description of Item

Rugged coastline with broken coastal vegetation. Dominated by pohutukawa, the vegetation also includes unusual amounts of titoki and whau, along with coastal specialists, such as ngaio, taupata and karo. Threatened and unusual species grow here, most notably turepo, the large-leaved milk tree (*Streblus banksii*) which is critically threatened in the region. Tawapou (*Pouteria costata*) and coastal mahoe (*Melicytus novae-zelandiae*) are also present. Between Anita Bay and Hooks Bay are two breeding colonies of spotted shag, the only two colonies on Waiheke. Reef herons (a nationally vulnerable species) are also present on the rocky coast.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Man O'War Bay Forest	Map reference: 23-29
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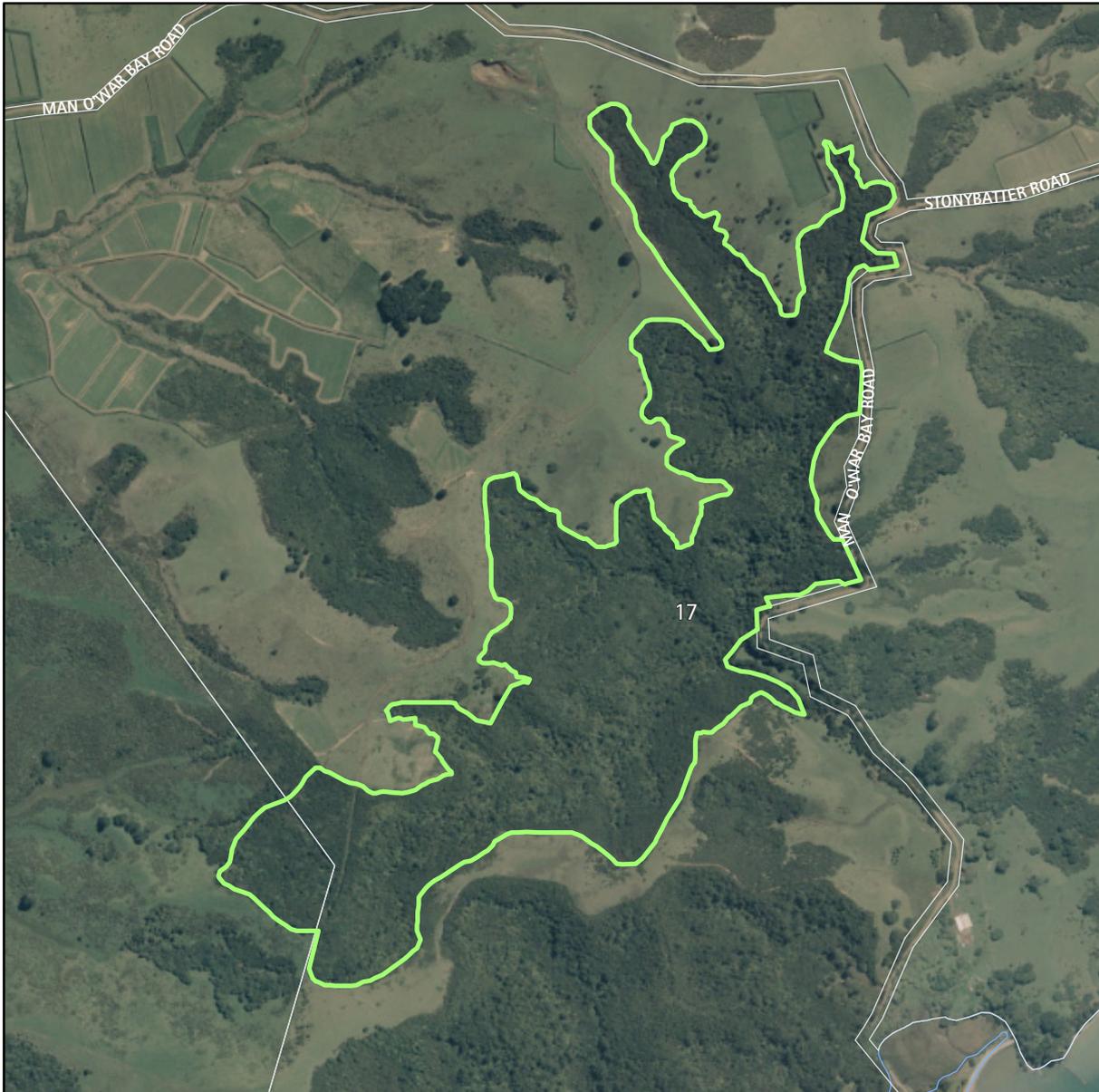
Island: Waiheke	SES 2 (Site of Ecological Significance)	
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Description of Item

Largest area of relatively continuous mature forest on Waiheke. Consists of a diverse range of forest types grading from ridge forests down to swamp forests. The ridge forests are mixes of kauri, tanekaha and hard beech. These areas are the largest kauri forest remaining on Waiheke. Broadleaved forests with mainly taraire and kohekohe grow further down the slopes. There are swamp forests in the wettest parts, including the best areas of swamp maire (maire tawake) forest on the island. The forest has some very large individual trees, mainly kauri, but also swamp maire, totara and rimu. Kaka and kereru (NZ pigeon) both live in the forest. Kaka is a nationally endangered species, and kereru are considered to be gradually declining. The forest grades into wetlands, which range through a variety of types from raupo / manuka freshwater wetland through to estuarine saltmarshes with sea rush, jointed wire rush and saltmarsh ribbonwood. The wetlands are important habitat for spotless crane and banded rail, which may be breeding in the area.



Appendix 1d Schedule of sites of ecological significance - inner islands

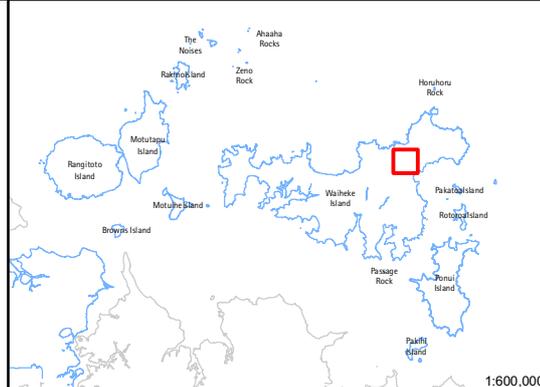


Ecology	Name of item: Man O'War Bay Shrubland	Map reference: 23-30
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Island: Waiheke	SES 17 (Site of Ecological Significance)	<p>1:12,000 metres</p>
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Description of Item

Large area of scrubland and regenerating forest. The young forests are now around 10-15m in height and consist of a wide variety of both broadleaved trees and conifers. The conifers are mainly tanekaha and totara, with some kauri, rimu, matai and miro. Broadleaved tree species include kohekohe, tawa, taraire and some large puriri. There are some areas of manuka gumland supporting a diverse range of gumland species, such as gahnias, turutu, *Schoenus tendo* and clubmosses. Kereru (NZ pigeon) are numerous in this area, although they are considered to be gradually declining nationally.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Waikopua Bay Forest	Map reference: 23-31
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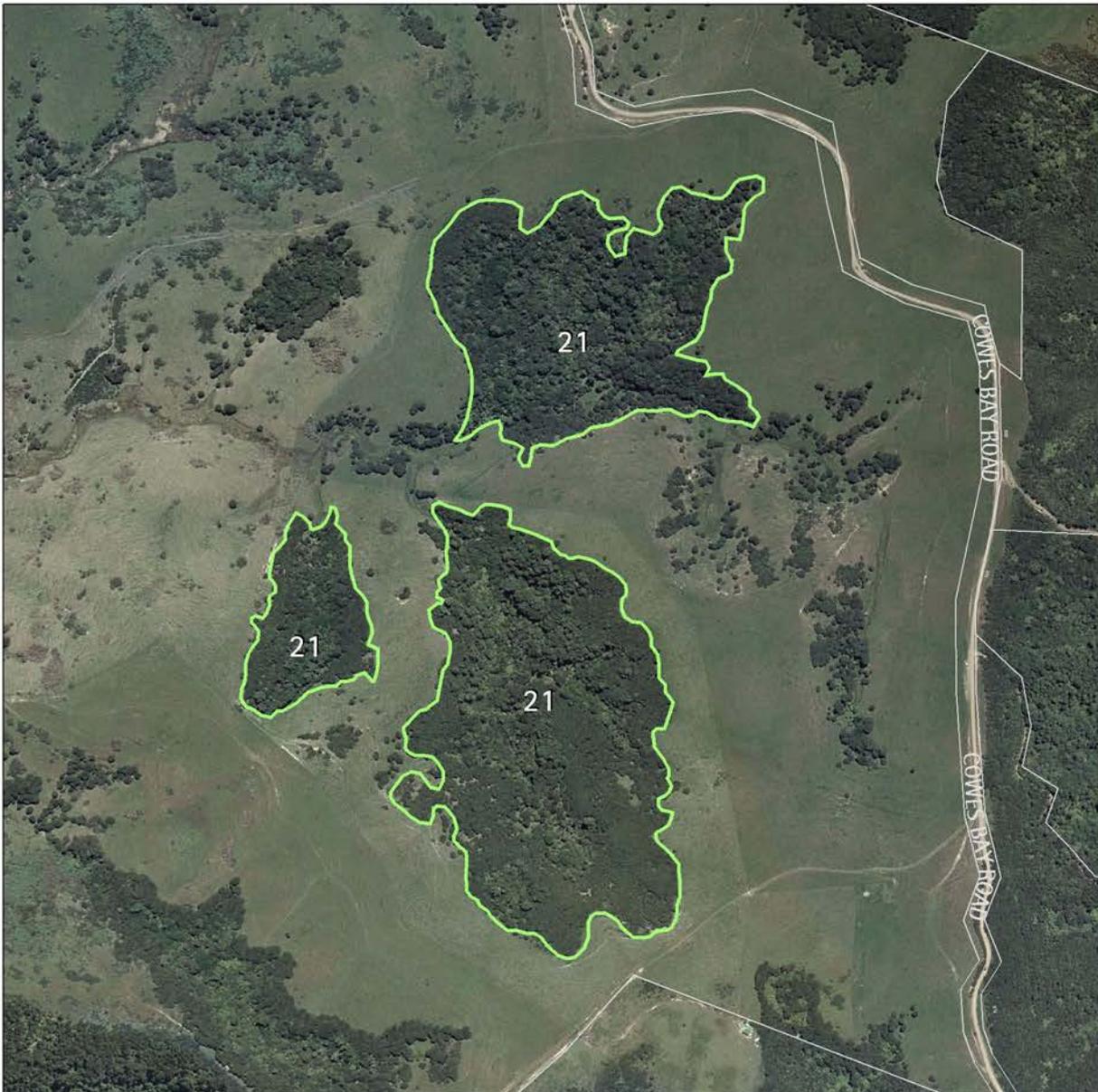
Island: Waiheke	SES 18 (Site of Ecological Significance)	
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Description of Item

This is an area of remnant forests surrounded by dense manuka and kanuka. The remnant forests grow in an altitudinal sequence. Mature taraire forest dominates the valleys. Tawa, kohekohe and puriri are also common, while titoki is found occasionally. Nikau is very common in all tiers of the understorey. Kauri and tanekaha dominate the ridges, with pohutukawa, tawa and rewarewa sometimes present. The forest has a dense understorey, reflecting the fencing that was erected in around the 1970s to exclude stock. The forest is older than most of the vegetation along this coast and has some very large and ancient remnant trees. Notable large remnant trees include kauri, hard beech, hinau, tanekaha, miro and possibly the largest rimu on Waiheke. Kaka and kereru are found in the forest. Kaka are nationally endangered, while kereru (NZ pigeon) are considered to be gradually declining.



Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Cowes Bay Road Remnants	Map reference: 23-32
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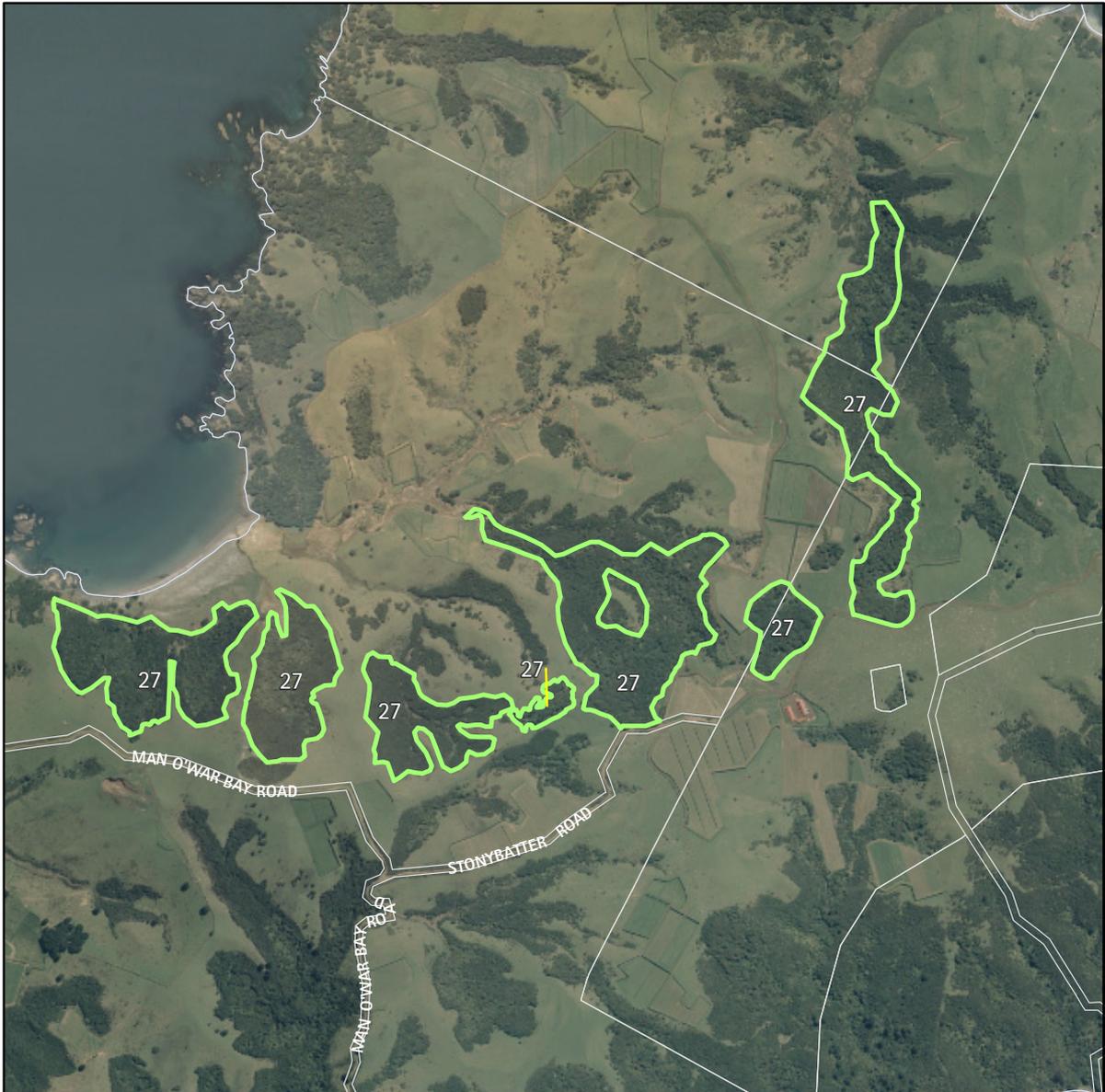
Island: Waiheke	SES 21 (Site of Ecological Significance)	
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Description of Item

A mixture of young forests and old remnant trees. There are manuka, young kanuka, kauri and tanekaha on the ridges, along with some large kauri and pohutukawa / northern rata hybrids. Taraire forest is the main vegetation in the valleys, although there is a mixture of species, including large kauri and puriri and some very impressive emergent swamp maire, an unusual species in the inner gulf islands. Kereru (NZ pigeon, which are in gradual decline nationally) are abundant in areas of forest.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Stony Batter Remnants	Map reference: 23-33
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Island: Waiheke	SES 27 (Site of Ecological Significance)	
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Description of Item

Remnants of broadleaved forest of mainly taraire and puriri, with associated pohutukawa and totara. Some individual trees are large, most notably a matai more than 20m tall with a trunk more than 1m in diameter. There are some high quality, steep and bouldery streams along with patches of wetland, including mature cabbage trees. There are some younger areas of kanuka vegetation that provide an important buffer to the older forests and the streams. *Peripatus* (velvet worms) and threatened land snails are present. Kaka (which are nationally endangered) are present and may be breeding.



Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Rangitawhiri Point Forest	Map reference: 23-34
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Island: Waiheke	SES 28 (Site of Ecological Significance)	
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Description of Item

A small but prominent coastal remnant of forest that is valuable because of its unusual assemblage of tree species. Pohutukawa, the normal canopy species of coastal fringe forests, is present. However there are numerous tanekaha, mangleo and kowhai. At times, this forest provides habitat for numerous tui.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Awakiriapa Bay Shrubland	Map reference: 23-35
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Island: Waiheke	SES 29 (Site of Ecological Significance)	
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Description of Item

An extensive area of young regenerating forests and shrublands of mainly kanuka, treeferns and manuka. The best areas are in the north where there has been fencing since around the 1970s. There are lots of regenerating broadleaved and podocarp species. In the gullies there are remnants of older forests, mainly taraire, puriri and kohekohe.



Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands

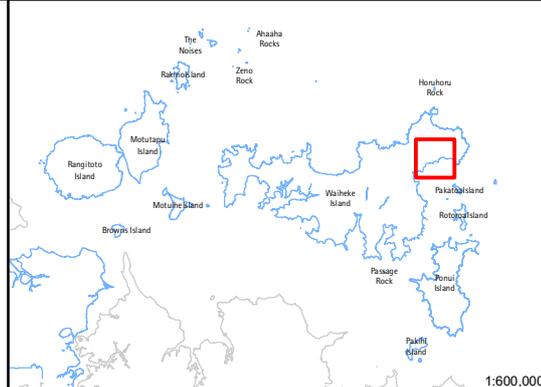


Ecology	Name of item: Opopo Bay-Huse Bay Shrubland	Map reference: 23-36
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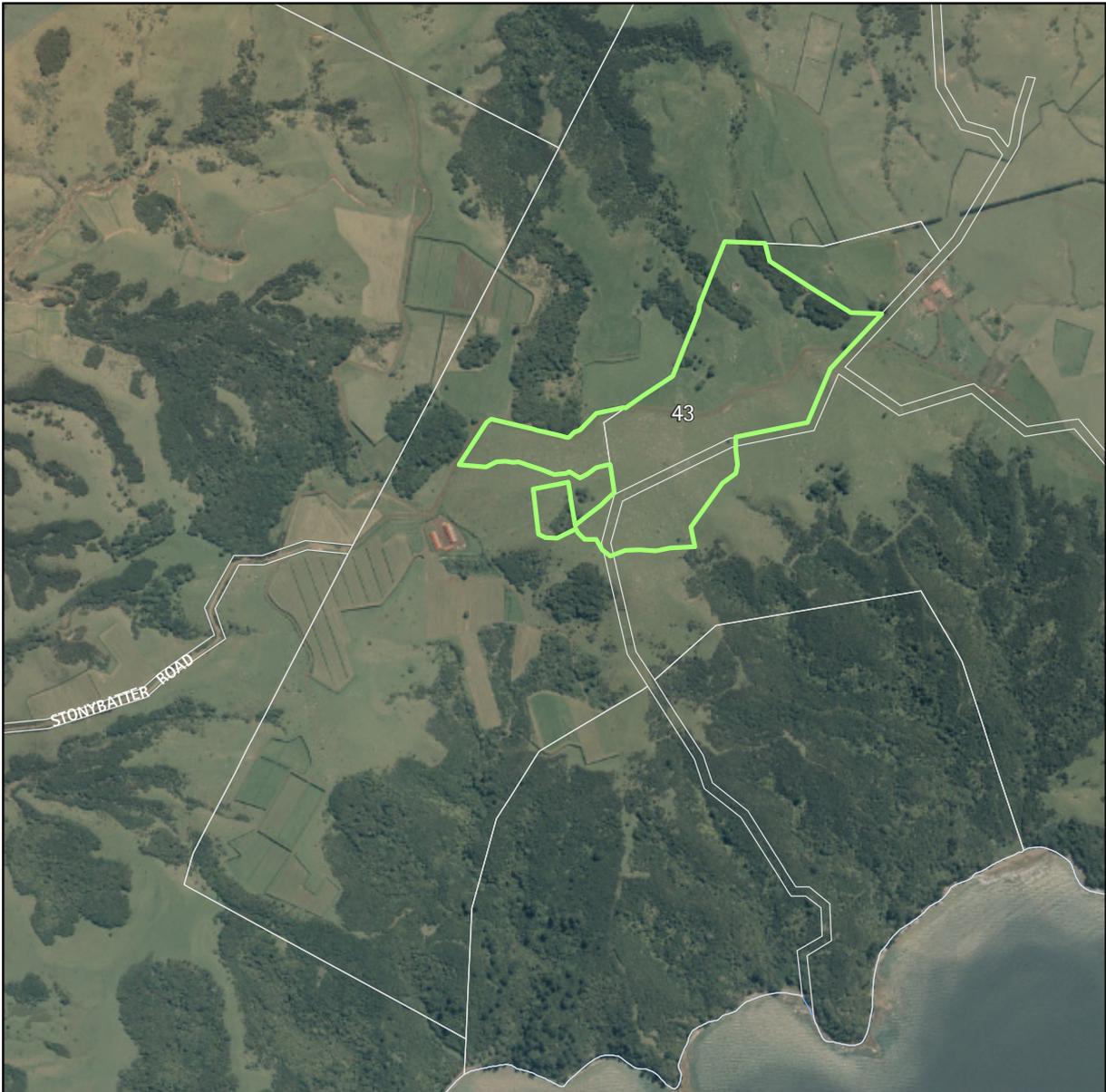
Island: Waiheke	SES 31 (Site of Ecological Significance)	
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Description of Item

Very extensive block of regenerating forest. On the ridges, the vegetation is mainly kanuka or manuka with young kauri and tanekaha and sometimes hard beech. Occasionally there is an older patch of kauri forest. In the gullies, the vegetation is taraire or tawa forest with nikau and treeferns and some kahikatea. There are some large remnant trees growing in the forest, such as puriri. Pohutukawa forests grow on the coast. Other species present include tanekaha and occasionally mangeao. Kaka (nationally endangered) and kereru (NZ pigeon, gradual decline nationally) are found in the forest. Reef herons (nationally vulnerable) are present and endemic variable oystercatchers breed along the coast.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Stony Batter Boulder Communities	Map reference: 23-37
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Island: Waiheke	<p>SES 43 (Site of Ecological Significance)</p>	
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Description of Item

Throughout the Stony Batter boulder field, lichen growth commonly accentuates the unusual surface grooves (flutes) on the rounded boulders. These flutes resulted from long-term weathering by slightly corrosive acidic water that drained from forest trees and perching plants. A little of the original surrounding forest still remains in the immediate vicinity of the boulder field. In some places, particularly where there is some sheltering vegetation, communities of perching rupestral (rock-dwelling) species still exist on the tops of some boulders. The more open landscapes that are now through most of the boulder fields provide suitable habitat for the New Zealand pipit, an endemic subspecies that although still relatively common on Waiheke is declining elsewhere in its range. Pipits favour open habitats, but avoid intensively farmed areas. The boulders themselves are likely to support native skinks.



Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands

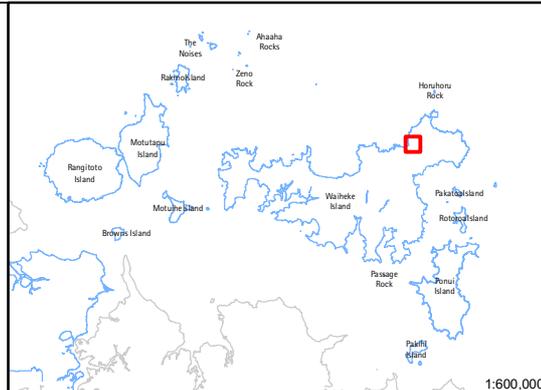


Ecology	Name of item: Owahi Bay Wetland	Map reference: 23-38
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Island: Waiheke	SES 54 (Site of Ecological Significance)	
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Description of Item

This wetland system drains west into Owahi Bay and presents a matrix of habitats including raupo wetland, broadleaf forest fragments, manuka/kanuka scrub and tree fern bush. Although generally rather degraded due to stock browsing, there are some pockets of mamaku and manuka bush in the steeper gullies with intact understorey vegetation. The broadleaf forest contains puriri, pohutukawa, totara, taraire and tawa.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Man O' War Bay Gully Forest Remnants	Map reference: 23-39
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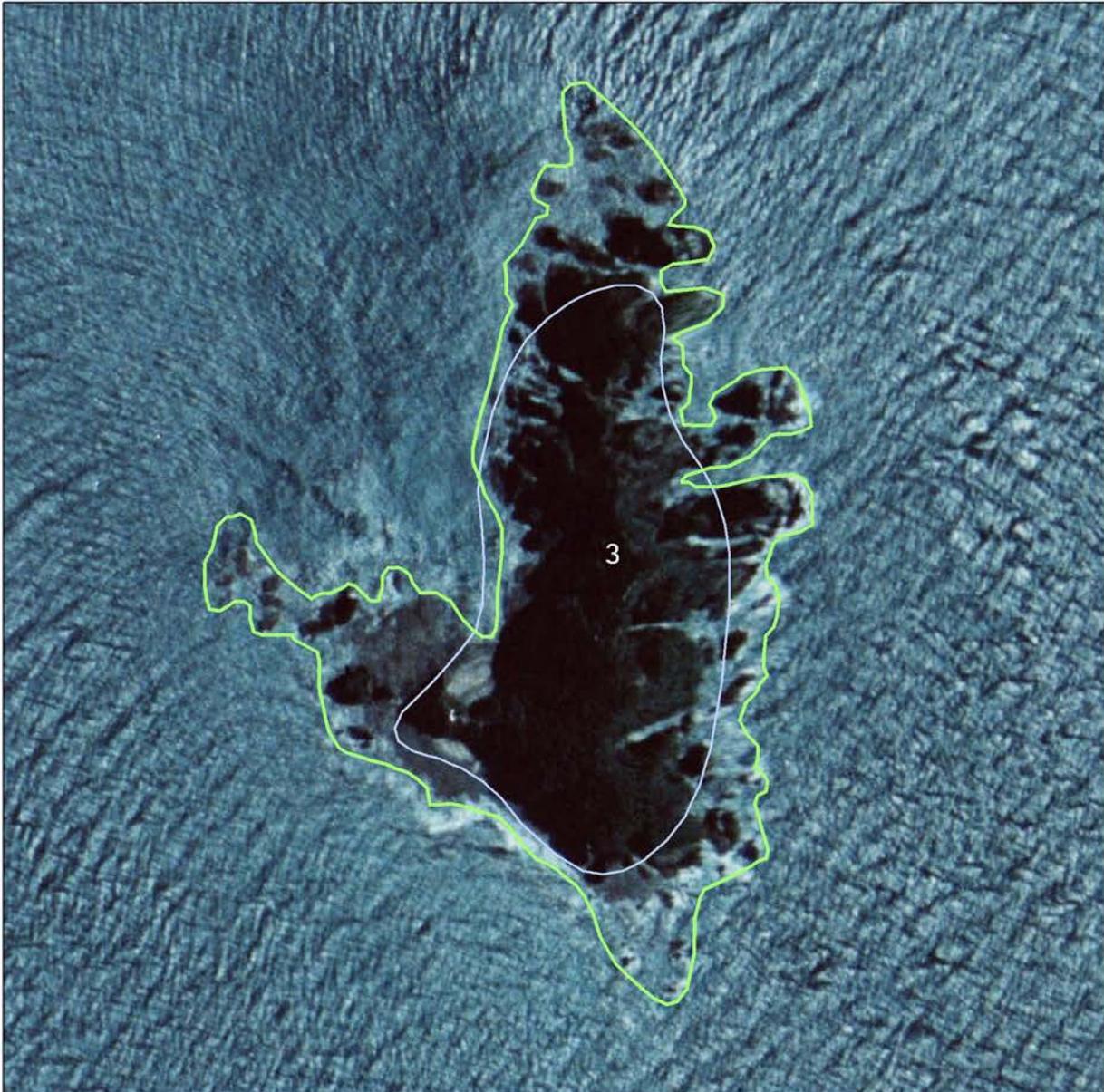
Island: Waiheke	SES 56 (Site of Ecological Significance)	
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Description of Item

Three areas of climax broadleaf canopy, generally dominated by taraire and rewarewa, along with tawa and puriri, and some areas with mainly tanekaha and some larger kauri. The understorey vegetation is patchy here as it suffers from stock browsing, but the forest supports breeding kingfisher, kereru and kaka.



Appendix 1d Schedule of sites of ecological significance - inner islands

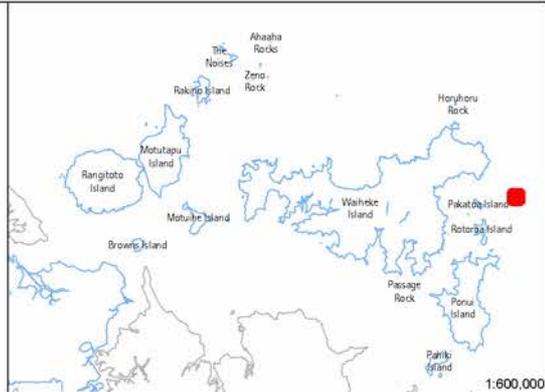


Ecology	Name of item: Tarahiki (Shag) Island	Map reference: 24-9
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Island: Tarahiki (Shag)	SES 3 (Site of Ecological Significance)	
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Description of Item

This is one of New Zealand's key seabird breeding sites. It has the largest breeding colony of the endemic spotted shag in the gulf. Reef herons (a nationally vulnerable species) breed here. White-fronted terns (which are in decline nationally) also breed here.



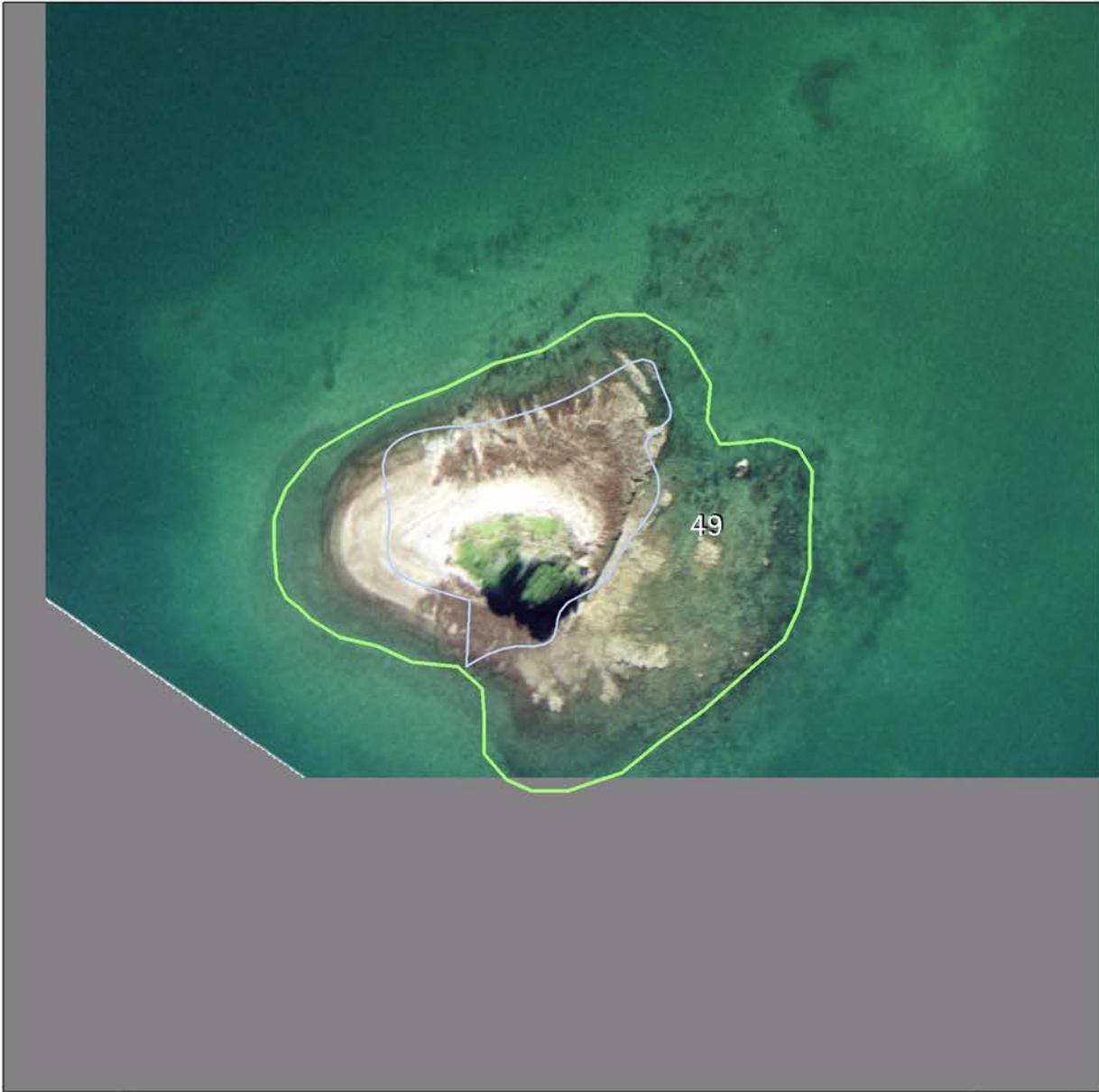
Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Pakatoa Coastal Forest	Map reference: 24-10
Island: Pakatoa SES 36 (Site of Ecological Significance)		

Description of Item		
<p>A diversity of coastal forests and shrublands. Tall pohutukawa forest grows on the southern cliffs, along with karo, houpara, coastal astelia and flax. Rengarenga lilies are also significant in this vegetation. A shrubland of manuka and pohutukawa with a range of dry shrub species grows on the eastern coast. A mix of shrubland and short pohutukawa grows on the western coast. Mature broadleaved forest of pohutukawa, puriri and karaka grows in the centre of the island. North Island weka, a nationally endangered species, were released on Pakatoa in 1996 and have established a breeding population. This is the only site with North Island weka in Auckland City's inner gulf islands.</p>		

Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Frenchmans Cap (Kahakaha)	Map reference: 24-11
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Island: Frenchmans Cap (Kahakaha)	SES 49 (Site of Ecological Significance)	
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<p style="text-align: center;">Description of Item</p> <p>This site is of international importance to a threatened species, the white-fronted tern, with more than 1% of the total population breeding here. Smaller numbers of another threatened tern, the Caspian tern (which is nationally vulnerable to extinction) also breed on the island. Two other species considered nationally vulnerable to extinction also breed here, the reef heron and the northern New Zealand dotterel. The endemic variable oystercatcher also nests here.</p>	
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Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Waiti Bay Gully Forest Remnant	Map reference: 24-12
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Island: Waiheke	<p>SES 57 (Site of Ecological Significance)</p>	
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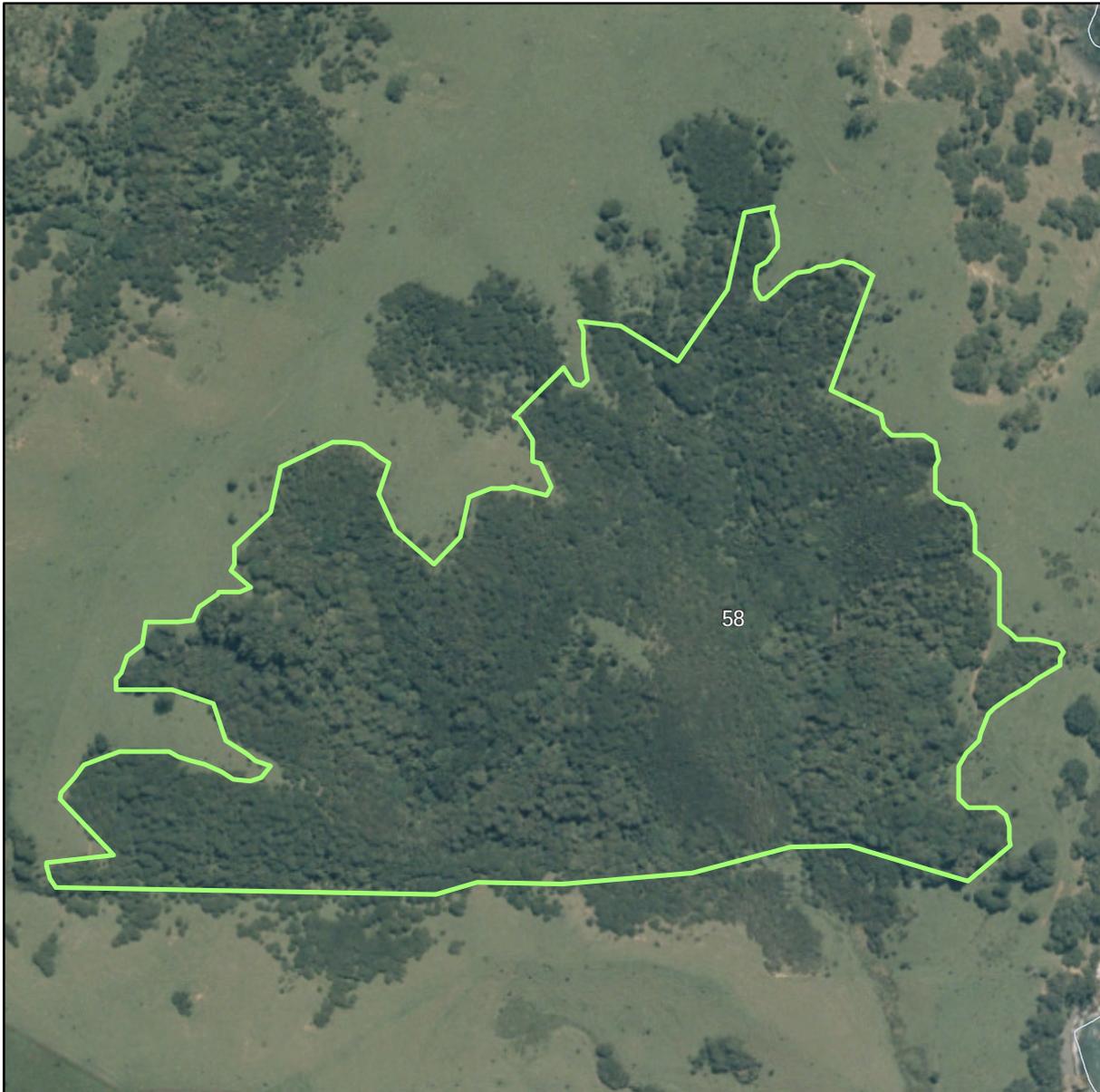
Description of Item

Pockets of broadleaf forest within kanuka bush. The broadleaf forest is mainly taraire with a sub-canopy of puriri, tawa, kohokohe, rewarewa, totara and nikau.



Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands

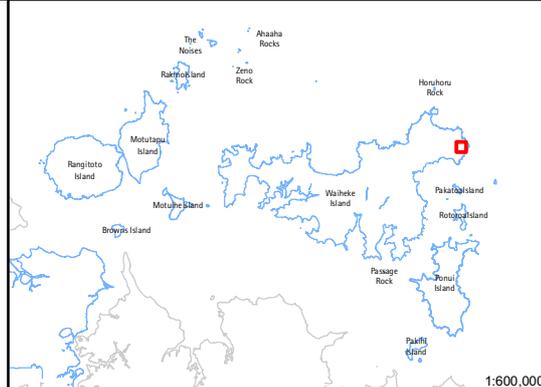


Ecology	Name of item: Kauri Point Gully Forest Remnants	Map reference: 24-13
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Island: Waiheke	SES 58 (Site of Ecological Significance)	
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Description of Item

A matrix of broadleaf forest, remnant kanuka/manuka scrub and tree ferns around the stream. The broadleaf forest supports a taraire canopy with some tawa and puriri; the understorey suffers from stock grazing.



Refer to the disclaimer at the beginning of this appendix.

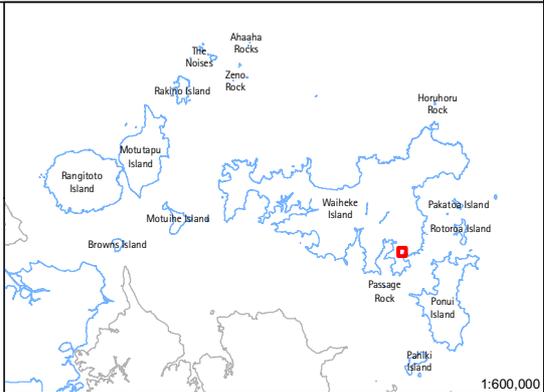


Ecology	Name of item: Omaru Bay Forest	Map reference: 25-12
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Island: Waiheke	SES 30 (Site of Ecological Significance)	
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Description of Item

This site consists of four zones, two of remnant tairaire forest and two areas of saltmarsh. The remnant tairaire forest, with large emergent kahikatea, lies in the gully. A mixed forest exists further up the slope. This mixed forest has mamangi, rewarewa, tawa, miro and lancewood. Up on the exposed ridge, the vegetation is kanuka, with some pohutukawa, tanekaha and kauri. The understorey throughout the forest is quite dense as the area has been fenced to prevent stock access. Kereru (NZ pigeon, a species in gradual decline nationally) and tui are found in the forest. The two areas of saltmarsh near the coast contain jointed wire rush, saltmarsh ribbonwood, mangroves and the fern *Hypolepis distans*. Pied stilts breed here.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Te Kawau Bay Islet	Map reference: 25-13
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Island: Te Kawau Bay Islet	SES 51 (Site of Ecological Significance)	
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Description of Item

Two seabirds that are in gradual decline nationally, the white-fronted tern and the red-billed gull, breed on the islet.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Rotoroa Island	Map reference: 26-18
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Island: Rotoroa	SES 35 (Site of Ecological Significance)	
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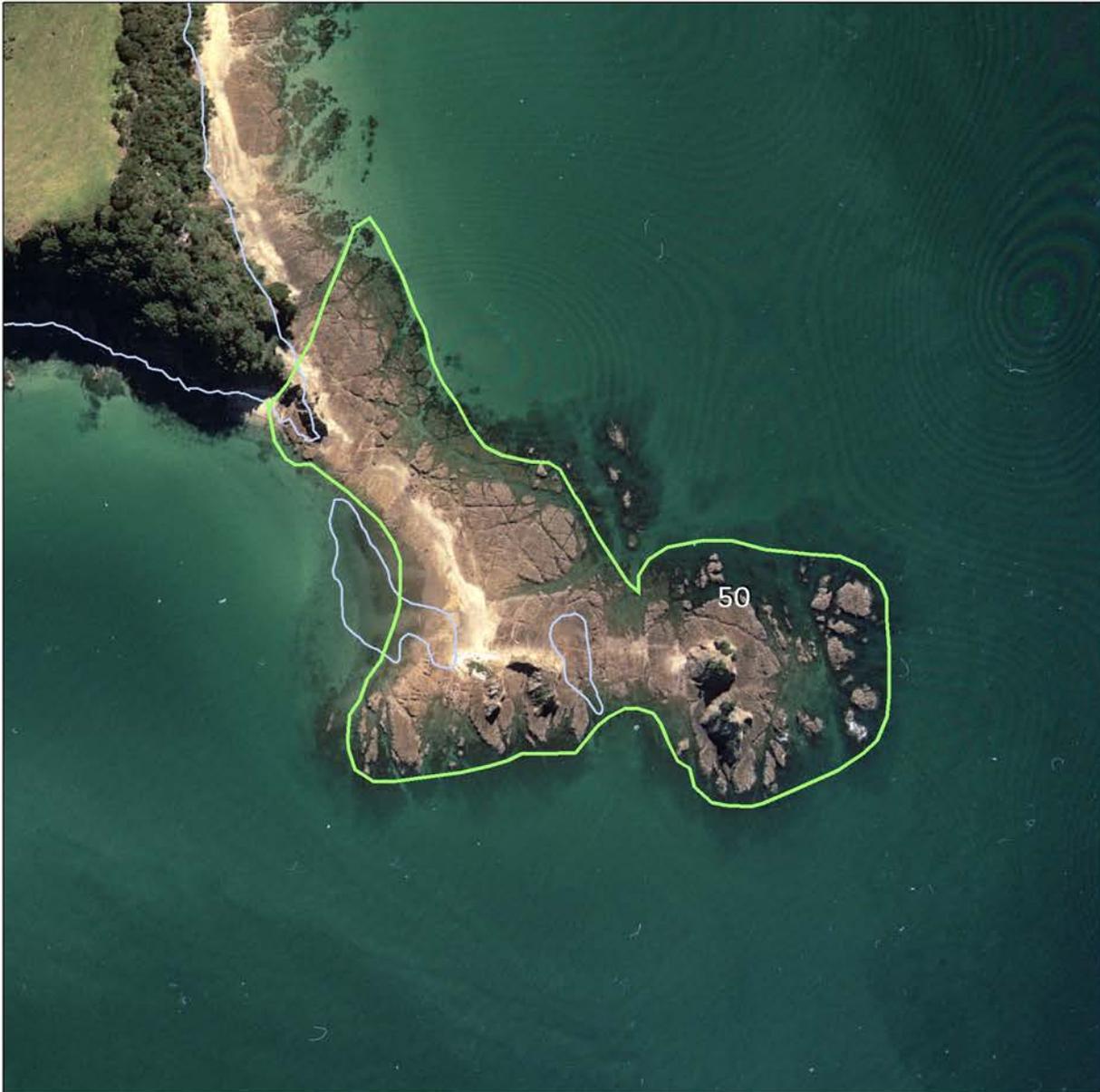
Description of Item

Discontinuous fragments of coastal forest, shrubland and regenerating forest that are almost all in the coastal area. These grow interspersed with areas dominated by pines. Pohutukawa grow on the coastal cliffs, sometimes in association with other coastal species, such as karo, karamu, mahoe, houpara, rengarenga, kowharawhara, akepiro, wiwi and wharanui. In places, the coastal vegetation is younger and does not have the large pohutukawa trees. Many of the species found in pohutukawa forest are present, although kanuka, manuka, mapou and mahoe are more common. On the slopes away from the coast and occasionally on the ridges on the coast, the vegetation is dominated by kanuka. In accessible areas, this vegetation may be undergrazed. A range of indigenous forest birds and other fauna use these areas. The coastal margins below the identified forests and shrublands are suitable habitat for coastal birds, such as variable oystercatchers and reef herons.



Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands

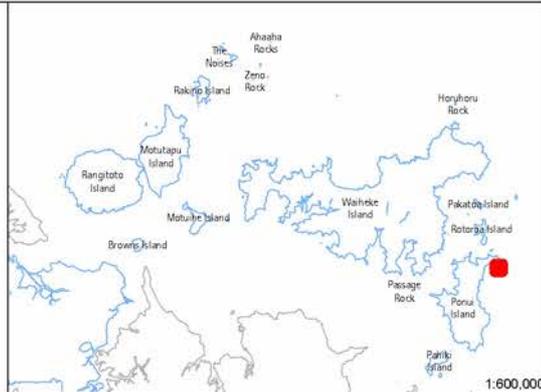


Ecology	Name of item: Scully Reef	Map reference: 26-19
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Island: Scully Reef	SES 50 (Site of Ecological Significance)	
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Description of Item

This site is of international importance to white-fronted terns (in gradual decline nationally), with more than 1% of the total population nesting here in some years. Several pairs of northern New Zealand dotterel (a nationally vulnerable species) breed here. Variable oystercatchers also breed here. Hundreds of spotted shags roost here. Reef herons (nationally vulnerable) also use this site.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Un-named Islet between Ponui and Rotoroa	Map reference: 26-20
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Island: NZMS 260 S11 072835	<p>SES 53 (Site of Ecological Significance)</p>	
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Description of Item

Reef herons (which are nationally vulnerable to extinction) breed here. Blue penguins (which are in gradual decline nationally) also breed here. There is a small colony of grey-faced petrels on the islet which is unusual (the only other colonies in the inner gulf are on the Noises).



Refer to the disclaimer at the beginning of this appendix.

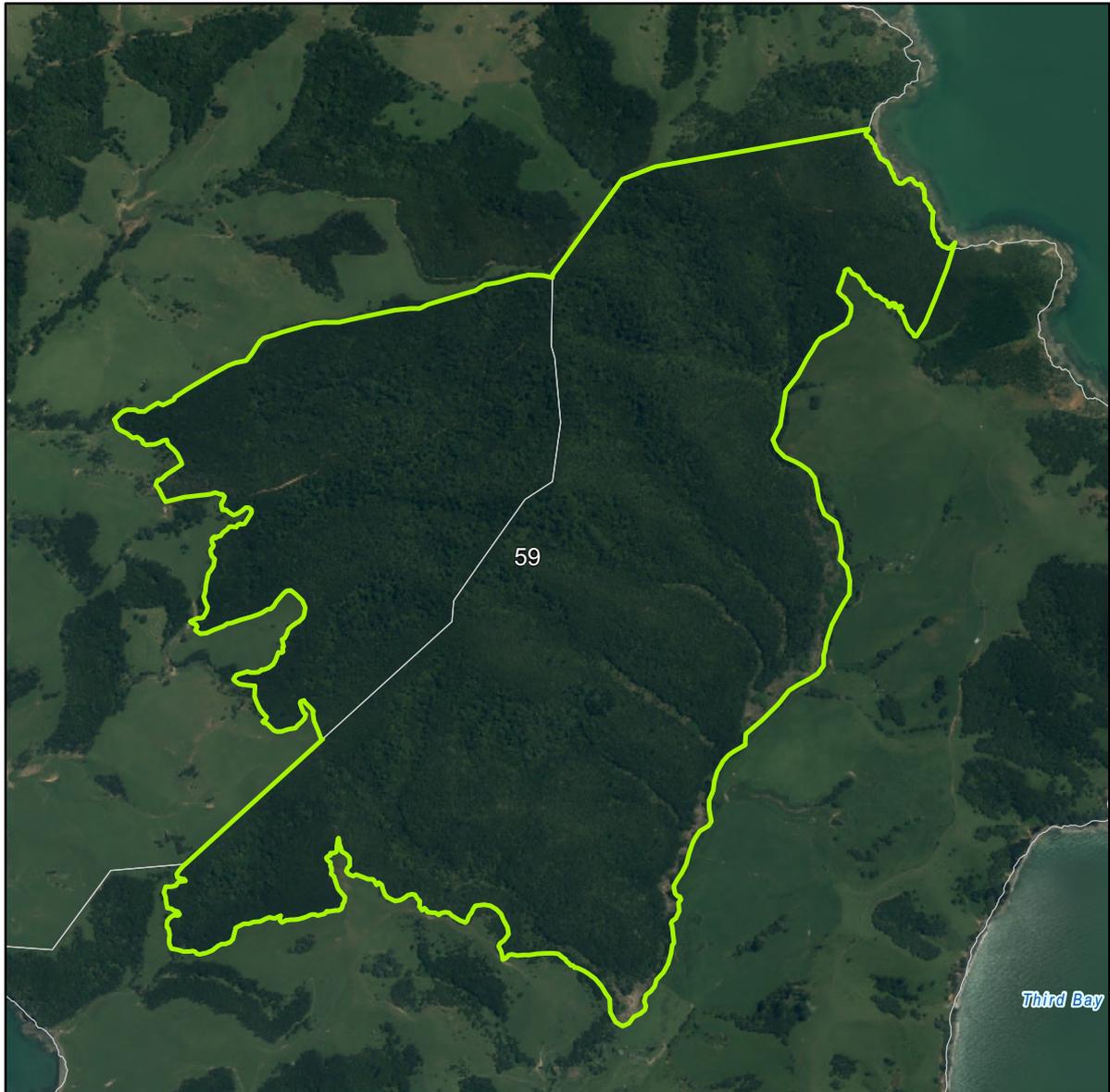


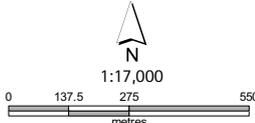
Ecology	Name of item: Ponui Island	Map reference: 27-1
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Island: Ponui Island (Chamberlins Island)	SES 59 (Site of Ecological Significance)	
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<p style="text-align: center;">Description of Item</p> <p>A large block of secondary and mature remnant forest extending to a freshwater wetland in the southern section. Coastal parts are dominated by pohutukawa (with karaka, kohekohe, and puriri), with broadleaf (taraire-tawa-puriri-kohekohe-pigeonwood-nikau) forest on sheltered coastal and inland valleys, and kauri podocarp broadleaf forest (kauri-rewarewa-mamangi) on the upper valleys and ridges. Secondary forest is dominated by mamangi and kanuka. The wetland includes reedland, rushland and sedgeland which provides habitat for spotless crakes. A range of common and threatened forest birds are present including kereru and North Island brown kiwi. Up to twenty threatened plants are present including Pomaderris rugosa, Libocedrus plumosa, Ptisana salicina (king fern), Olearia albida, and Planchonella costata (tawapou).</p>	
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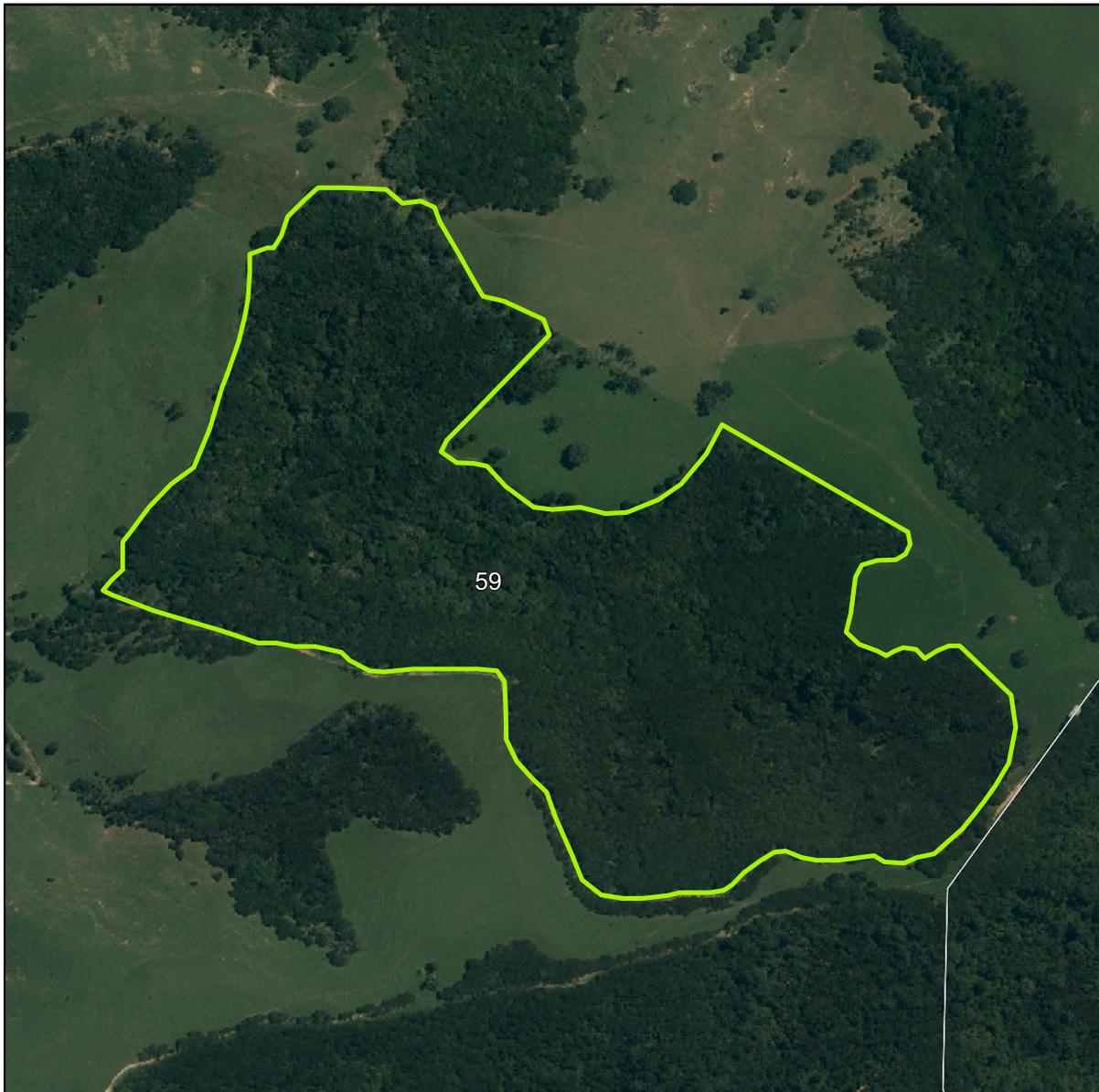
Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Ponui Island	Map reference: 27-2
Island: Ponui Island (Chamberlins Island) SES 59 (Site of Ecological Significance)		
Description of Item		
<p>A large block of secondary and mature remnant forest extending to a freshwater wetland in the southern section. Coastal parts are dominated by pohutukawa (with karaka, kohekohe, and puriri), with broadleaf (taraire-tawa-puriri-kohekohe-pigeonwood-nikau) forest on sheltered coastal and inland valleys, and kauri podocarp broadleaf forest (kauri-rewarewa-mamangi) on the upper valleys and ridges. Secondary forest is dominated by mamangi and kanuka. The wetland includes reedland, rushland and sedgeland which provides habitat for spotless crakes. A range of common and threatened forest birds are present including kereru and North Island brown kiwi. Up to twenty threatened plants are present including Pomaderris rugosa, Libocedrus plumosa, Ptisana salicina (king fern), Olearia albida, and Planchonella costata (tawapou).</p>		

Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Ponui Island	Map reference: 27-3
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Island: Ponui Island (Chamberlins Island)	SES 59 (Site of Ecological Significance)	
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<p style="text-align: center;">Description of Item</p> <p>A large block of secondary and mature remnant forest extending to a freshwater wetland in the southern section. Coastal parts are dominated by pohutukawa (with karaka, kohekohe, and puriri), with broadleaf (taraire-tawa-puriri-kohekohe-pigeonwood-nikau) forest on sheltered coastal and inland valleys, and kauri podocarp broadleaf forest (kauri-rewarewa-mamangi) on the upper valleys and ridges. Secondary forest is dominated by mamangi and kanuka. The wetland includes reedland, rushland and sedgeland which provides habitat for spotless crakes. A range of common and threatened forest birds are present including kereru and North Island brown kiwi. Up to twenty threatened plants are present including Pomaderris rugosa, Libocedrus plumosa, Ptisana salicina (king fern), Olearia albida, and Planchonella costata (tawapou).</p>	
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Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Ponui Island	Map reference: 27-4
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Island: Ponui Island (Chamberlins Island)	SES 59 (Site of Ecological Significance)	
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Description of Item

A large block of secondary and mature remnant forest extending to a freshwater wetland in the southern section. Coastal parts are dominated by pohutukawa (with karaka, kohekohe, and puriri), with broadleaf (taraire-tawa-puriri-kohekohe-pigeonwood-nikau) forest on sheltered coastal and inland valleys, and kauri podocarp broadleaf forest (kauri-rewarewa-mamangi) on the upper valleys and ridges. Secondary forest is dominated by mamangi and kanuka. The wetland includes reedland, rushland and sedgeland which provides habitat for spotless crakes. A range of common and threatened forest birds are present including kereru and North Island brown kiwi. Up to twenty threatened plants are present including Pomaderris rugosa, Libocedrus plumosa, Ptisana salicina (king fern), Olearia albida, and Planchonella costata (tawapou).



Refer to the disclaimer at the beginning of this appendix.

Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Ponui Island	Map reference: 27-5
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Island: Ponui Island (Chamberlins Island)	SES 59 (Site of Ecological Significance)	
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<p>Description of Item</p> <p>A large block of secondary and mature remnant forest extending to a freshwater wetland in the southern section. Coastal parts are dominated by pohutukawa (with karaka, kohekohe, and puriri), with broadleaf (taraire-tawa -puriri-kohekohe-pigeonwood-nikau) forest on sheltered coastal and inland valleys, and kauri podocarp broadleaf forest (kauri-rewarewa-mamangi) on the upper valleys and ridges. Secondary forest is dominated by mamangi and kanuka. The wetland includes reedland, rushland and sedgeland which provides habitat for spotless crakes. A range of common and threatened forest birds are present including kereru and North Island brown kiwi. Up to twenty threatened plants are present including Pomaderris rugosa, Libocedrus plumosa, Ptisana salicina (king fern), Olearia albida, and Planchonella costata (tawapou).</p>	
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Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Ponui Island	Map reference: 27-6
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Island: Ponui Island (Chamberlins Island)	SES 60 (Site of Ecological Significance)	
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Description of Item

Regenerating coastal bush dominated by a kanuka canopy with pohutukawa, puriri, kohekohe, karaka, kauri, and tawa. Threatened plants include tawapou. North Island Brown Kiwi are present.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Motukorea Shorebird Area	Map reference: 30-55
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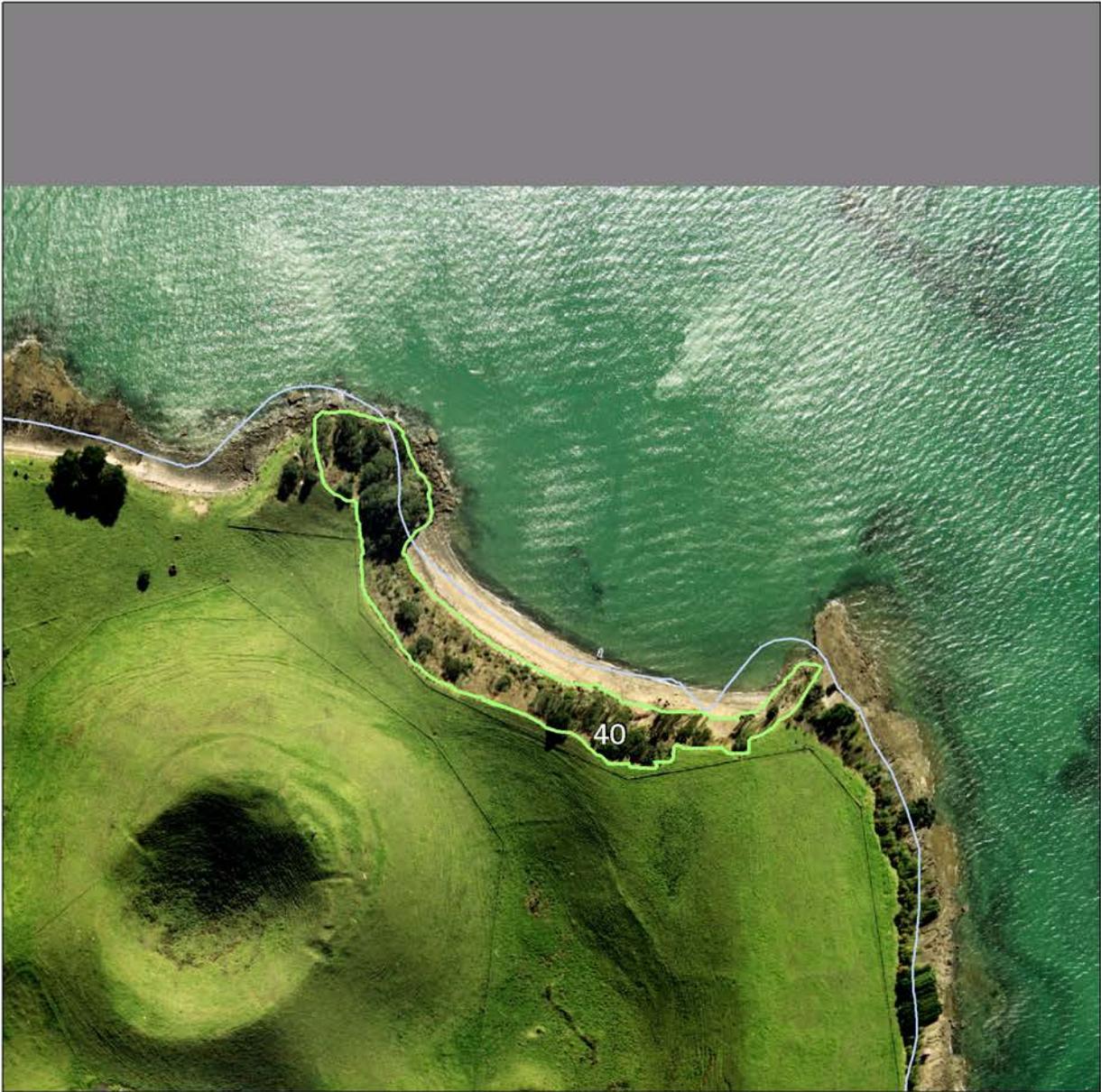
Island: Motukorea (Browns)	SES 39 (Site of Ecological Significance)	<p>1:7,000</p>
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Description of Item

This area is an internationally important site for the nationally vulnerable northern New Zealand dotterel and the endemic variable oystercatcher. More than 1% of the total northern New Zealand dotterel population breed in this area, and more than 2% gather here in post-breeding flocks. More than 1% of the total variable oystercatcher population breed and flock on the island. Caspian terns (which are a nationally vulnerable species) also breed here. Reef herons (a nationally vulnerable species) are frequently present.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Motukorea Coastal Vegetation	Map reference: 30-56
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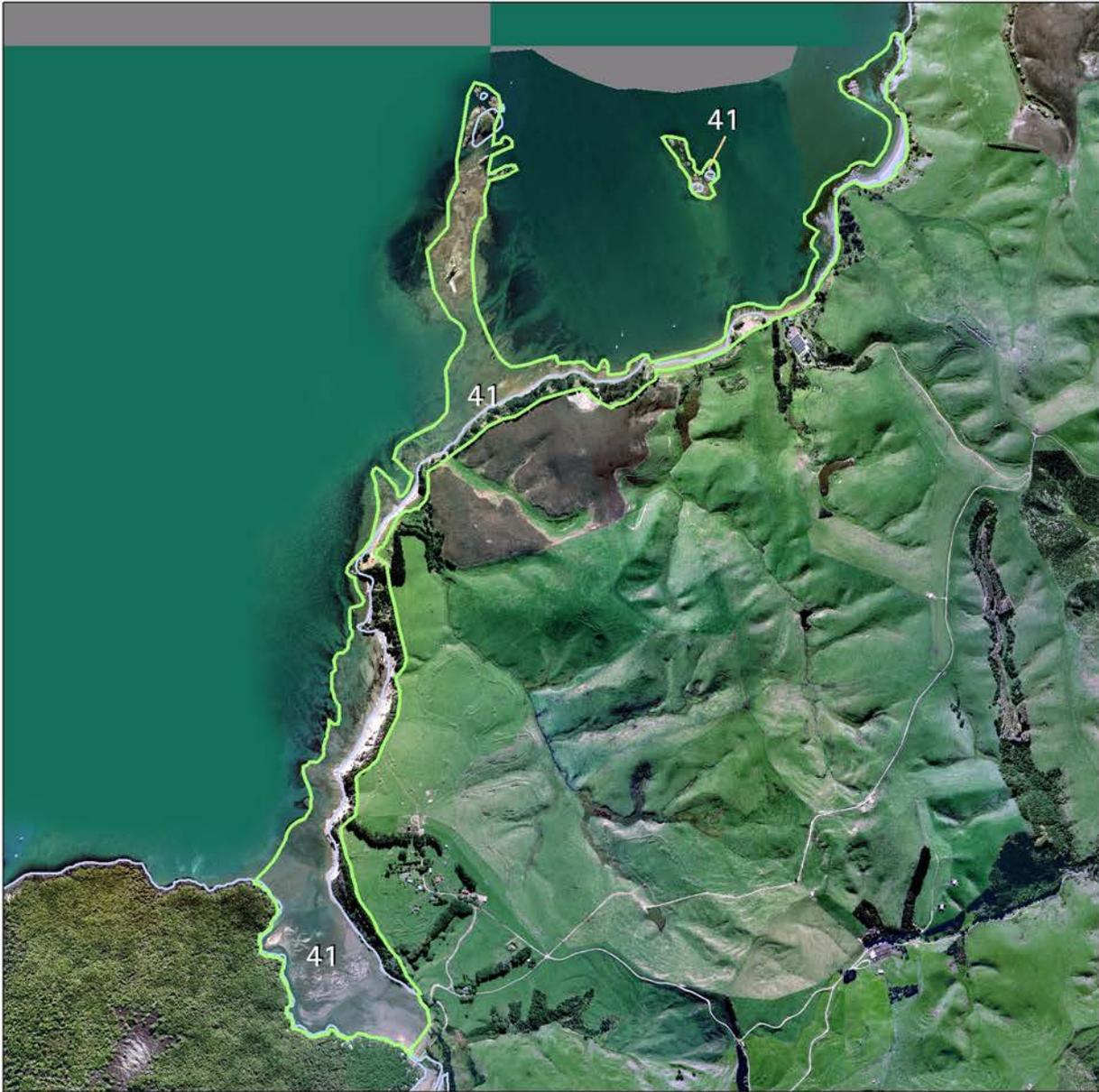
Island: Motukorea (Browns)	SES 40 (Site of Ecological Significance)	
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Description of Item

Pohutukawa forest is dotted along spectacular volcanic tuff cliffs and headlands. The threatened plant *Euphorbia glauca* grows at one site on the tuff cliffs. This species is in serious decline and this is the only natural population on the inner gulf islands. There is a small dune area with a range of species growing on it including spinifex, knobby clubbrush, ngaio and pohuehue. *Euphorbia glauca* has been planted on the dunes and along the cliff base.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Motutapu Coastal Bird Zone	Map reference: 30-57
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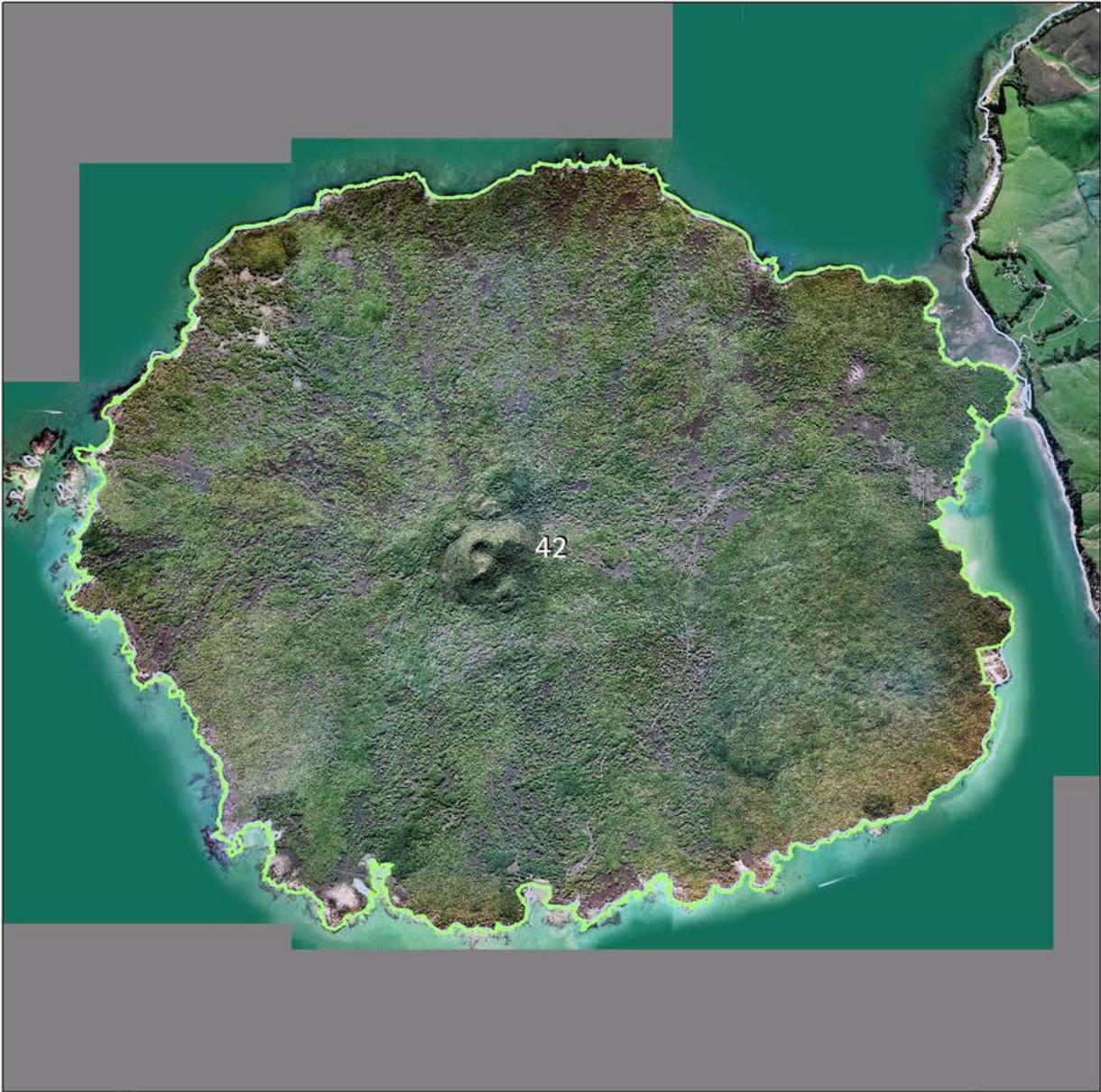
Island: Motutapu	SES 41 (Site of Ecological Significance)	
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Description of Item

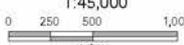
Four coastal bird species breed in this area: white-fronted terns (which are in gradual decline nationally), red-billed gulls (also in gradual decline nationally), New Zealand dotterels (nationally vulnerable to extinction) and the endemic variable oystercatcher. Reef herons, which are nationally vulnerable, are also present.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Rangitoto	Map reference: 30-58
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Island: Rangitoto	SES 42 (Site of Ecological Significance)	 1:45,000  metres
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Description of Item

An internationally significant recent basalt volcano with unique vegetation. This island supports a range of pohutukawa-dominated shrublands and forests. These grow in patterns that respond to the size of the basalt boulders and to the availability of water in different parts of the lava flows. A wide range of species more commonly found growing up in tree branches on the mainland are found growing on the ground at Rangitoto. These include puka (*Griselinia lucida*) and Kirk's daisy. Ferns and orchids are prolific since the eradication of possums and wallabies. NZ dotterels (nationally vulnerable) and blue penguins (gradual decline) breed along the coast. Moko skinks and egg-laying skinks (range restricted) are also present.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Motuihe Western Forest	Map reference: 31-3
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Island: Motuihe	SES 37 (Site of Ecological Significance)	
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Description of Item

Pohutukawa forest grows along the edge with some kanuka. Further from the coast are some mature stands of coastal broadleaved trees, including puriri and karaka. Tieke (North Island saddleback) were released in this forest in 2005 and have since bred. This is the only site in Auckland City's inner gulf islands with a breeding saddleback population.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: Ohinerau Bay	Map reference: 31-4
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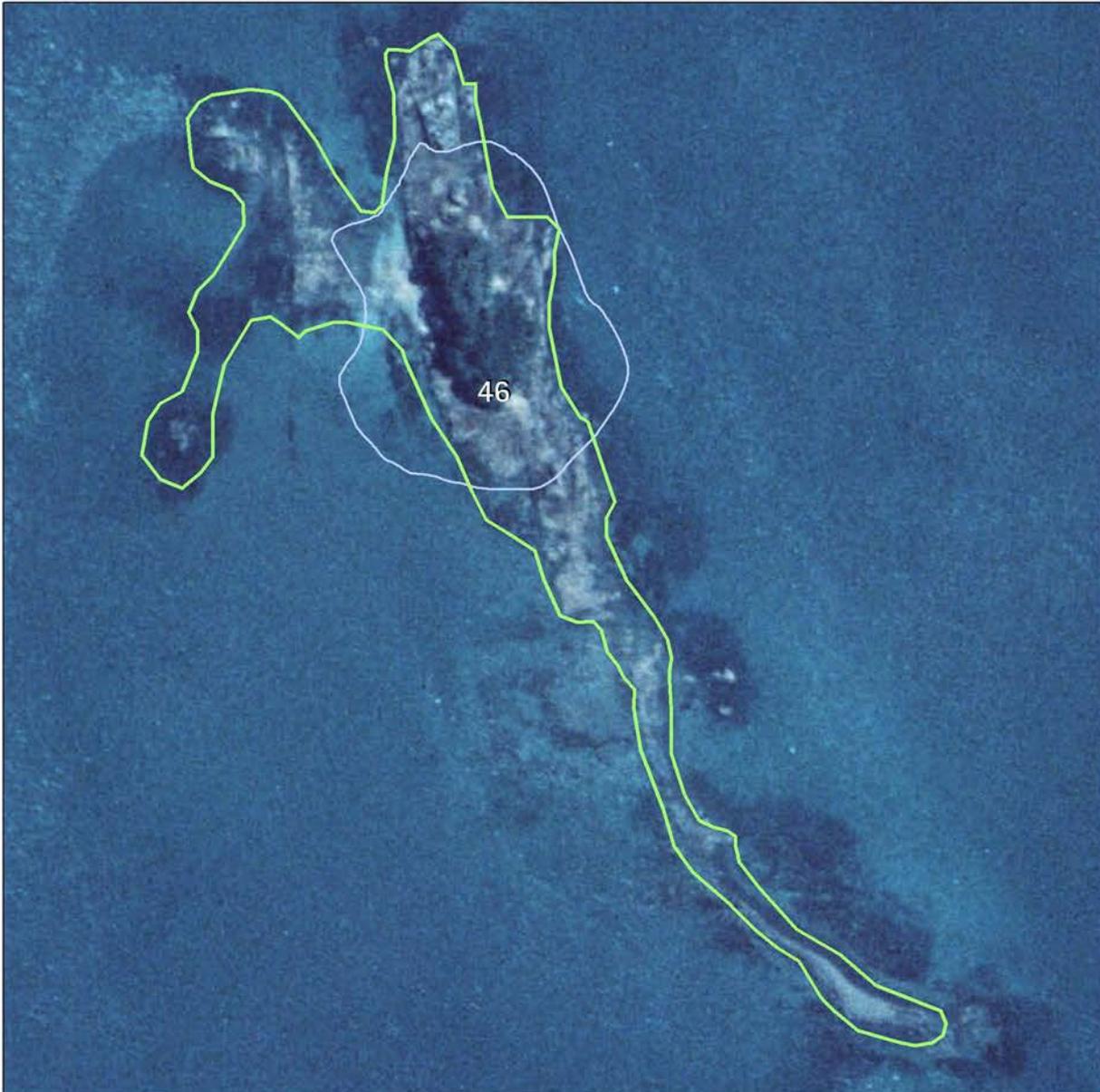
Island: Motuihe	SES 38 (Site of Ecological Significance)	
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Description of Item

Ohinerau Bay is a flock site of international importance for northern New Zealand dotterels (which are classed as nationally vulnerable), with more than 1% of the total population gathered here outside the breeding season. Five to six pairs of New Zealand dotterels also breed in the bay. Reef herons and Caspian terns (which are both nationally vulnerable species) and the endemic variable oystercatcher also use the bay. Some valleys of tall mainly taraire forest run down to the sandflats, meeting with pohutukawa forest closer to the coast.



Appendix 1d Schedule of sites of ecological significance - inner islands



Ecology	Name of item: Papakohatu (Crusoe) Island	Map reference: 31-5
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Island: Papakohatu (Crusoe)	SES 46 (Site of Ecological Significance)	
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Description of Item

This site is of international importance to a threatened species, the white-fronted tern, with more than 1% of the total population breeding here. Reef herons (a nationally vulnerable species) breed here, as do blue penguins (which are in gradual decline nationally). Endemic variable oystercatchers also nest here, as do pied and little shags.



Refer to the disclaimer at the beginning of this appendix.



Ecology	Name of item: The Noises	Map reference: 32-1
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Island: The Noises	SES 34 (Site of Ecological Significance)	
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Description of Item

The Noises are one of New Zealand's key seabird breeding sites. Three islands within the group are each of international importance to the threatened endemic white-fronted tern. Seven other seabird species also breed on the islands: white-faced storm petrels, diving petrels, blue penguins, grey-faced petrels, white-fronted terns, spotted and pied shags. A threatened land snail *Placostylus hongii* was introduced in the 1930s and is still present. The vegetation is coastal, with pohutukawa forests and mixed coastal shrubs with mapou, manuka, karo, flax and coastal koromiko. In the most sheltered areas, broadleaved species such as kohekohe and mahoe dominate. On the exposed cliffs there are coastal specialists houpara, taupata and coastal astelia. On the most exposed and smallest of the islands, the vegetation is very low coastal scrub.



Refer to the disclaimer at the beginning of this appendix.