

## 7.3 Moutere o Kawau / Kawau Island

### 7.3.1 Te murunga o te kararehe orotā / Eradication pest animals

Kei te motu o Kawau anake te huinga warapi i te rohe o Tāmaki Makaurau. He mea wetiweti tēnei ki tuawhenua nei, ina hoki te raru o ngā ngahere taketake me ngā pāmu i te warapi. Heoi anō rā, he raru anō hoki tō te muru anake i ngā warapi i Kawau, pērā i te āhei o te piki ake o ngā koiora orotā whakataetae mai pērā i te kiore, te paihamu, ngā tupu orotā rānei. Koia ngā hōtaka te whai ake nei, te aro ki te muru i ngā koiora orotā i Kawau pērā i te kiore, te wīhara, te paihamu me te warapi anō hoki hei tiaki i a Kawau me te rohe i ngā whakaweti a te warapi, hei karo hoki i ngā raru te tūpono ake i te patu noa iho i ngā warapi. Ka whakahaeretia e te Kaunihera o Tāmaki Makaurau tēnei hōtaka, ina kitea he pūtea tautoko mai i waho kē. Ko te muru koiora orotā i te moutere nohoa e te tangata he ahunga hōu e taea ai te taumata o Tāmaki Makaurau Orotā Kore/ Aotearoa Konihi Kore 2050.



7.3 Moutere o Kawau / Kawau island

Kawau island is home to kiwi, rare native plant species and large areas of regenerating native bush. Situated in close proximity to Tāwharanui and Shakespear Open Sanctuaries, as well as other pest-free islands, Kawau has the potential to become home to many more native birds if invasive mammals are removed from the island and habitat regenerates. Kawau Island holds the only population of wallabies in the Tāmaki

Makaurau / Auckland region. This poses a very real risk to the mainland, with wallabies having severe impacts on native forest as well as pastoral farming. However, eradication of wallabies, alone, from Kawau has the potential to have perverse outcomes, such as creating an advantage for competing pests like rats and possums or pest plants. The following programmes combine to cover a multi-species eradication of pest mammals from Kawau, including rats, stoats and possums as well as wallabies, to protect Kawau and the region from the threat of wallabies, while also avoiding unintended outcomes that might arise from managing wallabies in isolation. Auckland Council will manage this programme, contingent on external funding contributions. Eradication of pest mammals from an inhabited island also represents a step-change achievement towards achievement of Pest Free Auckland / Predator Free New Zealand 2050. In addition to mammal eradications, this plan provides for on-going eradication of Argentine ants from Kawau, under section 7.1.

**Objective:** over the duration of the plan Auckland Council will eradicate the pest animals specified below from Kawau Island to prevent adverse effects on economic well-being, the environment, human health, enjoyment of the natural environment and the relationship between Māori, their culture, their traditions and their ancestral lands, waters, sites, wāhi tapu, and taonga.

**Intermediate outcome:** “eradication” which means to reduce the infestation level of the subject to zero levels in an area in the short to medium term.

**Principal measures of achievement:**

Service delivery (control)	<p>Coordinate a multi-species eradication in collaboration with the Department of Conservation, Local Board, mana whenua and community.</p> <p>Enter any property within the specified geographic area of the programme and carry out control work on this species.</p> <p>Protect the island from reinvasion following eradication, through implementation of Hauraki Gulf Controlled Area programmes.</p>
Monitoring and surveillance	<p>Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new infestations and status of existing or historical sites.</p>
Enforcement	<p>Enforce restrictions on the sale, breeding, distribution and exhibition of the pest animal, including pathway measures to prevent reinvasion following eradication.</p>
Education and advice	<p>Provide information and advice on pest animal identification, impacts and control.</p> <p>Provide information and advice on how to avoid spreading the pest animal.</p>

### **Possum (*Trichosurus vulpecula*)**

Possums are small marsupials with thick bushy tails, weighing between 1.4-6.4kg and can be grey, brown or black in colour. Possums will predate on eggs and chicks of various threatened birds, including kōkako, and compete for nest sites with hole-nesting birds, such as kiwi and parakeets. Heavy plant browsing by possums can suppress or eliminate preferred plants by selective browsing. This can alter the vegetation composition in invaded ecosystems and ultimately lead to the collapse of palatable canopy species, such as Northern rātā. Possums are also considered serious agricultural pests. They are vectors for bovine TB in cattle and compete directly with stock for pasture.



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### **Rats: ship rats (*Rattus rattus*), Norway rats (*Rattus norvegicus*)**

Rats are small black, grey or brown mammals with naked tails. Rats occupy a wide range of terrestrial habitats throughout Aotearoa / New Zealand. Rats are generalist omnivores, their diet includes seed predation, and preying on small animals such as invertebrates, reptiles, amphibians and juvenile birds. They compete with native birds for nests and burrows, and have been implicated in the decline of a number of threatened birds, particularly seabirds. Excessive consumption of seeds by rats can greatly reduce native seedling recruitment and ultimately modify plant communities in invaded ecosystems. Rats are particularly damaging to cereal production, stored products and the food services industry, and are a potential disease vector to humans.



Ship rat, Manaaki Whenua Landcare Research

**Mustelids: ferrets (*Mustela furo*), stoats (*Mustela erminea*), and weasels (*Mustela nivalis*)**

Ferrets, stoats and weasels belong to a group of animals known as mustelids. Ferrets are the largest of the mustelids (600-1,300g) and can be distinguished by a dark 'mask' across their eyes. Stoats are smaller (200–350g) with orange-brown coats and a black tip at end of the tail. Weasels are the smallest (60–120g), with orange-brown coats and a uniformly brown tail.

Mustelids are bold generalist predators and can have devastating impacts on native birds, amphibians, reptiles, molluscs, and insects. Ferrets mostly threaten ground nesting birds while stoats and weasels have contributed to the decline and extinction of many forest birds, particularly cavity nesting species. Mustelids are also a vector of a wide range of agricultural diseases including canine distemper and bovine tuberculosis (TB).



Stoat, Department of Conservation

**Wallaby (*Macropus*, *Petrogale* and *Wallabia* spp.)**

Wallabies are medium-sized, semi-nocturnal marsupial mammals. They compete directly with livestock for pasture and have a substantial diet overlap with sheep resulting in large production losses in the sheep and beef industry. They also damage newly planted radiata pine plantations, browse native forest seedlings and destroy understorey, favouring kāmahi and māhoe.



## 7.4 Moutere o Waiheke / Waiheke Island

### 7.4.1 Te murunga o te kararehe orotā / Eradication pest animals

He kāinga a Waiheke nō te tini manu takutai moana, repo kei te rarua te kōkopu, me te rahi atu o ngā uara kanorau-koiora e whakawetihia ana e te orotā. Tēra a Waiheke te noho hei kāinga hōu mō ētahi momo hōu kei te rarua, pērā i te kiwi, ina taea ngā koiora orotā te muru. Āpiti atu ki tērā he poto noa te kauhoe atu i Waiheke ki ētahi atu motu orotā-kore, ina ka noho tonu ngā koiora orotā pērā i te kiore me te wīhara i runga o Waiheke, ka mau tonu te āhei kia pokea anō aua moutere. Ko ngā hōtaka e whai ake nei e aro ana ki te muru i te hia momo koiora orotā i Waiheke mai i te kiore, te wīhara me te poaka puihi. Ka whakahaeretia e te Kaunihera o Tāmaki Makaurau tēnei hōtaka, ina kitea he pūtea tautoko mai i waho kē. Ko te muru koiora orotā i te moutere nohoa e te tangata he ahunga hōu e taea ai te taumata o Tāmaki Makaurau Orotā Kore / Aotearoa Konihi Kore 2050.



Moutere o Waiheke / Waiheke Island

Waiheke is home to many native shorebirds, wetlands with threatened kōkopu, and other high biodiversity values that are threatened by pests. Waiheke has the potential to be home to new threatened species introductions, such as kiwi, if mammalian pests are removed. The community-led initiative Te Korowai o Waiheke has a goal of eradicating rats and stoats from the island as part of a broader vision to protect and restore the island's native biodiversity. In addition, Waiheke is within swimming distance of other pest-free islands, and while pests such as rats and stoats remain on Waiheke this poses a source of on-going reinvasion of surrounding islands. The following programmes combine to cover a multi-species eradication of pest mammals

from Waiheke, including rats, stoats and feral pigs. Auckland Council will contribute to these programmes, contingent on continued external funding contributions. Eradication of pest mammals from an inhabited island also represents a step-change achievement towards achievement of Pest Free Auckland / Predator Free New Zealand 2050.

**Objective:** over the duration of the plan Auckland Council and Te Korowai o Waiheke partners will eradicate the pest animals specified below from Waiheke Island to prevent adverse effects on economic well-being, the environment, human health, enjoyment of the natural environment and the relationship between Māori, their culture, their traditions and their ancestral lands, waters, sites, wāhi tapu, and taonga.

**Intermediate outcome:** “eradication” which means to reduce the infestation level of the subject to zero levels in an area in the short to medium term.

**Principal measures of achievement:**

Service delivery (control)	<p>Contribute to a multi-species eradication in collaboration with the Department of Conservation, Local Board, mana whenua and community.</p> <p>Enter any property within the specified geographic area of the programme and carry out control work on these species.</p> <p>Protect the island from reinvasion following eradication, through implementation of Hauraki Gulf Controlled Area programmes.</p>
Monitoring and surveillance	<p>Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new infestations and status of existing or historical sites.</p>
Enforcement	<p>Enforce restrictions on the sale, breeding, distribution and exhibition of the pest animal, including pathway measures to prevent reinvasion following eradication.</p>
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### Feral pigs<sup>1</sup> (*Sus scrofa*)

Feral pigs are large (sometimes over 300kg), black to brown, stoutly built mammals with large heads and well-developed canine teeth. They actively scavenge during the day and will overturn large areas of soil to consume soil invertebrates, especially earthworms. In invaded ecosystems, they prey on and compete with native species, alter nutrient cycles, damage vegetation and soil, and facilitate the spread of weeds and plant diseases, including kauri dieback disease. They are of high risk to the primary production industry as vectors of bovine tuberculosis. International trading options may be reduced if the Aotearoa / New Zealand feral pig population became a reservoir for swine fever or foot and mouth disease. Feral pig attacks on humans are rare but could be potentially fatal.



Manaaki Whenua Landcare Research

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Ship rat, Manaaki Whenua Landcare Research

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<sup>1</sup> A feral pig includes any pig that is not:

- a) held behind effective fences or otherwise constrained; and
- b) identified by ear tag

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Stoat, Department of Conservation