## 7.7.1 Te noho wātea o te kararehe orotā / Exclusion pest animals

The following pest animal species are not known to be established either in the Tāmaki Makaurau / Auckland region (rooks) or part of the region (wallabies; absent from the region with the exception of Kawau). If either of these pests were to become widely established, their impacts could be severe. Therefore early intervention to prevent establishment would be a cost effective approach in the event of an incursion.

### 7.7.1.1 **Rook (Corvus frugilegus)**

Rooks are large black birds with a violet-blue glossy sheen, between 20 and 30cm long. Rooks feed on invertebrates and plant material. They cause extensive damage to maize, peas, squash, green feed and cereal crops and uproot pasture searching for grass grubs in pasture. They are also urban nuisance pests and can aggressively attack people.

**Objective:** over the duration of the plan Auckland Council will exclude rooks (*Corvus frugilegus*) from establishing in the region to prevent adverse effects on economic well-being, the environment, 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:** "exclusion" which means to prevent the establishment of rooks in the Tāmaki Makaurau / Auckland region.

**Rules:**

7.7.1.1.1 No person shall cause to breed any rook within the Auckland region.

7.7.1.1.2 No person shall distribute or release (or cause to be released or distributed), any rook within the Auckland region.

7.7.1.1.3 No person shall sell or offer for sale any rook within the Auckland region.

The purpose of these rules is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

### Principal measures of achievement:

| | |
|---|---|
| Service delivery (control) | Enter any property within the specified geographic area of the programme and carry out control work on this species. |
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new infestations and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest animal. |
| Education and advice | Provide information and advice on pest animal identification, impacts and control. |

### 7.7.1.2 **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.

**Objective:** over the duration of the plan Auckland Council will eradicate wallabies (*Macropus, Petrogale* and *Wallabia* spp.) from within the Tāmaki Makaurau / Auckland region 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:** "exclusion" which means to prevent the establishment of wallabies in the Tāmaki Makaurau / Auckland region, other than the existing population on Kawau Island.

**Rules:**

7.7.1.2.1 No person shall cause to breed any wallaby within the Auckland region.

7.7.1.2.2 No person shall distribute or release (or cause to be released or distributed), any wallaby within the Auckland region.

7.7.1.2.3 No person shall sell or offer for sale any wallaby within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of these rules is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

### Principal measures of achievement:

| | |
|---|---|
| Service delivery (control) | Incursion responses to all sightings of wallabies within the region outside of Kawau Island. Enter any property within the specified geographic area of the programme and carry out control work on this species. |
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new infestations and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest animal. |
| Education and advice | Provide information and advice on pest animal identification, impacts and control. |

See also section 7.3 for Kawau eradication.

## 7.7.2 Aukati haere noa i te kararehe / Progressive Containment animals

These progressive containment pest animals are present in Tāmaki Makaurau / Auckland at sufficient numbers or distributions that eradication may not be possible in the short term. Nonetheless, all are species that could be suppressed to much lower levels than they are currently at, thereby substantially and cost effectively reducing future impacts. While taking a regional approach in the long-term, containment strategies for these species will also focus on prioritising significant sites first, notably Te Wao Nui a Tiriwa / the Waitākere Ranges and Kohukohunui / Hunua Ranges.

### 7.7.2.1 **Feral deer (*Cervus, Axis, Dama, Odocoileus, Elaphurus* spp.)**

Feral deer are medium to large-sized ungulates. Red deer have reddish-brown coats and can reach 180kg. Fallow deer are much smaller and have a chestnut coloured coat. Heavy and selective deer browsing on native plants, particularly schefflera/patete, three-finger, horoeka/lancewood, and mouku/hen and chicken fern, can radically change forest structure and impact below-ground processes by altering the nature of litter inputs into the soil. Feral deer are also spill-over hosts and potential reservoirs of bovine TB.

**Objective:** over the duration of the plan Auckland Council will progressively contain feral deer[1] (*Cervus, Axis, Dama, Odocoileus, Elaphurus* spp. including any hybrid) 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:** "progressive containment" which means to contain or reduce the geographic distribution of feral deer in the Tāmaki Makaurau / Auckland region, over time.

**Rules:**

7.7.2.1.1 No person shall release from containment any deer in any part of the Auckland region.

[1] *A feral deer includes any deer that is not:*
*a) being kept or farmed in accordance with the Wild Animal Control Act 1977; and*
*b) identified in accordance with the National Animal Identification and Tracing Act 2012.*

7.7.2.1.2 No person shall move or distribute any deer into the Hauraki Gulf Controlled Area, Hunua and Waitākere Ranges (as defined in Map 9), or onto or between any of the areas.

The purpose of rules 7.7.2.1.1 and 7.7.2.1.2 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

**Principal measures of achievement:**

| | |
|---|---|
| Service delivery (control) | Provide support to the Department of Conservation as the lead agency in managing deer in the region.<br>Enter any property within the specified geographic area of the programme and carry out control work on this species, prioritising control operations by their relative contribution to 1) preventing establishment of new deer species in the region (e.g. Sika), 2) excluding deer from Kohukohunui / Hunua and Te Wao Nui a Tiriwa / Waitākere, 3) protecting other biodiversity focus areas and 4) protecting the deer-free status of Northland. |
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new incursions and status of existing or historical sites. |
| Education and advice | Provide information and advice on responsible domestic ownership and containment as well as identification and impacts of the pest animal.<br>Encourage reporting of sightings of feral deer.<br>Provide advice and support to community groups undertaking pest animal control. |
| Enforcement | Enforce prohibition on release.<br>Enforce prohibition on possession and movement of deer within Kohukohunui / Hunua Ranges and Te Wao Nui a Tiriwa / Waitākere Ranges. |

See also section 7.1 for Hauraki Gulf Controlled Area Exclusion programme.

### 7.7.2.2 **Feral goat (*Capra hircus*)**

Feral goats are even-toed hoofed, monochromatic or mixture of black, white and brown ungulates. Males weigh c.45-55kg, females c.25-35kg. Browsing causes reductions in vegetation cover and density, loss of plant species richness, prevents regeneration and alters plant community composition in favour of unpalatable species. Feral populations can act as disease reservoirs for farmed goats and cause damage to farm fences resulting in livestock escapes.

**Objective:** over the duration of the plan Auckland Council will progressively contain feral goats[2] (*Capra hircus*) 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:** "progressive containment" which means to contain or reduce the geographic distribution of feral goats in the Tāmaki Makaurau / Auckland region, over time.

**Rules:**

7.7.2.2.1 No person shall release from containment any goat in any part of the Auckland region.

7.7.2.2.2 No person shall move or distribute any goat into the Hauraki Gulf Controlled Area or the Hunua and Waitākere Ranges (as defined in Map 9), or onto or between any of the areas, unless the goat is a British alpine, toggenburg, nubian, saanen, or sable dairy goat.

7.7.2.2.3 No person shall farm or keep any goat on any island within the Hauraki Gulf Controlled Area or in the Hunua and Waitākere Ranges (as defined in Map 9), except in relation to the British alpine, toggenburg, nubian, saanen, or sable dairy goat.

7.7.2.2.4 Any person farming or keeping a goat in accordance with rule 7.7.2.2.3 must:

a) meet the minimum goat fencing requirement; or

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[2] *A feral goat includes any goat that is not:*

*a) held behind effective fences or otherwise constrained; and*

*b) identified in accordance with an animal identification device approved under the National Animal Identification and Tracing Act 2012.*

b) tether any goat not contained within fencing that meets the minimum fencing requirement.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rules 7.7.2.2.1 and 7.7.2.2.2 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

The purpose of rules 7.7.2.2.3 and 7.7.2.2.4 is to regulate activities that may affect measures taken to implement the plan.

**Minimum goat fencing requirement means:**

1. In relation to an existing fence with conventional post, wire and batten, a fence that is:
    a. a minimum overall fence height of 1175 mm; and
    b. a maximum of 5 m spacing between posts; and
    c. a minimum of 7 wires with maximum spacing of 200 mm between top wires; and
    d. spaces between wires gradually decreasing to 100 mm between bottom two wires; and,
    e. the bottom wire is a maximum of 100 mm above the ground; and
    f. a minimum of 1m spacing between battens; and
    g. all wires must be strained to a minimum 150 kgs of tension; and
    h. all materials are structurally sound; and
    i. swing or driven footing in all dips or hollows; and
    j. which has been topped up with a top up netting fence that is:
        i. minimum overall fence height 1550 mm; and
        ii. any new wires are minimum gauge of 2.5 mm high tensile galvanised; and
        iii. any existing, end and angle strainers must have at minimum a 2.1 m long round with minimum diameter 150 mm dug in and wired on to attach netting to; and
        iv. a batten of dimensions 1500 x 50 x 50 mm must be installed beside any existing posts to attach netting to; and
        v. minimum top up netting specifications of height 600 mm, stay wire width 300 mm and 5 line wires; and
        vi. an overlap may be created onto existing fence if required.
2. In relation to a new conventional post wire and batten fence, a fence that has:
    a. minimum overall fence height 1550 mm; and
    b. any wires are minimum gauge of 2.5 mm high tensile galvanised; and

c. the bottom wire is a maximum of 70 mm above the ground along a bulldozed line or equivalent[3]; and

d. any end strainers are 3 m long rounds with minimum 200 mm diameter; and

e. any angle strainers are 2.7 m long rounds with minimum 200 mm diameter; and

f. no internal stays; and

g. any posts are 2.4 m long rounds with minimum diameter 120 mm; and

h. a maximum spacing between posts of

    i. 5 metres on land with less than 30 degree ground slope; or

    ii. 4 metres on land with ground slope between 30 degrees to less than 45 degrees; or

    iii. 3 metres on land with ground slope of 45 degrees or more; and

        i. swing or driven footing in all dips or hollows; and

j. is constructed alongside any water body with an appropriate setback sufficient to avoid any slumping which may cause a breach of the fencing standard; and

k. two electrified outriggers at 300mm and 1200mm spacing; and

l. a minimum of 1m spacing between battens; and

m. minimum batten dimensions are 1500 x 50 x 40 mm; and

n. 11 wires with a maximum spacing from bottom to top of 114mm, 114mm, 127mm, 139mm, 165mm, 178mm, 178mm, 178mm, 178mm, 178mm; and

o. all wires must be strained to a minimum 150 kilograms of tension.

3. In relation to a new netting fence, a fence that has:

a. minimum overall fence height 1550 mm; and

b. been constructed of tight lock deer netting; and

c. no internal stays; and

d. any stay wires are 300mm wide; and

e. a minimum of 11 line wires; and

f. the bottom of the netting is a maximum of 70 mm above the ground; and

g. any end strainers are 3 m long rounds with minimum 200 mm diameter; and

h. any angle strainers are 2.7 m long rounds with minimum 200 mm diameter; and

i. swing or driven footing in all dips or hollows; and

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*[3] Note that bulldozing may carry additional risk of spreading kauri dieback disease. Equipment should be clean and environmental disturbance in fence construction should be minimized.*

j. any posts are 2.4 m long rounds with minimum diameter 120 mm; and

k. a maximum spacing between posts of

   i. 5 metres on land with less than 30 degree ground slope; or

   ii. 4 metres on land with ground slope between 30 degrees to less than 45 degrees; or

   iii. 3 metres on land with ground slope of 45 degrees or more.

4. In relation to any gate, whether new or top-up, a gate that is:

   a. the same height as the adjoining fence; and

   b. the bottom of the gate is a maximum of 100 mm above the ground at all points including over any ditches or hollows; and

   c. all components are structurally sound.

5. In relation to any fence across any water body, that fence must have a flood gate that:

   a. is constructed of H3 treated 100mm x 50mm timber; and

   b. is suspended from an overhead wire or rail in such a way that the spacings will allow the passage of water but will not allow stock including goats to pass through; and

   c. swings freely; and

   d. is panelled in partitions; and

   e. has a cross-bar positioned in the top third of the floodgate; and

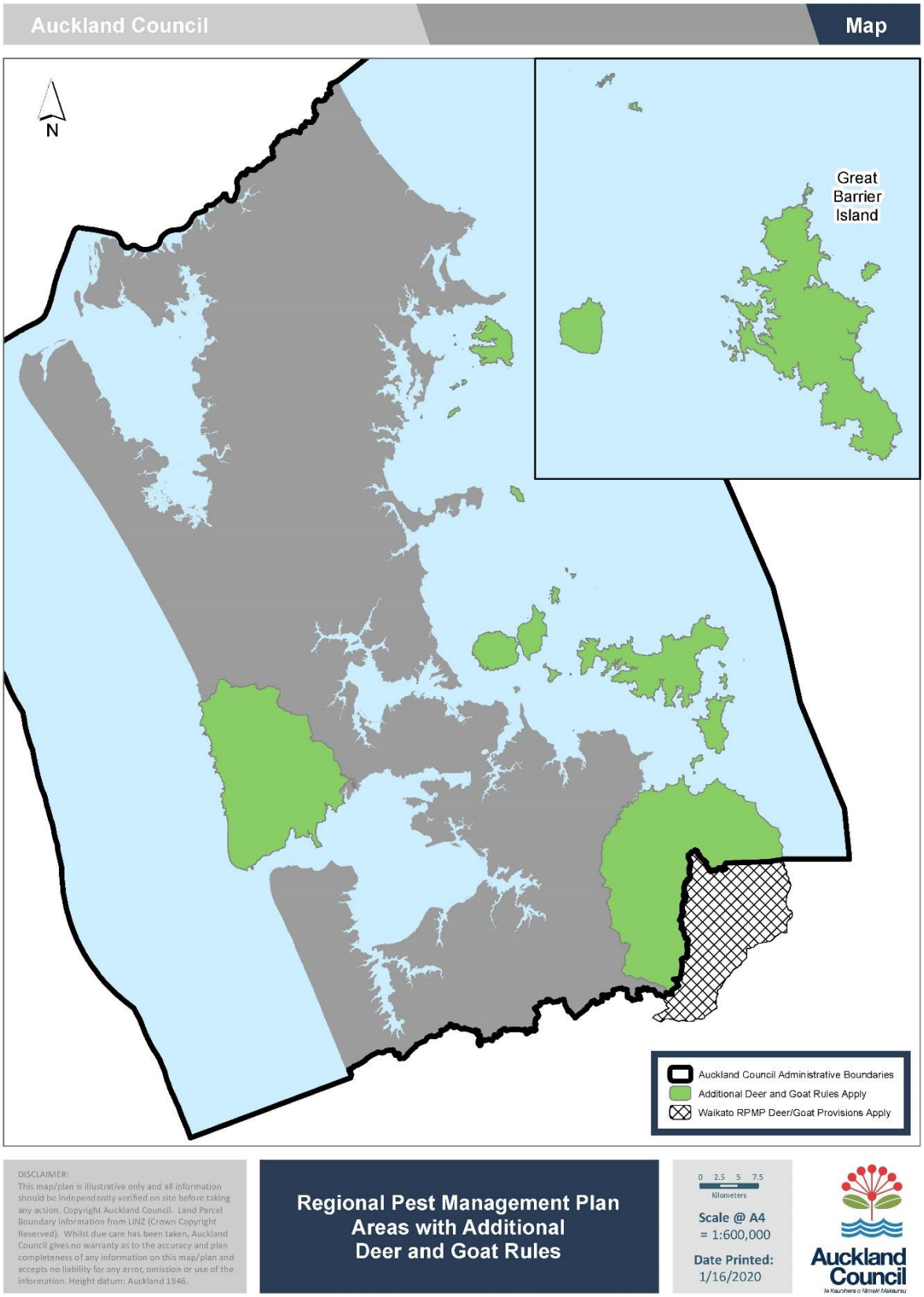
   f. is on the downstream side of any culvert.

Wire netting may not be used in floodgate construction. Flood gates may not be a single solid panel.

Electric type fences do not comply, as shortages and vegetation growth may lead to non-compliance.

### Principal measures of achievement:

| | |
|---|---|
| Service delivery (control) | Enter any property within the specified geographic area of the programme and carry out control work on this species. Over the lifetime of the plan, progressively contain feral goat populations across the entire region, prioritising control operations by their relative contribution to excluding feral goats from Kohukohunui / Hunua and Te Wao Nui a Tiriwa / Waitākere, and secondarily by protecting other biodiversity focus areas. |
| Education and advice | Provide information and advice on pest animal identification, impacts and control.<br>Provide information and advice on conditions relating to keeping of goats.<br>Provide advice and support to community groups undertaking pest animal control, with priority given to activity in or around biodiversity focus areas, or in defendable or strategic geographic locations such as peninsulas, islands and corridors. |
| Enforcement | Enforce conditions on goat farms within the Hauraki Gulf Controlled Area and the Hunua or Waitākere Ranges buffer zones.<br>Enforce conditions on movement of goats to or within the Hauraki Gulf Controlled Area.<br>Enforce Sections 52 and 53 of the Biosecurity Act, preventing the breeding, exhibition, sale and distribution of the pest. |




**Map 9. Areas where additional rules apply as part of the feral deer (7.7.2.1) and feral goat (7.7.2.2) progressive containment programmes[4].**

[4] *Note: these areas can also be viewed at higher resolution online at https://geomapspublic.aucklandcouncil.govt.nz/viewer/index.html*

### 7.7.2.3 **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 prey 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.

Nga Manu Images

**Objective:** over the duration of the plan Auckland Council will progressively contain possums (*Trichosurus vulpecula*) in Tāmaki Makaurau / Auckland to reduce 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:** "progressive containment" which means to contain or reduce the geographic distribution of possums, in the Tāmaki Makaurau / Auckland region, over time.

**Rules:**

7.7.2.3.1 No person shall cause to breed any possum within the Auckland region.

7.7.2.3.2 No person shall distribute or release (or cause to be released or distributed), any possum within the Auckland region.

7.7.2.3.3 No person shall sell or offer for sale any possum within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.2.3.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.2.3.2 and 7.7.2.3.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

### Principal measures of achievement:

| | |
|---|---|
| Service delivery (control) | Enter any property within the specified geographic area of the programme and carry out control work on this species. Control to be prioritised to rural areas of high biodiversity value, including the Waitākere Ranges, or strategic geography (e.g. peninsulas). Set up and maintain possum control in staged blocks, aiming for at or below 2-5% Residual Trap Catch, depending on the values being protected at the site, and specifically aiming for below 2% in the Waitākere Ranges. Control may also be delivered at smaller scale in high biodiversity value urban parkland. |
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new infestations and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, propagation, distribution and exhibition of the pest animal. |
| Education and advice | Provide information and advice on pest animal identification, impacts and control.<br>Provide advice and support to community groups undertaking pest animal control, with priority given to activity in or around Te Wao Nui a Tiriwa / the Waitākere Ranges and Kohukohunui / Hunua Ranges and other biodiversity focus areas, or in defendable or strategic geographic locations such as peninsulas, islands and corridors. |

See also section 7.1 for Hauraki Gulf Controlled Area site-led programme, and section 7.3 for Kawau eradication.

### 7.7.2.4 **Sulphur-crested cockatoo (*Cacatua galerita*)**

Sulphur-crested cockatoos are large stocky white parrots with a forward-curving yellow crest. In the Tāmaki Makaurau / Auckland region farmers have reported damage to pecan nuts, walnuts, feijoas, and plum crops but the cockatoos have also been recorded damaging various cereal crops nationally. Birds will often attack kauri, rimu and other species, stripping bark, eating the growing tips, seed, flowers and fruit, and digging into the trees with their beaks. There is also a potential risk the cockatoos will spread Psittacine Beak and Feather Disease to native parrots.

**Objective:** over the duration of the plan Auckland Council will progressively contain sulphur-crested cockatoos (*Cacatua galerita*) to prevent adverse effects on economic well-being, the environment, 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:** "progressive containment" which means to contain or reduce the geographic distribution of sulphur-crested cockatoos in the Tāmaki Makaurau / Auckland region, over time.

**Rules:**

7.7.2.4.1 No person shall cause to breed any sulphur-crested cockatoo within the Auckland region.

7.7.2.4.2 No person shall distribute or release (or cause to be released or distributed), any sulphur-crested cockatoo within the Auckland region.

7.7.2.4.3 No person shall sell or offer for sale any sulphur-crested cockatoo within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.2.4.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.2.4.2 and 7.7.2.4.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

Rules 7.7.2.4.1, 7.7.2.4.2 and 7.7.2.4.3 come into force on 1 April 2021.

### Principal measures of achievement:

| | |
|---|---|
| Service delivery | Progressively control naturalised populations of sulphur-crested cockatoos within the region, with priority given to protection of Te Wao Nui a Tiriwa / Waitākere Ranges and other biodiversity focus areas. |
| Education and advice | Provide information and advice on responsible pet ownership as well as identification, impacts and control of the pest animal. |
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3 Te mau tonu o te patu kararehe orotā / Sustained Control pest animals

The species in the following Sustained Control programmes vary greatly in their distribution across the region; some are currently present only in containment (e.g. as pets), while others are already well established in the wild and spreading. Nonetheless, all these species have the potential for economic and/or environmental impacts, and for all of these species there is value in reducing the risk of humans assisting the establishment or further spread of pest populations. The following programmes therefore manage these pest animals through rules and accompanying education and awareness programmes designed to reduce risk of pests being spread through activities such as recreational fishing, pet ownership, movement of risk goods, and recreational use of natural areas. In some instances, Council may also undertake direct control of pest animals as well, generally aligned with biodiversity focus areas.

#### 7.7.3.1 **Argentine ant (*Linepithema humile*)**

Argentine ant workers are uniformly light brown insects, wingless and are roughly 2–3mm long. Queens are larger (10-12mm) and dark brown. They have a broad diet and impact on many invertebrate species through predation, competition and interference, and will also predate on hatchlings in nests. They feed extensively on honeydew produced by aphids and scale insects, and therefore protect these insects from predators. This can majorly impact on the horticulture industry and will often kill fruit trees due to an increase in scale insects. Production losses in the poultry industry can be caused by Argentine ants killing hatchlings, and to the apiculture industry due to hive robbing. Argentine ants will often bite humans and can become major nuisances in homes and gardens.

Richard Toft, Entecol

**Objective:** over the duration of the plan Auckland Council will sustainably control Argentine ants (*Linepithema humile*) 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:** “sustained control” which means to provide for ongoing control of Argentine ants, to reduce their impacts and spread to other properties.

### Rules:

7.7.3.1.1 No person shall cause to breed any Argentine ant within the Auckland region.

7.7.3.1.2 No person shall distribute or release (or cause to be released or distributed), any Argentine ant within the Auckland region.

7.7.3.1.3 No person shall sell or offer for sale any Argentine ant within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.1.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.1.2 and 7.7.3.1.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

### Principal measures of achievement:

| | |
|---|---|
| Education and advice | Provide information and advice on identification, impacts and control of the pest animal, and how to reduce risk of accidental spread of the pest animal to new locations. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |

See also section 7.1 for Hauraki Gulf Controlled Area site-led programme, including eradication on Aotea and Kawau.

### 7.7.3.2 **Bearded dragon (*Amphibolurus barbatus* syn. *Pogona barbata*)**

Also known as: coastal or eastern bearded dragon

Bearded dragons are grey-brown reptiles, between 55-58cm long and throats covered with distinctive spiny scales which can be raised to form a black "beard". As opportunistic omnivores, bearded dragons are likely to predate on native invertebrates and compete for food and resources with native lizards and birds. There is added potential for disease transmission to native reptiles (e.g. adenovirus infections, skin conditions). Bites to humans may cause prolonged swelling and bleeding with the risk of disease transmission to humans.

**Objective:** over the duration of the plan Auckland Council will sustainably control bearded dragons (*Pogona barbata*) 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:** “sustained control” which means to provide for ongoing control of bearded dragons, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.2.1 No person shall cause to breed any bearded dragon within the Auckland region.

7.7.3.2.2 No person shall distribute or release (or cause to be released or distributed), any bearded dragon within the Auckland region.

7.7.3.2.3 No person shall sell or offer for sale any bearded dragon within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.2.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.2.2 and 7.7.3.2.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

Rules 7.7.3.2.1, 7.7.3.2.2 and 7.7.3.2.3 come into force on 1 April 2021.

### Principal measures of achievement:

| | |
|---|---|
| Service delivery | Council may undertake incursion responses to prevent population establishment outside of captivity. |
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade. Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new infestations outside of containment and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |
| Education and advice | Provide information and advice on responsible pet ownership as well as identification and impacts of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3.3 Blue tongued skink: common (*Tiliqua scincoides*) and blotched (*T. nigrolutea*)

Blue tongued skinks are lizards up to 40-70cm long with distinctive blue tongues. They can either have dark bands around the body (common) or are mostly black with varying amounts of light brown, grey, yellow or orange blotches (blotched). They are likely to prey on native invertebrates, smaller lizards, birds and their eggs, and may compete with native species for food and other resources. There is further potential for disease and parasite transmission to other reptiles.

JJ Harrison

**Objective:** over the duration of the plan Auckland Council will sustainably control blotched blue tongued skinks (*Tiliqua nigrolutea*) to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing control of blotched blue tongued skinks, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.3.1 No person shall cause to breed any blue tongued skink within the Auckland region.

7.7.3.3.2 No person shall distribute or release (or cause to be released or distributed), any blue tongued skink within the Auckland region.

7.7.3.3.3 No person shall sell or offer for sale any blue tongued skink within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.3.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.3.2 and 7.7.3.3.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

### Principal measures of achievement:

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade. Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new infestations outside of containment and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |
| Education and advice | Provide information and advice on responsible pet ownership as well as identification and impacts of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3.4 **Brown bullhead catfish (*Ameiurus nebulosus*)**

Brown bullhead catfish are scaleless dark brown to olive green fish which are most easily distinguished by eight whiskery barbels around the mouth. Adults can grow up to 250-500mm long. They are opportunistic generalist feeders, which have been documented eating common bullies as well as a wide range of invertebrates including kōura. Their presence in wai māori / freshwater bodies can contribute to poor water clarity by extensive consumption of zooplankton, thereby exacerbating algal blooms. Bottom-feeding can also cause the re-suspension of sediment and up-rooting of submerged aquatic plants. These impacts can contribute to lakes 'flipping' to an alternative stable state devoid of vegetation, with turbid water dominated by phytoplankton.

Stephen Moore

**Objective:** over the duration of the plan Auckland Council will sustainably control brown bullhead catfish (*Ameiurus nebulosus*) 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:** "sustained control" which means to provide for ongoing control of brown bullhead catfish, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.4.1 No person shall distribute or release (or cause to be released or distributed) any brown bullhead catfish in any part of the Auckland region.

7.7.3.4.2 No person may fish for brown bullhead catfish in High Conservation Value water bodies or their catchments (see Appendix 3), or anywhere in the Hauraki Gulf Controlled Area.

A breach of this rule is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.4.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

The purpose of rule 7.7.3.4.2 is to regulate activities that may affect measures taken to implement the plan.

### Principal measures of achievement:

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade.<br>Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new incursions and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest, its release from containment, and fishing in High Conservation Value water bodies. |
| Education and advice | Provide information and advice on responsible fishing.<br>Provide information and advice on identification, impacts and control of the pest animal. |

See also section7.2 for Aotea / Great Barrier Exclusion programme and section 7.6 for priority lakes site-led programme.

### 7.7.3.5 **Canadian goose (*Branta canadensis*)**

Canadian geese are large (4.5-5.5kg) light brown birds with black heads and white chinstraps. They can be very aggressive towards other wildlife; potential impacts on co-occurring bird species can include displacement from territories and mortality. Goose grazing on pastures can be at levels of appreciable economic impact but tend to be concentrated heavily on farms with the most suitable habitat. Canadian geese pose a high risk of bird strike at airports due to their substantial body size. Faecal contamination of water bodies, pasture and crops with pathogens such as *Salmonella* and *Escherichia coli*, including antibiotic-resistant strains, may pose a risk to human health.

**Objective:** over the duration of the plan Auckland Council will sustainably control Canadian geese (*Branta canadensis*) to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing control of Canadian geese, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.5.1 No person shall cause to breed any Canadian goose within the Auckland region.

7.7.3.5.2 No person shall distribute or release (or cause to be released or distributed), any Canadian goose within the Auckland region.

7.7.3.5.3 No person shall sell or offer for sale any Canadian goose within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.5.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.5.2 and 7.7.3.5.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

**Principal measures of achievement:**

| | |
|---|---|
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest animal. |

| | |
|---|---|
| Education and advice | Provide information and advice on identification, impacts and control of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3.6 **Darwin's ant (*Doleromyrma darwiniana*)**

Darwin's ants are small omnivorous insects (2-5mm) with dark brown heads and light brown bodies, which give off a strong odour when crushed. Impacts are expected to be similar to Argentine ants. Their preference for sweet foods may lead to the invasion of vineyards and orchards, and facilitate high densities of scale insects and aphids by tending them for honeydew, further impacting plant health. They are also likely to compete strongly with other native species that feed on honeydew or nectar. Predation by Darwin's ants has been implicated as a factor in the failure of the boneseed leaf roller moth biocontrol agent, thereby indirectly facilitating the spread of the pest plant.

Richard Toft, Entocol

**Objective:** over the duration of the plan Auckland Council will sustainably control Darwin's ants (*Doleromyrma darwiniana*) 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:** "sustained control" which means to provide for ongoing control of Darwin's ants, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.6.1 No person shall cause to breed any Darwin's ant within the Auckland region.

7.7.3.6.2 No person shall distribute or release (or cause to be released or distributed), any Darwin's ant within the Auckland region.

7.7.3.6.3 No person shall sell or offer for sale any Darwin's ant within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.6.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.6.2 and 7.7.3.6.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

**Principal measures of achievement:**

| | |
|---|---|
| Education and advice | Provide information and advice on identification, impacts and control of the pest animal, and how to reduce risk of accidentally spread the pest animal to new locations. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |

See also section 7.1 for Hauraki Gulf Controlled Area site-led programme.

### 7.7.3.7 **Eastern rosella (*Platycercus eximius*)**

Eastern rosella are brightly coloured parakeets approximately 30cm long and 90-120g in weight, with red heads, white cheeks and mostly yellow/green bodies. They are seed predators, consuming seeds from a range of native plants including harakeke, tōtara and pōhutukawa, and nectar from pūriri and other native plants. They are also implicated as a reservoir for transmission of Beak and Feather Disease Virus to native parrot species. This is likely to be the most important ecological impact, and is likely to pose a higher risk as rosellas increase in range and population density.

**Objective:** over the duration of the plan Auckland Council will sustainably control eastern rosella (*Platycercus eximius*) outside of containment to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing control of eastern rosella, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.7.1 No person shall cause to breed any eastern rosella within the Auckland region.

7.7.3.7.2 No person shall distribute or release (or cause to be released or distributed), any eastern rosella within the Auckland region.

7.7.3.7.3 No person shall sell or offer for sale any eastern rosella within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.7.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.7.2 and 7.7.3.7.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

### Principal measures of achievement:

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |
| Education and advice | Provide information and advice on responsible pet ownership as well as identification and impacts of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3.8 Eastern water dragon (*Intellagama lesueurii* syn. *Physignathus lesueurii lesueurii*)

Eastern water dragons are large lizards with brownish-grey bodies and black stripes along the ridge of the back, tail and limbs. Males are up to 1kg in weight and 80-90cm long. Females are shorter and lighter. They are likely to prey on a wide range of small terrestrial, freshwater and inter-tidal fauna, including insects, crabs, molluscs and crustaceans, and may impact upon native plants via herbivory. There is further potential to spread diseases such as Salmonella to native reptiles.

Margaret Stanley

**Objective:** over the duration of the plan Auckland Council will sustainably control eastern water dragons (*Intellagama lesueurii*) 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:** "sustained control" which means to provide for ongoing control of eastern water dragons, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.8.1 No person shall cause to breed any eastern water dragon within the Auckland region.

7.7.3.8.2 No person shall distribute or release (or cause to be released or distributed), any eastern water dragon within the Auckland region.

7.7.3.8.3 No person shall sell or offer for sale any eastern water dragon within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.8.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.8.2 and 7.7.3.8.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

Rules 7.7.3.8.1, 7.7.3.8.2 and 7.7.3.8.3 come into force on 1 April 2021.

### Principal measures of achievement:

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade. Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new infestations outside of containment and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |
| Education and advice | Provide information and advice on responsible pet ownership as well as identification and impacts of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3.9 **Feral pig (*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

**Objective:** over the duration of the plan Auckland Council will sustainably control feral pigs[5] (*Sus scrofa*) 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:** "sustained control" which means to provide for ongoing control of feral pigs, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.9.1 No person shall distribute or release (or cause to be released or distributed), any feral pig within the Auckland region.

A breach of this rule is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.9.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

[5] *A feral pig includes any pig that is not:*
*a) held behind effective fences or otherwise constrained; and*
*b) identified by ear tag*

### Principal measures of achievement:

| | |
|---|---|
| Education and advice | Provide information and advice on pest animal identification, impacts and control, as well as responsible hunting practices and containment of domestic pigs. |
| Enforcement | Enforce prohibition on release. |
| Service delivery | Discretion to undertake feral pig control anywhere in region if required to protect biodiversity focus areas. |

See also section 7.1 for Hauraki Gulf Controlled Area site-led programme.

### 7.7.3.10 **Galah (*Eolophus roseicapillus*)**

Galahs are colourful parrots weighing up to 325g, with white crowns, grey wings and pink chests. They are ground feeding granivores, but will also eat buds, flowers, berries and insect larvae. They may compete with native hole-nesting birds for nest cavities and act as reservoirs or vectors of wildlife diseases and human pathogens. Galahs are a major pest of grain crops in Australia. The impact on grain crops is likely to worsen if galah populations increased in Tāmaki Makaurau / Auckland.

**Objective:** over the duration of the plan Auckland Council will sustainably control galahs (*Eolophus roseicapillus*) outside of containment to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing control of galahs, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.10.1 No person shall cause to breed any galah within the Auckland region.

7.7.3.10.2 No person shall distribute or release (or cause to be released or distributed), any galah within the Auckland region.

7.7.3.10.3 No person shall sell or offer for sale any galah within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.10.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.10.2 and 7.7.3.10.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

Rules 7.7.3.10.1, 7.7.3.10.2 and 7.7.3.10.3 come into force on 1 April 2021.

### Principal measures of achievement:

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |
| Education and advice | Provide information and advice on responsible pet ownership as well as identification and impacts of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3.11 **Gambusia (*Gambusia affinis*)**

Gambusia are small (3.5-6cm), silver fish which occupy shallow margins of still or slow moving water bodies including lakes, wetlands, ponds and streams. Gambusia prey on zooplankton, eggs and larvae of fish, and a diverse range of aquatic and terrestrial macroinvertebrates. This can induce avoidance behaviours such as changes in habitat use in a range of native fish and crustaceans. Their presence in wai māori / freshwater bodies can contribute to poor water clarity by altering patterns of nutrient cycling via the consumption of zooplankton, subsequently exacerbating algal blooms.

Stephen Moore

**Objective:** over the duration of the plan Auckland Council will sustainably control gambusia (*Gambusia affinis*) to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing control of gambusia, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.11.1 No person shall distribute or release (or cause to be released or distributed) any gambusia in any part of the Auckland region.

7.7.3.11.2 No person may fish for gambusia in High Conservation Value water bodies or their catchments (see Appendix 3), or anywhere in the Hauraki Gulf Controlled Area.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.11.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

The purpose of rule 7.7.3.11.2 is to regulate activities that may affect measures taken to implement the plan.

### Principal measures of achievement:

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade.<br>Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new incursions and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest, its release from containment, and fishing. |
| Education and advice | Provide information and advice on responsible fishing.<br>Provide information and advice on identification, impacts and control of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme and section 7.6 for priority lakes site-led programme.

### 7.7.3.12 **Pest goldfish (*Carassius auratus*)**

Pest goldfish are small-medium sized (100-400g) fish which may vary in colour, from red-gold, bronze-black through to olive-green. Pest goldfish are generalist feeders consuming aquatic plants, algae, insects, crustaceans, small fish and fish eggs; potentially competing with native fish for resources. The predation of zooplankton, up-rooting of aquatic plants and re-suspension of nutrients and sediments into the water column may contribute to reduced water clarity and algal blooms in invaded freshwater ecosystems.

**Objective:** over the duration of the plan Auckland Council will sustainably control pest goldfish[6] (*Carassius auratus*) to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing control of goldfish, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.12.1 No person shall release from containment (or cause to be released) any goldfish within the Auckland region.

A breach of this rule is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.12.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

**Principal measures of achievement:**

| | |
|---|---|
| Education and advice | Provide information and advice on responsible pet ownership as well as identification, impacts and control of the pest animal. |
| Enforcement | Enforce prohibition of release from secure containment. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

[6] *A pest goldfish means any goldfish that is not:*
*a) held in effective containment on private land; or*
*b) otherwise constrained in an enclosed water body on private land.*

### 7.7.3.13 **Hedgehog (*Erinaceus europaeus*)**

Hedgehogs are small brown to grey, insectivorous mammals with spiny coats. They are voracious nocturnal predators, consuming invertebrates, ground nesting birds' eggs and small reptiles. They also vector a wide variety of human, bird, pet and agricultural diseases, including bovine TB.

Department of Conservation

**Objective:** over the duration of the plan Auckland Council will sustainably control hedgehogs (*Erinaceus europaeus*) 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:** "sustained control" which means to provide for ongoing control of hedgehogs, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.13.1 No person shall cause to breed any hedgehog within the Auckland region.

7.7.3.13.2 No person shall distribute or release (or cause to be released or distributed), any hedgehog within the Auckland region.

7.7.3.13.3 No person shall sell or offer for sale any hedgehog within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.13.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.13.2 and 7.7.3.13.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

**Principal measures of achievement:**

| | |
|---|---|
| Education and advice | Provide information and advice on pest animal identification, impacts and control.<br>Provide advice and support to community groups undertaking pest animal control, with priority given to activity in or around biodiversity focus areas, or in defendable or strategic geographic locations such as peninsulas, islands and corridors. |

| | |
|---|---|
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |

See also section 7.1 for Hauraki Gulf Controlled Area site-led programme.

### 7.7.3.14 **Indian ring-necked parakeet (*Psittacula krameri*)**

Indian ring-necked parakeets are green parrots (38-42cm long) with a red band (males) or an indistinct emerald band (females) encircling their necks. They are highly aggressive to other species, including native birds and small mammals such as bats, and have the potential to competitively exclude other cavity-nesting species through eviction, early occupancy and successful defence of cavities. They pose further risk to native parrots as potential vectors of disease, including Beak and Feather Disease Virus. Overseas, Indian ring-necked parakeets are considered primary production pests and can cause economically significant damage to grain crops such as maize and may also attack fruit in orchards such as citrus, guava and grapes.

**Objective:** over the duration of the plan Auckland Council will sustainably control Indian ring-necked parakeets (*Psittacula krameri*) to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing control of Indian ring-necked parakeets, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.14.1 No person shall cause to breed any Indian ring-necked parakeet within the Auckland region.

7.7.3.14.2 No person shall distribute or release (or cause to be released or distributed), any Indian ring-necked parakeet within the Auckland region.

7.7.3.14.3 No person shall sell or offer for sale any Indian ring-necked parakeet within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.14.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.14.2 and 7.7.3.14.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

Rules 7.7.3.14.1, 7.7.3.14.2 and 7.7.3.14.3 come into force on 1 April 2021.

### Principal measures of achievement:

| | |
|---|---|
| Education and advice | Provide information and advice on responsible pet ownership as well as identification, impacts and control of the pest animal. |
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3.15 **Koi carp (*Cyprinus carpio*)**

Koi carp are an ornamental strain of common carp measuring up to 700mm long which are variable in colour but can be distinguished by the presence of a pair of barbels. Koi carp can negatively impact submerged aquatic plant communities via plant uprooting and reduced light penetration, and alter invertebrate communities via predation and habitat modification. Waterfowl, native fish and kōura are also at risk from increased water turbidity, due to koi carp stirring sediment when feeding, and resource competition. Invasion may contribute to lakes 'flipping' to an alternative stable state devoid of vegetation, with turbid water dominated by phytoplankton.

Stephen Moore

**Objective:** over the duration of the plan Auckland Council will sustainably control koi carp (*Cyprinus carpio*) to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing control of koi carp, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.15.1 No person shall distribute or release (or cause to be released or distributed) any koi carp in any part of the Auckland region.

7.7.3.15.2 No person may fish koi carp in High Conservation Value water bodies or their catchments (see Appendix 3), or anywhere in the Hauraki Gulf Controlled Area.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.15.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

The purpose of rule 7.7.3.15.2 is to regulate activities that may affect measures taken to implement the plan.

### Principal measures of achievement:

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade.<br>Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new incursions and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest, its release from containment, and fishing in High Conservation Value water bodies. |
| Education and advice | Provide information and advice on responsible fishing.<br>Provide information and advice on identification, impacts and control of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme and section 7.6 for priority lakes site-led programme.

### 7.7.3.16 **Magpie (*Gymnorhina* sp.)**

Magpies are black and white piebald birds of medium size (up to 350g) with red eyes. They compete aggressively for territory in groups, restricting the movement of native birds in rural landscapes. They prey upon threatened species such as lizards and may vector diseases to native birds. Aggressive swooping attacks can cause road strike and will sometimes wound pedestrians and pets in parkland and other open spaces during breeding season.

**Objective:** over the duration of the plan Auckland Council will sustainably control magpies (*Gymnorhina* sp.) 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:** "sustained control" which means to provide for ongoing control of magpies, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.16.1 No person shall cause to breed any magpie within the Auckland region.

7.7.3.16.2 No person shall distribute or release (or cause to be released or distributed), any magpie within the Auckland region.

7.7.3.16.3 No person shall sell or offer for sale any magpie within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.16.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.16.2 and 7.7.3.16.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

**Principal measures of achievement:**

| | |
|---|---|
| Education and advice | Provide information and advice on pest animal identification, impacts and control. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |

### 7.7.3.17 **Monk parakeet (*Myiopsitta monachus*)**

Also known as: Quaker parrots

Monk parakeets are medium sized greenish-grey parrots weighing between 90-120g. They will feed on vegetables, orchard fruit, and grain crops (e.g. maize and sunflower seeds) resulting in substantial crop losses and control efforts overseas. Native birds may be at risk via competition for food and disease transmission, and native vegetation may be impacted via feeding damage and herbivory. Monk parakeets will build chambered nests that may exceed 1000kg; nesting on power line poles, satellite dishes and other utility structures resulting in power outages, fires, and considerable time and money spent removing nests and repairing damage.

Murray Foubister

**Objective:** over the duration of the plan Auckland Council will sustainably control monk parakeets (*Myiopsitta monachus*) 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:** "sustained control" which means to provide for ongoing control of monk parakeets, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.17.1 No person shall cause to breed any monk parakeet within the Auckland region.

7.7.3.17.2 No person shall distribute or release (or cause to be released or distributed), any monk parakeet within the Auckland region.

7.7.3.17.3 No person shall sell or offer for sale any monk parakeet within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.17.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.17.2 and 7.7.3.17.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

Rules 7.7.3.17.1, 7.7.3.17.2 and 7.7.3.17.3 come into force on 1 April 2021.

### Principal measures of achievement:

| | |
|---|---|
| Education and advice | Provide information and advice on responsible pet ownership as well as identification, impacts and control of the pest animal. |
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3.18 **Mouse (*Mus musculus*)**

Mice are small grey-brown or black rodent omnivores which can be found in almost every habitat type. They directly impact native reptile and invertebrate populations through predation but also indirectly, as a food source facilitating other invasive predators. Excessive consumption of seeds by mice can greatly reduce native seedling recruitment and potentially modify plant communities in invaded ecosystems. Mice are also particularly damaging to cereal production and the food services industry, attacking and contaminating stored produce at all stages.

Ngā Manu Images

**Objective:** over the duration of the plan Auckland Council will sustainably control mice (*Mus musculus*) 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:** "sustained control" which means to provide for ongoing control of mice, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.18.1 No person shall release (or cause to be released), any mouse within the Auckland region.

A breach of this rule is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.18.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

**Principal measures of achievement:**

| | |
|---|---|
| Education and advice | Provide information and advice on pest animal identification, impacts and control.<br>Provide advice and support to community groups undertaking pest animal control, with priority given to activity in or around biodiversity focus areas, or in defendable or strategic geographic locations such as peninsulas, islands and corridors. |
| Enforcement | Enforce restrictions on release of the pest. |

See also section 7.1 for Hauraki Gulf Controlled Area site-led programme.

### 7.7.3.19 Mustelid: 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

**Objective:** over the duration of the plan Auckland Council will sustainably control mustelids (*Mustela furo, Mustela erminea, Mustela nivalis*) 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:** "sustained control" which means to provide for ongoing control of mustelids, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.19.1 No person shall cause to breed any mustelid within the Auckland region.

7.7.3.19.2 No person shall distribute or release (or cause to be released or distributed), any mustelid within the Auckland region.

7.7.3.19.3 No person shall sell or offer for sale any mustelid within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.19.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.19.2 and 7.7.3.19.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

### Principal measures of achievement:

| | |
|---|---|
| Education and advice | Provide information and advice on pest animal identification, impacts and control.<br>Provide advice and support to community groups undertaking pest animal control, with priority given to activity in or around biodiversity focus areas, or in defendable or strategic geographic locations such as peninsulas, islands and corridors. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |
| Service delivery (control) | Discretion to undertake control anywhere in region if required to protect biodiversity focus areas. |

See also section 7.1 for Hauraki Gulf Controlled Area site-led programme, and sections 7.3 and 7.4 for eradications on Kawau and Waiheke.

### 7.7.3.20 **Myna (*Acridotheres tristis*)**

Myna are small (100-140g) brown, black and white birds with a yellow patch behind the eye. They out-compete native birds for food, territory and nests; potentially affecting native cavity nesting species such as native parrots. Sometimes they will even attack other bird's nests, destroying eggs and young. Feeding can damage native fruit without dispersing seed and predation can threaten vulnerable insects. Birds carry mites, lice, flies, worms and microbial diseases which may be transmitted to humans and other animals.

**Objective:** over the duration of the plan Auckland Council will sustainably control mynas (*Acridotheres tristis*) 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:** "sustained control" which means to provide for ongoing control of mynas, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.20.1 No person shall cause to breed any myna within the Auckland region.

7.7.3.20.2 No person shall distribute or release (or cause to be released or distributed), any myna within the Auckland region.

7.7.3.20.3 No person shall sell or offer for sale any myna within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.20.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.20.2 and 7.7.3.20.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

**Principal measures of achievement:**

| | |
|---|---|
| Education and advice | Provide information and advice on pest animal identification, impacts and control. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |

### 7.7.3.21 **Perch (*Perca fluviatilis*)**

Perch are olive green-grey fish (< 1kg) with six or more dark vertical bands across their sides. They can contribute to poor water clarity via the consumption of zooplankton, thereby exacerbating algal blooms. Feeding habits can also cause the re-suspension of sediment and up-rooting of submerged aquatic plants. Combined effects of zooplankton feeding and bottom-feeding habits can contribute to lakes 'flipping' to an alternative stable state devoid of vegetation, with turbid water dominated by phytoplankton. Perch presence has shown to reduce the abundance of common bullies, and impacts are likely on other native fish such as tuna (eels), īnanga, galaxiids and paraki/smelt through predation, aggressive attacks and competition for prey.

**Objective:** over the duration of the plan Auckland Council will sustainably control perch (*Perca fluviatilis*) 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:** "sustained control" which means to provide for ongoing control of perch, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.21.1 No person shall distribute or release (or cause to be released or distributed) any perch in any part of the Auckland region.

7.7.3.21.2 No person may fish for perch in any High Conservation Value water body or their catchments (see Appendix 3) in the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.21.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

The purpose of rule 7.7.3.21.2 is to regulate activities that may affect measures taken to implement the plan.

### Principal measures of achievement:

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade.<br>Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new incursions and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest, its release from containment, and fishing in High Conservation Value water bodies. |
| Education and advice | Provide information and advice on responsible fishing.<br>Provide information and advice on identification, impacts and control of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme and section 7.6 for priority lakes site-led programme.

### 7.7.3.22 **Plague skink (*Lampropholis delicata*)**

Also known as: rainbow skinks

Plague skinks are small brown lizards with an iridescent rainbow sheen to their scales visible under bright light. The skinks are generalist predators of a wide variety of invertebrates and are prevalent in suburban gardens, parks, disturbed sites, urban areas, open rocky land, farmland and scrub. They have higher reproductive rates and reach maturation faster than native skinks, reaching densities of 300-400 per 100m$^2$. Such high population densities can result in plague skinks out-competing native reptiles, particularly native mokomoko kapa/ copper skinks.

**Objective:** over the duration of the plan Auckland Council will sustainably control plague skinks (*Lampropholis delicata*) 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:** "sustained control" which means to provide for ongoing control of plague skinks, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.22.1 No person shall cause to breed any plague skink within the Auckland region.

7.7.3.22.2 No person shall distribute or release (or cause to be released or distributed), any plague skink within the Auckland region.

7.7.3.22.3 No person shall sell or offer for sale any plague skink within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.22.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.22.2 and 7.7.3.22.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

### Principal measures of achievement:

| | |
|---|---|
| Education and advice | Provide information and advice on identification, impacts and control of the pest animal, and how to reduce risk of accidental spread of the pest animal to new locations. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |

See also section 7.1 for Hauraki Gulf Controlled Area site-led programme.

### 7.7.3.23 **Rabbits and hares (*Oryctolagus cuniculus, Lepus europaeus*)**

Rabbits and hares are small terrestrial herbivorous mammals. Rabbits are about the size of a small domestic cat, often grey-brown in colour. Hares are larger than rabbits and have black tipped ears. They will heavily browse native seedlings and low-growing native plants in open habitats, such as sand dunes and grasslands; suppressing threatened species and altering vegetation composition. As prey species, they indirectly contribute to increased predation pressure on native species by supporting populations of introduced predators, including unowned cats and mustelids. In agricultural systems, excessive browsing can cause major damage to pastures, with 7-10 rabbits estimated to eat as much as one sheep.

Manaaki Whenua Landcare Research

**Objective:** over the duration of the plan Auckland Council will sustainably manage pest rabbits[7] and hares (*Oryctolagus cuniculus, Lepus europaeus*) to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing management of pest rabbits and hares, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.23.1 No person shall abandon, or cause to be abandoned, any rabbit or hare within the Auckland region.

The purpose of rule 7.7.3.23.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

[7] *Pest rabbit means any rabbit within the Auckland region that is not:*
*One of the following breeds: New Zealand white, angora, Flemish giant, rex, chinchilla, Californian, Netherland dwarf, Dutch, tan, and silver fox.*

### Principal measures of achievement:

| | |
|---|---|
| Service delivery (control) | Facilitate rabbit calcivirus biocontrol within the region.<br>Undertake site-led control to protect biodiversity focus areas. |
| Education and advice | Provide information and advice on identification, impacts and control of the pest animal.<br>Provide advice and support to community groups undertaking pest animal control or revegetation planting, with priority given to activity in or around biodiversity focus areas, or in defendable or strategic geographic locations such as peninsulas, islands and corridors.<br>Provide information and advice on responsible pet ownership (including identity of breeds exempt from pest status). |
| Enforcement | Enforce restriction on the sale, breeding, distribution and exhibition of the pest and prohibition on release from containment. |

See also section 7.1 for Hauraki Gulf Controlled Area site-led programme.

### 7.7.3.24 **Rainbow lorikeet (*Trichoglossus haematodus*)**

Rainbow lorikeets are brightly coloured long-tailed parrots (75-157g) with blue heads, green wings and orange-yellow breasts. They are potential reservoirs for transmission of parrot-specific diseases to native parrots. Beak and Feather Disease Virus has been recorded in captive rainbow lorikeets in Aotearoa / New Zealand. They aggressively out-compete native nectar feeding avifauna including tūī, kōmako-bellbird and hihi. These combined effects make them a threat to Tīkapa Moana / Hauraki Gulf islands habitats such as Hauturu / Little Barrier Island and Tiritiri Matangi Island. Unwanted Organism managed by the Department of Conservation and Ministry of Primary Industries as a National Interest Pest Response.

**Objective:** over the duration of the plan Auckland Council will sustainably control rainbow lorikeet (*Trichoglossus haematodus*) outside of containment to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing control of rainbow lorikeets, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.24.1 No person shall cause to breed any rainbow lorikeet within the Auckland region.

7.7.3.24.2 No person shall distribute or release (or cause to be released or distributed), any rainbow lorikeet within the Auckland region.

7.7.3.24.3 No person shall sell or offer for sale any rainbow lorikeet within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.24.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.24.2 and 7.7.3.24.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

### Principal measures of achievement:

| | |
|---|---|
| Education and advice | Provide information and advice on responsible pet ownership as well as identification, impacts and control of the pest animal. |
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3.25 Rats: ship rats (*Rattus rattus*), Norway rats (*Rattus norvegicus*), kiore[8] (*R. exulans*)

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

**Objective:** over the duration of the plan Auckland Council will sustainably manage pest rats[9] (*Rattus rattus, R. norvegicus, R. exulans*) 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:** "sustained control" which means to provide for ongoing control of pest rats, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.25.1 No person shall release from containment (or cause to be released), any rat within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.25.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

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[8] *Council acknowledges that kiore are culturally significant for mana whenua and the need for operational engagement with mana whenua where relevant.*

[9] A pest rat includes:

a) any *Rattus rattus* or *Rattus exulans*; and

*b)* any *Rattus norvegicus* that is not held in effective containment

### Principal measures of achievement:

| | |
|---|---|
| Education and advice | Provide information and advice on pest animal identification, impacts and control.<br>Provide advice and support to community groups undertaking pest animal control, with priority given to activity in or around biodiversity focus areas, or in defendable or strategic geographic locations such as peninsulas, islands and corridors.<br>Provide information and advice on responsible pet ownership. |
| Enforcement | Enforce prohibition on the breeding, exhibition, sale and distribution of the pest. |
| Service delivery | Discretion to undertake control anywhere in region if required to protect biodiversity focus areas. |

See also section 7.1 for Hauraki Gulf Controlled Area site-led programme, and sections 7.3 and 7.4 for eradications on Kawau and Waiheke.

### 7.7.3.26 **Red-eared slider (*Trachemys scripta elegans, T. scripta scripta, T. scripta troostii*)**

Red-eared sliders are turtles with olive to brown carapaces patterned with yellow spots or stripes, and a distinctive red stripe behind each eye. They inhabit a wide variety of still or slow-moving water bodies including ponds, lakes, wetlands, rivers and drainage ditches. As opportunistic omnivores, potential impacts via herbivory and the predation of zooplankton, molluscs, fish, frogs, crustaceans, insects, gastropods, birds and small reptiles are likely. There are further risks to native reptiles and amphibians via disease transmission. Wetland bird reproductive success may be impacted through the displacement of parent birds from nests to use as basking sites. Feeding habits and associated activities are likely to result in food-web and ecosystem process impacts, and reduced water quality in invaded habitats.

© Rod Morris, Department of Conservation

**Objective:** over the duration of the plan Auckland Council will sustainably control red-eared sliders and related sub-species (*Trachemys scripta elegans, T. scripta scripta, T. scripta troostii*) 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:** "sustained control" which means to provide for ongoing control of red-eared sliders, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.26.1 No person shall cause to breed any red-eared slider or other sub-species of *Trachemys scripta* within the Auckland region.

7.7.3.26.2 No person shall distribute or release (or cause to be released or distributed), any red-eared slider or other sub-species of *Trachemys scripta* within the Auckland region.

7.7.3.26.3 No person shall sell or offer for sale any red-eared slider or other sub-species of *Trachemys scripta* within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.26.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.26.2 and 7.7.3.26.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

Rules 7.7.3.26.1, 7.7.3.26.2 and 7.7.3.26.3 come into force on 1 April 2021.

**Principal measures of achievement:**

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade. Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new infestations outside of containment and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |
| Education and advice | Provide information and advice on responsible pet ownership as well as identification, impacts and control of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3.27 **Rudd (*Scardinius erythrophthalmus*)**

Rudd are fish with bright red fins, usually 200-250mm as adults, but can be larger. Extensive herbivory can negatively affect aquatic plant growth, survival and community composition, sometimes leading to aquatic plant collapse in lakes. Some high impact aquatic weeds, including hornwort, are selectively avoided by rudd and may thus be further competitively advantaged. They may compete with native fish such as paraki/smelt and common bullies for invertebrate prey. Facilitation of nutrient and sediment suspension in the water column and predation of zooplankton by rudd can contribute to regime shifting of lakes from clear to turbid states.

Stephen Moore

**Objective:** over the duration of the plan Auckland Council will sustainably control rudd (*Scardinius erythrophthalmus*) to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing control of rudd, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.27.1 No person shall distribute or release (or cause to be released or distributed) any rudd in any part of the Auckland region.

7.7.3.27.2 No person may fish for rudd in any High Conservation Value water body or their catchments (see Appendix 3) in the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.27.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

The purpose of rule 7.7.3.27.2 is to regulate activities that may affect measures taken to implement the plan.

### Principal measures of achievement:

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade.<br>Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new incursions and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest, its release from containment, and fishing. |
| Education and advice | Provide information and advice on responsible fishing.<br>Provide information and advice on identification, impacts and control of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme and section 7.6 for priority lakes site-led programme.

### 7.7.3.28 **Shingleback lizard (*Tiliqua rugosa*)**

Shingleback lizards are reptiles up to 40cm long with large heads, short blunt tails and dark blue tongues. They are slow-moving; therefore predation impacts are likely to be confined mainly to some native invertebrates. The potential for disease transmission to other reptiles may be the most important risk.

Pest outside of\cure co

Margaret Stanley

**Objective:** over the duration of the plan Auckland Council will sustainably control pest shingleback lizards (*Tiliqua rugosa*[10]) to prevent adverse effects on economic well-being, the environment, 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:** "sustained control" which means to provide for ongoing control of shingleback lizards, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.28.1 No person shall release (or cause to be released), any shingleback lizard within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.28.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

**Principal measures of achievement:**

| | |
|---|---|
| Enforcement | Enforce restrictions on the release of individuals from secure containment. Sale and distribution is still allowed within the region, provided animals are maintained in secure containment. |
| Education and advice | Provide information and advice on responsible pet ownership as well as identification and impacts of the pest animal. |
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new infestations outside of containment and status of existing or historical sites. |

[10] *A pest shingleback lizard is one that is not effectively held in secure containment.*

### 7.7.3.29 **Snake-neck turtle (*Chelodina longicollis*)**

Snake-neck turtles are medium-sized turtles with characteristically long necks (approximately 60% of the shell length). They are likely to predate on a range of zooplankton, aquatic and terrestrial invertebrates, amphibians, carrion, fish and crustaceans. Snake-neck turtles can dig nesting burrows in the ground which may disturb gardens, golf courses, gravel roads and other recreational land. They are carriers of *Salmonella* and risk transmitting the disease to native reptiles and humans.

**Objective:** over the duration of the plan Auckland Council will sustainably control snake-neck turtles (*Chelodina longicollis*) 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:** "sustained control" which means to provide for ongoing control of snake-neck turtles, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.29.1 No person shall cause to breed any snake-neck turtle within the Auckland region.

7.7.3.29.2 No person shall distribute or release (or cause to be released or distributed), any snake-neck turtle within the Auckland region.

7.7.3.29.3 No person shall sell or offer for sale any snake-neck turtle within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.29.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.29.2 and 7.7.3.29.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

Rules 7.7.3.29.1, 7.7.3.29.2 and 7.7.3.29.3 come into force on 1 April 2021.

### Principal measures of achievement:

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade. Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new infestations outside of containment and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest. |
| Education and advice | Provide information and advice on responsible pet ownership as well as identification, impacts and control of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme.

### 7.7.3.30 **Tench (*Tinca tinca*)**

Tench are olive green-bronze fish (30-70cm), distinguished by red eyes, two barbels, large soft-rayed fins and copious mucous. They can contribute to poor water clarity via the consumption of zooplankton, thereby exacerbating algal blooms. Bottom-feeding also causes the re-suspension of sediment and up-rooting of submerged macrophytes. These combined effects can contribute to lakes 'flipping' to an alternative stable state devoid of vegetation, with turbid water dominated by phytoplankton. Indirect effects to native fish species diversity via transmission of parasites, reduced water clarity, and/or competition for invertebrate prey are also likely.

**Objective:** over the duration of the plan Auckland Council will sustainably control tench (*Tinca tinca*) 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:** "sustained control" which means to provide for ongoing control of tench, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.30.1 No person shall distribute or release (or cause to be released or distributed) any tench in any part of the Auckland region.

7.7.3.30.2 No person may fish for tench in any High Conservation Value water body or their catchments (see Appendix 3) in the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.30.1 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

The purpose of rule 7.7.3.30.2 is to regulate activities that may affect measures taken to implement the plan.

### Principal measures of achievement:

| | |
|---|---|
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of pet shops, markets and online pet trade.<br>Undertake inspections, monitoring and surveillance of key risk areas to determine the presence of new incursions and status of existing or historical sites. |
| Enforcement | Enforce restrictions on the sale, breeding, distribution and exhibition of the pest, its release from containment, and fishing. |
| Education and advice | Provide information and advice on responsible fishing.<br>Provide information and advice on identification, impacts and control of the pest animal. |

See also section 7.2 for Aotea / Great Barrier Exclusion programme and section 7.6 for priority lakes site-led programme.

### 7.7.3.31 Wasp: German (*Vespula germanica*), common (*V. vulgaris*), Asian paper (*Polistes chinensis*), Australian paper (*P. humilis*)

*Vespula* and paper wasps are social insects that build intricate nests out of fiber. Paper wasps have thinner abdomens than *Vespula* wasps and can be distinguished by their habit of flying with legs hanging down. Both demonstrate aggressive behaviour and pose a risk to human health; stings can require medical attention and sometimes cause death from anaphylactic shock in extreme cases. They are serious primary production pests; attacking grazing livestock and workers, causing forestry operations to stop, and robbing beehives of honey in the apiculture industry. In natural ecosystems, wasps compete with native birds and invertebrates that also consume honeydew, changing the behaviour of native honeydew feeders. They prey on a range of invertebrates, including native species. Predation of many invertebrate species can be so high that the probability of individuals surviving a season can be close to zero.

Asian paper wasp

**Objective:** over the duration of the plan Auckland Council will sustainably control wasps (*Vespula vulgaris, V. germanica, Polistes chinensis, P. humilis*) 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:** "sustained control" which means to provide for ongoing control of wasps, to reduce their impacts and spread to other properties.

**Rules:**

7.7.3.31.1 No person shall cause to breed any wasp within the Auckland region.

7.7.3.31.2 No person shall distribute or release (or cause to be released or distributed), any wasp within the Auckland region.

7.7.3.31.3 No person shall sell or offer for sale any wasp within the Auckland region.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.3.31.1 is to regulate activities that may affect measures taken to implement the plan.

The purpose of rules 7.7.3.31.2 and 7.7.3.31.3 is to specify the circumstances in which the pest may be communicated, released, or otherwise spread.

**Principal measures of achievement:**

| | |
|---|---|
| Education and advice | Provide information and advice on pest animal identification, impacts and control.<br>Provide advice and support to community groups undertaking pest animal control, with priority given to activity in or around biodiversity focus areas. |
| Research and development | Collaborate with other parties to facilitate research and development of improved control tools. |
| Enforcement | Enforce prohibition on the breeding, exhibition, sale and distribution of the pest. |

## 7.7.4 Wāhi whai kararehe orotā / Site-led animals

### 7.7.4.1 Unowned cat

Cats are small-bodied carnivorous mammals (2-7kg as adults) with variable coat colours. Adults are active both day and night, switching activity patterns in response to opportunity, favouring small terrestrial mammals (rodents and rabbits) but prey-switching to take a wide variety of other taxa (birds, bats, reptiles, amphibians, invertebrates) according to their availability. Cat predation is one of the main threats to tūturiwhatu / New Zealand dotterels, and juvenile kiwi and burrowing seabirds such as tāiko / black petrel and tītī / Cook's petrels are also at risk. Cats can also facilitate disease and parasite transmission to native species, particularly *Toxoplasma gondii*, which is dependent on cats to complete its lifecycle. Fatal toxoplasmosis has been reported in tutumairekurai / Hector's and Maui's dolphins, terehu / bottle nose dolphins, kēkeno / NZ fur seals, kiwi, kererū/kukupā and kākā. However, cats are also Aotearoa / New Zealand's most popular companion animal, and Auckland Council recognises the need to balance wildlife protection with protection of companion animal values.

Manaaki Whenua Landcare Research

**Objective:** over the duration of the plan Auckland Council will manage cats to protect values in places to reduce adverse effects on the environment, enjoyment of the natural environment, and the relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu, and taonga.

**Intermediate outcome:** "protecting values in places" which means that cats, that are capable of causing damage to threatened species areas, are controlled within sites containing threatened species populations to an extent that protects the threatened species values of those places.

**Rules:**

7.7.4.1.1 No person shall abandon, or cause to be abandoned, any cat within the Auckland region.

7.7.4.1.2 No person shall feed any cat on any park within the Auckland region that contains a resident or breeding or roosting population of any threatened native bird, reptile or amphibian.

7.7.4.1.3 Any owner of a cat must ensure their cat does not enter an intensively managed site as defined in Map 11.

A breach of these rules is an offence under s154N(19) of the Biosecurity Act.

The purpose of rule 7.7.4.1.1 is to specify the circumstances in which the subject may be communicated, released, or otherwise spread.

The purpose of rules 7.7.4.1.2 and 7.7.4.1.3 is to regulate activities that may affect measures taken to implement the plan.

**Principal measures of achievement:**

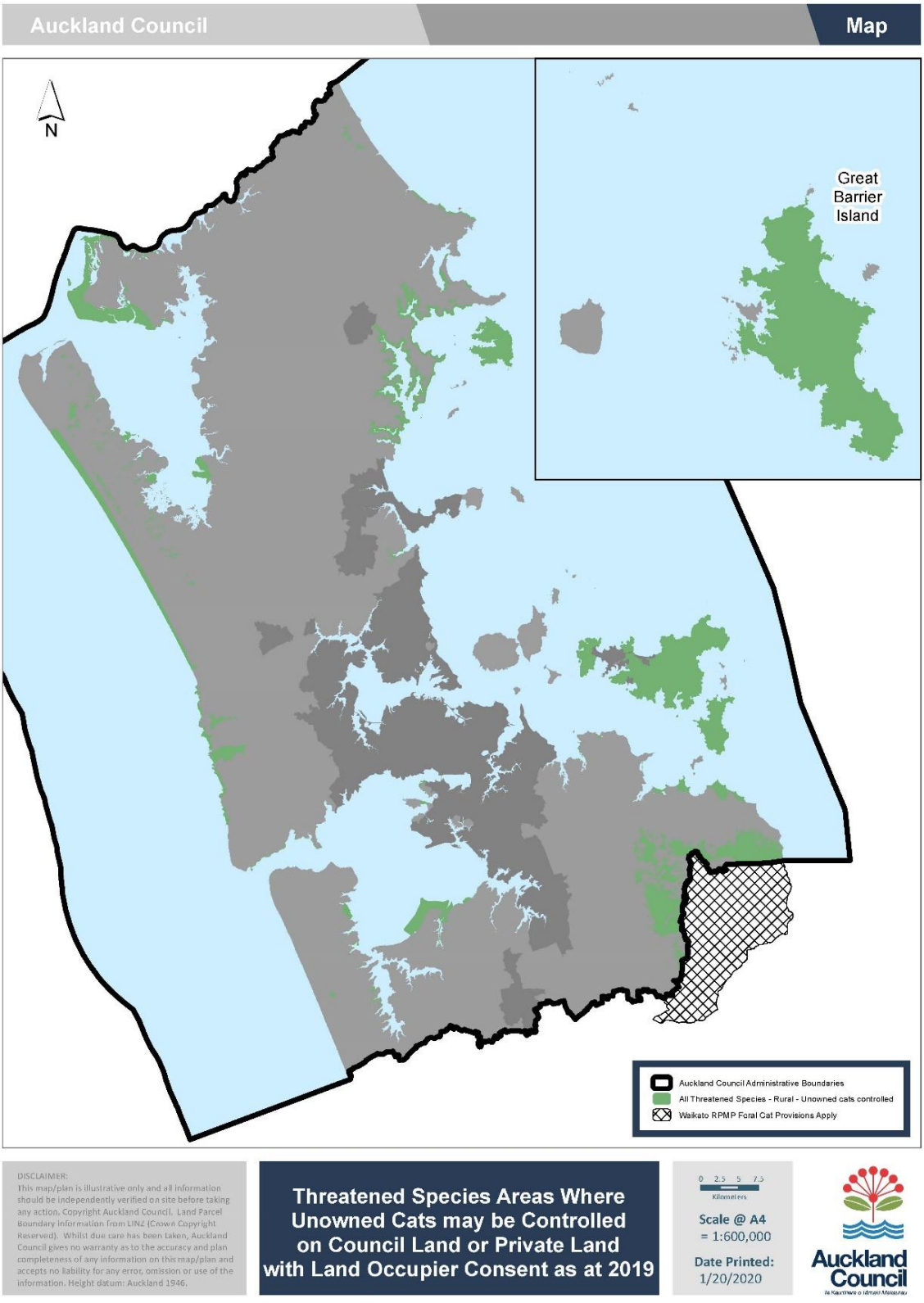
| | |
|---|---|
| Service delivery (control) | Provide subsidised de-sexing and microchipping for owned cats living near threatened species populations.<br>Council may undertake control of unowned[11] cats as part of integrated management of other pest threats to protect threatened species. Accordingly, Council may consider unowned cat control at sites meeting the follow criteria:<br>a. the site contains a resident or breeding or roosting population of any threatened native bird, reptile or amphibian species; and<br>b. the site is within a rural area; and<br>c. where that site is:<br>i. public land; or<br>ii. private land with consent of the private land occupier.<br>Map 10 indicatively shows the extent of sites meeting these threatened species criteria based on current knowledge as at January 2019.<br>Sites shown in Map 11 are intensively managed and of particular value to threatened species programmes. At these sites, Council may manage any cat as a pest in accordance with the Biosecurity Act 1993, to prevent recovery programmes being undermined. |
| Monitoring and surveillance | Undertake inspections, monitoring and surveillance of unowned cat populations in and around sites containing threatened species. |

[11] *Unowned cat means:*
- *a) any cat which is not:*
  - *i. Microchipped, or otherwise identified with owner's name and address; and*
  - *ii. Registered on the New Zealand Companion Animal Register* https://www.animalregister.co.nz/*; and*
- *b) which is within any site that contains a resident or breeding or roosting population of any regionally or nationally threatened bird, reptile or amphibian, and is in a rural area.*

*Note: based on current knowledge of species distributions at time of writing, sites that meet these criteria are shown in Map 10. Note also cat control will only be undertaken on public land or on private land with consent of land occupier (see principle measures of achievement overleaf).*
*Note: this programme does not prevent the continuing sale and distribution of cats within the region.*

| | |
|---|---|
| Education and advice | Provide information and advice on responsible pet ownership (particularly de-sexing, microchipping, registration on the Companion Animal Register, home range size and containment options) as well as impacts and management of cats. Advice will be prioritised to communities near threatened species populations or biodiversity focus areas to assist cat owners in these areas to minimise the impacts of their companion animals on nearby wildlife.<br>Notify communities near intended cat management at least 4 weeks prior to control of unowned cats.<br>Provide advice and support to community groups undertaking cat management, with priority given to activity in or around biodiversity focus areas and threatened species populations. |
| Enforcement | Enforce prohibition on feeding cats or cat colonies on parkland that is home to threatened species. Enforce prohibition of abandonment. |

See also section 7.1 for Hauraki Gulf Controlled Area site-led programme.




**Map 10. Indicative distribution of threatened species populations in rural areas, based on current knowledge of species' distributions as of 2019. Unowned cats may be**

**controlled in rural areas to protect threatened species on Council land or on private land with land occupier consent[12].**

*[12] Any sites where unowned cat control is actually planned to be carried out can be viewed at higher resolution online at https://geomapspublic.aucklandcouncil.govt.nz/viewer/index.html*

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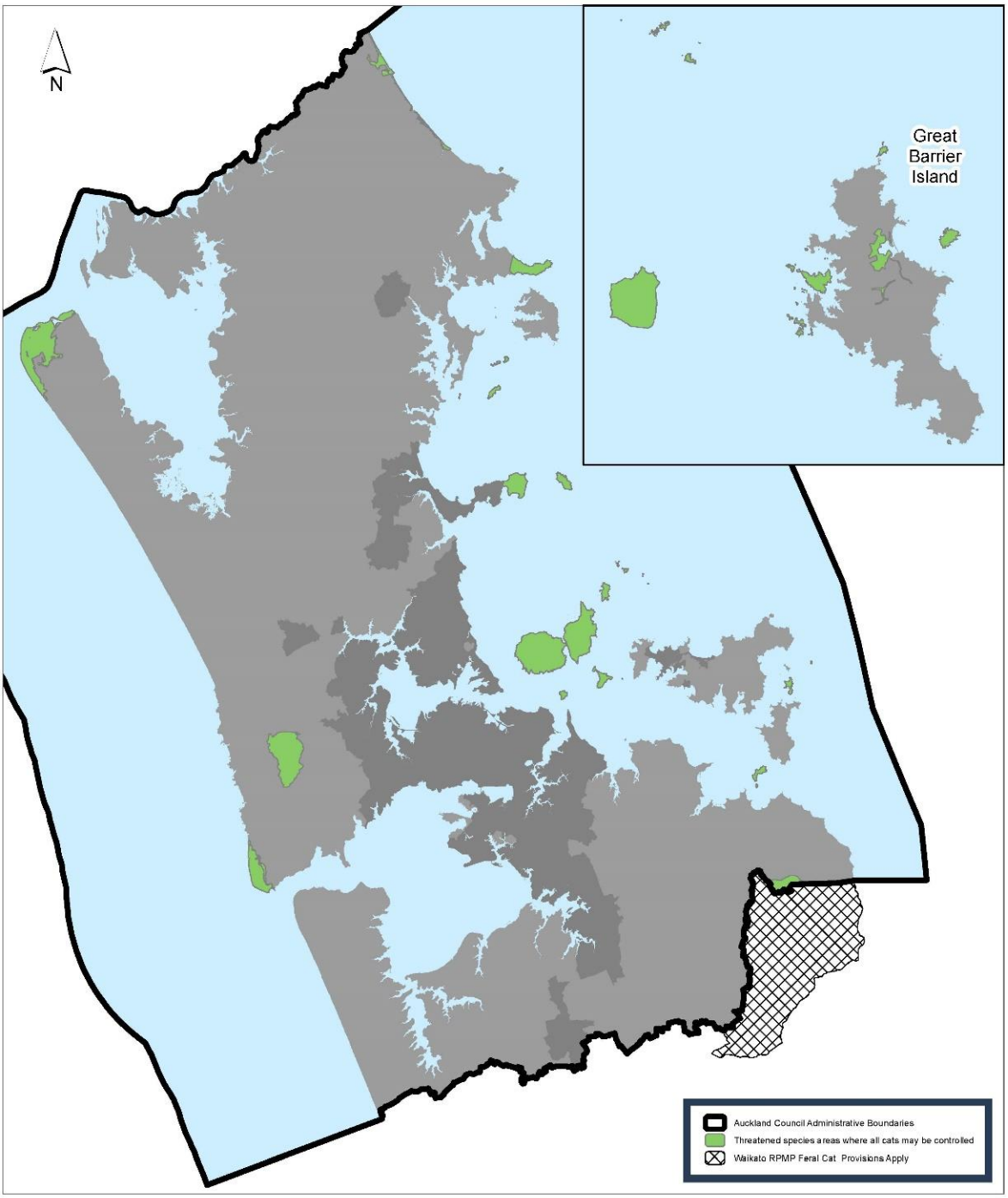
Map






# Intensively Managed Threatened Species Areas

0 2.5 5 7.5
Kilometers

Scale @ A4
= 1:600,000

Date Printed:
1/16/2020

Auckland Council
Te Kaunihera o Tāmaki Makaurau

**Map 11. Intensively managed sites for threatened species protection[13]. Any cat may be controlled at these sites.**

[13] *Any sites where cat control is actually planned to be carried out can be viewed at higher resolution online at https://geomapspublic.aucklandcouncil.govt.nz/viewer/index.html*