

### 4.4 Suppression Plants

Suppression plants are plant pests that are widespread in suitable habitat throughout the region. The intention is to reduce pest densities so that impacts on the community and the environment are decreased.

#### Objectives and Methods for Suppression Plants

The objectives and methods for the suppression plant pests apply to all species in this category.

#### Objectives (Five Year)

- To minimise the effects of the suppression plants on environmental and economic values in Northland.
- To raise public awareness of the economic, biodiversity, social and cultural impacts of the suppression plants.

#### Pest Management Methods

The following pest management methods apply to the suppression plants as outlined in Table 1.

##### Occupier Control:

The requirements for occupier control differ, and are clearly specified in the rules for each species. The requirements may include:

- Boundary control - occupiers are required to control the suppression plant within an appropriate distance of the property boundaries.
- Quarry control - owners or occupiers of quarries and metal stockpile areas are required to control the suppression plant within operational areas. Operational areas include overburden soil storage stockpiles, pits and faces,

extraction areas, raw material stockpiles, processing areas, product stockpiles, haulways and other vehicle routes.

- Road and rail side control - road and rail controlling authorities are required to progressively control the suppression plant on the region’s formed road and rail reserves where the adjoining land is clear or only sparsely infested, following an approved programme.
- Occupier road side control - occupiers are required to destroy the suppression plant between their property boundary and the carriageway of any adjoining road.
- Occupiers are required to control the suppression plant where it causes serious health effects.

##### Site-led Programmes:

- NRC will assist communities and stakeholders to control the suppression plant where it impacts upon local values.

##### Education:

- NRC will provide training to relevant NRC staff and stakeholders in the identification and control of plant pests.
- NRC will provide advice, and attend community meetings and field days.
- NRC will run publicity campaigns to educate the wider public about plant pests.

##### Research:

- NRC will work cooperatively with other agencies where further research is needed to identify management measures, potential impacts, pathways and/or behaviours.

##### Biological Control:

- NRC will support the use of biological control agents where the criteria for control and use of the biological control agent are met.

Table 1: Pest management methods for suppression plants.

Pest	Occupier Control	Site-led Programmes	Education	Research	Biological Control
Alligator weed		•	•	•	•
Gorse	•	•	•	•	•
Gravel groundsel	•		•	•	
Pampas	•	•	•	•	
Privet	•	•	•	•	
Ragwort	•		•	•	•
Wild ginger	•	•	•	•	

## ALLIGATOR WEED

*(Alternanthera philoxeroides)*

Alligator weed is a perennial emergent aquatic plant that can also grow in terrestrial areas. Its leaves are green, hairless, waxy and have a conspicuous midrib. The flowers resemble those of white clover but are smaller and each cluster is produced on a long stalk. The plant will not root in water deeper than 2-3m however a marginal weed bed can support a floating mat of vegetation in deeper water.

Alligator weed is widely distributed in rivers, streams and ponds throughout the region. It also occurs in terrestrial areas, especially low lying areas with clay soils. Alligator weed forms extensive floating mats. These out-compete other species and block waterways, causing silt build up, flooding and degradation of habitat for aquatic plants and animals. Alligator weed is also invasive in terrestrial areas affecting crops and pasture. It is toxic to livestock.

### Rules

1. No person shall sell, offer for sale, propagate, breed or multiply any alligator weed within the Northland region.
2. No person shall knowingly distribute, transport or release any alligator weed (including any seeds or live vegetation) within the Northland region.

## GORSE

*(Ulex species)*

Gorse is a deep-rooted, woody perennial shrub that can grow to 4m tall. It has densely spined branches and is woody when mature. Gorse has bright yellow flowers from May to November, and black seed pods in summer. Gorse seed reserves in the soil are long lasting and abundant under and near established infestations.

Gorse is a major pest in Northland, affecting large areas of land. It has the ability to occupy a wide range of soil types, and very quickly colonises new areas, forming dense thickets. It invades pasture land and roadsides as well as low growing or regenerating native vegetation. It harbours other pests, for example rabbits, and restricts the movement of stock and people.

### Rules

1. No person shall sell, offer for sale, propagate, breed or multiply any gorse within the Northland region.
2. No person shall knowingly distribute, transport or release any gorse (including any seeds or live vegetation) within the Northland region.
3. Where a management agency has undertaken initial control work on a property and/or supplied resources to reduce pest plant population densities to a level agreed to in a management plan for the area, the occupier of the property shall maintain the pest plant population densities to those agreed to in the management plan.
- 4 Land occupiers must:
  - a. Destroy all gorse within 10 metres of a property boundary where the neighbouring property is clear of gorse and is clear within 10 metres of that boundary;



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3. Where a management agency has undertaken initial control work on a property and/or supplied resources to reduce pest plant population densities to a level agreed to in a management plan for the area, the occupier of the property shall maintain the pest plant population densities to those agreed to in the management plan.

**A breach of these rules, without reasonable excuse, is an offence under Section 154(r) of the Act.**



- b. Destroy all gorse in the operational areas of a quarry; and
    - i. a 50 metre strip of land around the operational areas of a quarry, or;
    - ii. where existing vegetation reduces the risk of gorse spreading, the 50 metre buffer zone may be reduced by written agreement with the NRC.
5. Every road or rail controlling authority shall implement a control programme aimed at progressively controlling gorse on formed road or rail reserves under their jurisdiction where adjoining land is clear or only sparsely infested with gorse, in accordance with a five year management plan which shall be negotiated with, and agreed to by, the Northland Regional Council.

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## GRAVEL GROUNDSEL

(*Senecio skirrhodon*)

Gravel groundsel is a member of the daisy family. It is a semi annual to perennial bush-like herb and usually grows to 25-40cm tall. Gravel groundsel flowers are bright yellow, and appear individually at the tips of stems. It has downy, wind-borne seeds.

Gravel groundsel is found in localised areas, but in recent years populations have increased significantly, particularly in the Far North. It is an aggressive, prolific flowering plant that invades grasslands. It is not eaten by cattle and reduces pasture productivity.

### Rules

1. No person shall sell, offer for sale, propagate, breed or multiply any gravel groundsel within the Northland region.
2. No person shall knowingly distribute, transport or release any gravel groundsel (including any seeds or live vegetation) within the Northland region.
3. Land occupiers must:
  - a. Destroy all gravel groundsel within 50 metres of a property boundary where the neighbouring property is



clear of gravel groundsel and is clear within 50 metres of that boundary;

- b. Destroy all gravel groundsel between their property boundary and the carriageway of any adjoining road, where this land is within 50 metres of a property free of gravel groundsel.

**A breach of these rules, without reasonable excuse, is an offence under Section 154(r) of the Act.**

## PAMPAS

(*Cortaderia jubata* and *C.selloana*)

Pampas is a perennial, tussock-like grass, and there are two species present in Northland (*Cortaderia jubata* and *Cortaderia selloana*). Both have coarse abrasive leaves and grow 2-3m high. The plant's flowering stems, which can be up to 5m high, have distinctive, erect, fluffy white or pinky-purple flower heads. They flower from January to March (*C. jubata*) and March to May (*C.selloana*). The plants may be confused with the three native toe toe species which have more creamy-yellow flower heads. The pampas species also have dead leaf bases which spiral, resembling wood shavings.

Pampas is widespread throughout Northland. It inhabits a range of areas including dunelands, plantation forests, quarries, roadsides and disturbed native forests. Pampas is a very invasive plant, forming dense, often impenetrable, stands. It excludes other vegetation, poses a fire risk in summer, and reduces visibility on roads. It also provides habitats for possums and rats, and impedes access.

### Rules

1. No person shall sell, offer for sale, propagate, breed or multiply any pampas within the Northland region.
2. No person shall knowingly distribute, transport or release any pampas (including any seeds or live vegetation) within the Northland region.
3. Where a management agency has undertaken initial control work on a property and/or supplied resources to reduce pest plant population densities to a level agreed to in a management plan for the area, the occupier of the property shall maintain the pest plant population densities to those agreed to in the management plan.



4. Land occupiers must:
  - a. Destroy all pampas within 10 metres of a property boundary where the boundary adjoins a road or rail reserve clear of pampas;
  - b. Destroy all pampas in the operational areas of a quarry; and
    - i. a 50 metre strip of land around the operational areas of a quarry, or;
    - ii. where existing vegetation reduces the risk of pampas spreading, the 50 metre buffer zone may be reduced by written agreement with the NRC.
5. Every road or rail controlling authority shall implement a control programme aimed at progressively controlling pampas on formed road or rail reserves under their jurisdiction where adjoining land is clear or only sparsely infested with pampas, in accordance with a five year management plan which shall be negotiated with, and agreed to by, the Northland Regional Council.

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## PRIVET

*(Ligustrum species)*

Privet is an evergreen shrub or tree, and four species are found in New Zealand: tree privet (*Ligustrum lucidum*), Chinese privet (*L. sinense*), privet (*L. ovalifolium*) and common privet (*L. vulgare*). Tree and Chinese privet are common in Northland. Tree privet grows 5-10m high and has long glossy leaves. It has creamy flowers in summer and small black berries. Chinese privet grows to 5m in height. It has shorter, less glossy leaves, and produces white flowers in spring.

Chinese and tree privet are found throughout Northland, and are generally present near sites of human habitation, where they have been planted as hedges or specimen trees. Privet inhabits bush, gardens, roadsides and ungrazed wasteland areas. The scent of privet contributes to respiratory disorders and has associated human health impacts. Privet prevents native plant regeneration and can completely dominate areas of bush. It can also restrict visibility along roadsides and form barriers to recreational activities. Privet is toxic to livestock. When growing on riverbanks, privet catches flood debris and impedes flood flows.

### Rules

1. No person shall sell, offer for sale, propagate, breed or multiply any privet within the Northland region.
2. No person shall knowingly distribute, transport or release any privet (including any seeds or live vegetation) within the Northland region.
3. Where a management agency has undertaken initial control work on a property and/or supplied resources to reduce pest plant population densities to a level agreed to in a management plan for the area, the occupier of the property shall maintain the pest plant population densities to those agreed to in the management plan.
4. Land occupiers must:
  - a. Destroy all privet within 10 metres of a property boundary where the boundary adjoins a road or rail reserve that is clear of privet;
  - b. Destroy all privet within 50 metres of an affected individual's residence or fixed workplace where the privet exacerbates human health problems. Where privet is claimed to exacerbate human health problems, a medical certificate/letter is required as proof of this claim.



5. Every road or rail controlling authority shall implement a control programme aimed at progressively controlling privet on formed road or rail reserves under their jurisdiction where adjoining land is clear or only sparsely infested with privet, in accordance with a five year management plan which shall be negotiated with, and agreed to by, the NRC.
6. Privet tree hedges are permitted providing that hedges are maintained in a trimmed state that prevents flowering.

***A breach of these rules, without reasonable excuse, is an offence under Section 154(r) of the Act.***

## RAGWORT

*(Jacobaea vulgaris)*

*Also known as: Senecia jacobaea*

Ragwort is a member of the daisy family. It is an erect, annual-to-perennial herb and usually grows to 45-70cm tall, but can reach 1.6m. It has reddish-purple stems and wrinkled, divided leaves which are dark green on top with a downy lining. The leaves appear in a rosette that grows into a dense cluster. Ragwort flowers are bright yellow and appear in clusters. It has downy, parachute-like seeds.

Ragwort is found throughout the region. The largest infestations are generally found on reverted farmland and land that is unoccupied. Ragwort is an aggressive, prolific flowering plant. It reduces the productivity of the land and is toxic to livestock, particularly cattle and horses. Sheep are more resistant to its poison although deaths do sometimes occur.

Since the widespread introduction of the flea beetle (biological control agent for ragwort), average infestation densities throughout Northland have steadily declined to levels where it is no longer a significant threat on most properties.

### Rules

1. No person shall sell, offer for sale, propagate, breed or multiply any ragwort within the Northland region.
2. No person shall knowingly distribute, transport or release any ragwort (including any seeds or live vegetation) within the Northland region.
3. Land occupiers must:
  - a. Destroy all ragwort within 50 metres of a property boundary where the neighbouring property is clear of ragwort and is clear within 50 metres of that boundary;
  - b. Destroy all ragwort between their property boundary and the carriageway of any adjoining road, where this land is within 50 metres of a property free of ragwort;
  - c. Destroy all ragwort in the operational areas of a quarry; and
    - i. a 50 metre strip of land around the operational areas of a quarry, or;
    - ii. where existing vegetation reduces the risk of ragwort spreading, the 50 metre buffer zone may be reduced by written agreement with the NRC.

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## WILD GINGER

*(Hedychium flavescens and H. gardnerianum)*

The name 'wild ginger' applies to two species, yellow ginger (*Hedychium flavescens*) and kahili ginger (*H. gardnerianum*). Kahili ginger is the most common and most invasive of the two. Both species form dense colonies in native bush, on road sides and river banks, smothering and eventually replacing all other species. Wild ginger has a faint ginger smell and taste. Young plants are palatable to livestock, and both species tend to invade all areas where stock are excluded.

Both species are non-woody perennials, growing from thick-branching rhizomes (swollen underground stems). Rhizomes form dense beds up to 1m deep excluding all other species. Kahili ginger produces scented, lemon-yellow flowers with conspicuous red stamens, followed by fruiting spikes with fleshy orange fruits. Yellow ginger produces scented, cream-coloured flowers in clusters, from May to June and does not produce fruit.

Wild ginger is found in many parts of the region, particularly in and adjacent to coastal settlements. Major infestations are found in the Herekino, Whangaroa, Kohukohu, Rāwene, Waimamaku, Waipoua, Helena Bay, McLeods Bay and Whāngārei areas.

### Rules

1. No person shall sell, offer for sale, propagate, breed or multiply any wild ginger within the Northland region.
2. No person shall knowingly distribute, transport or release any wild ginger (including any seeds or live vegetation) within the Northland region.
3. Where a management agency has undertaken initial control work on a property and/or supplied resources to reduce pest plant population densities to a level agreed to in a management plan for the area, the occupier of the property shall maintain the pest plant population densities to those agreed to in the management plan.



4. Land occupiers must destroy all wild ginger within 10 metres of a property boundary where the boundary adjoins a road or rail reserve clear of wild ginger;
5. Every road or rail controlling authority shall implement a control programme aimed at progressively controlling wild ginger on formed road or rail reserves under their jurisdiction where adjoining land is clear or only sparsely infested with wild ginger, in accordance with a five year management plan which shall be negotiated with, and agreed to by, the NRC.

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## 4.5 Community Pest Control Area (CPCA) Plant Pests

The NRC aims to assist communities and stakeholders to control plant pests where they impact upon local values. Species that are regionally or locally common may be considered for a CPCA or interagency site-led programme where significant regional environmental, social or economic benefits are likely. The following species may be considered for inclusion in a CPCA (Table 2 and 3).

Table 2: CPCA plant pests that are also banned from sale and distribution in Northland.

Common Name	Scientific Name	Common Name	Scientific Name
African club moss	<i>Selaginella kraussiana</i>	Japanese spindle tree	<i>Euonymus japonicus</i>
Aristea	<i>Aristea ecklonii</i>	Jasmine	<i>Jasminum polyanthum</i>
Banana passionfruit	<i>Passiflora tripartita</i> (all subspecies) and <i>P. tarminiana</i>	Kangaroo acacia	<i>Acacia paradoxa</i>
Blue morning glory	<i>Ipomoea indica</i>	Lagarosiphon	<i>Lagarosiphon major</i>
Blue passion flower	<i>Passiflora caerulea</i>	Madeira vine	<i>Anredera cordifolia</i>
Broom	<i>Cytisus scoparius</i>	Mexican daisy	<i>Erigeron karvinskianus</i>
Brush wattle	<i>Paraserianthes lophantha</i>	Monkey apple	<i>Syzygium smithii</i>
Buddleia	<i>Buddleja davidii</i>	Moth plant	<i>Araujia hortorum</i>
Boneseed	<i>Chrysanthemoides monilifera</i>	Oxylobium	<i>Callistachys lanceolata</i>
Cape honey flower	<i>Melianthus major</i>	Paperbark poplar	<i>Melaleuca quinquenervia</i>
Cape ivy	<i>Senecio angulatus</i>	Parrots feather	<i>Myriophyllum aquaticum</i>
Cat's claw creeper	<i>Macfadyena unguis-cati</i>	Periwinkle	<i>Vinca major</i>
Century plant	<i>Agave americana</i>	Plectranthus	<i>Plectranthus ciliatus</i>
Climbing Asparagus	<i>Asparagus scandens</i>	Prickly Moses	<i>Acacia verticillata</i>
Coastal banksia	<i>Banksia integrifolia</i>	Reed sweet grass	<i>Glyceria spp</i>
Cotoneaster	<i>Cotoneaster glaucophyllus</i> , <i>C. franchetii</i>	Queensland poplar	<i>Homalanthus populifolius</i>
Egeria (oxygen weed)	<i>Egeria densa</i>	Sexton's bride	<i>Rhaphiolepis umbellata</i>
Elaeagnus	<i>Elaeagnus x reflexa</i>	Smilax	<i>Asparagus asparagoides</i>
German ivy	<i>Delairea odorata</i>	Sweet pea shrub	<i>Polygala myrtifolia</i> (not incl. cv. "Grandiflora")
Great bindweed	<i>Calystegia silvatica</i>	Sydney golden wattle	<i>Acacia longifolia</i>
Green cestrum	<i>Cestrum parqui</i>	Taiwan cherry	<i>Prunus campanulata</i>
Grey and crack willows	<i>Salix cinerea</i> , <i>Salix fragilis</i>	Tuber ladder fern	<i>Nephrolepis cordifolia</i>
Himalayan honeysuckle	<i>Leycesteria formosa</i>	Velvet groundsel	<i>Roldana petasitis</i>
Hornwort	<i>Ceratophyllum demersum</i>	Wandering jew	<i>Tradescantia fluminensis</i>
Japanese honeysuckle	<i>Lonicera japonica</i>	Woolly nightshade	<i>Solanum mauritianum</i>

Table 3: CPCA plant pests that are not banned from sale and distribution in Northland.

Common Name	Scientific Name	Common Name	Scientific Name
Agapanthus	<i>Agapanthus praecox</i>	Elodea (oxygen weed)	<i>Elodea canadensis</i>
Arum lily	<i>Zantedeschia aethiopica</i>	Phoenix palm	<i>Phoenix canariensis</i>
Bangalow palm	<i>Archontophoenix cunninghamiana</i>	Queen of the night	<i>Cestrum nocturnum</i>
Brazilian Pepper Tree	<i>Schinus terebinthifolius</i>	Wilding pines	<i>Pinus radiata, P. contorta, and P. pinaster</i>
Coral / Flame tree	<i>Erythrina xskykesii</i>		

These species are widespread throughout the region, and can damage native ecosystems by smothering existing vegetation, and preventing native plant regeneration. When growing in water bodies, some species catch flood debris, impede flood flows, impact on water quality, and impede recreational activities. Where a plant pest becomes dominant, the productivity of land may be severely reduced, and stock or crops may be devalued. Cultural and traditional values associated with a significant area may also be affected.

### Objectives (Five Year)

To assist communities and stakeholders to manage local impacts of these species.

### Pest Management Methods

#### Site-led Programmes:

- NRC will assist communities and stakeholders to control these species where they impact upon local values.

#### Education:

- NRC will provide advice to NRC staff and stakeholders on practices which limit establishment of plant pests.

### Rules

1. No person shall sell, offer for sale, propagate, breed or multiply any of the plant pests listed in Table 2 within the Northland region.
2. No person shall knowingly distribute, transport or release any of the plant pests listed in Table 2 (including any seeds or live vegetation) within the Northland region.
3. Where a management agency has undertaken initial control work on a property and/or supplied resources to reduce pest plant population densities to a level agreed to in a management plan for the area, the occupier of the property shall maintain the pest plant population densities to those agreed to in the management plan.

***A breach of these rules, without reasonable excuse, is an offence under Section 154(r) of the Act.***

## 4.6 Risk Assessment Plant Pests

Risk assessment plant pests (Table 4) are those species that are of potential concern to the region, but little is known about the distribution or the risks posed. While the extent of potential impacts is unknown, these species may have the ability to alter native ecosystems and compete with native species for food and space. Further information about the ecological requirements, population behaviour, and control methods for these species is needed. The intention is to improve understanding about these plants in the region so that they can be classified and managed appropriately when the Strategy is reviewed.

**Table 4: Risk assessment plants.**

Common Name	Scientific Name	Common Name	Scientific Name
Bat-wing passion flower	<i>Passiflora apetala</i>	Fork-leaved hakea	<i>Hakea drupacea</i>
Camphor laurel	<i>Cinnamomum camphora</i>	Himalayan fairy grass	<i>Miscanthus nepalensis</i>
Chinese windmill palm	<i>Trachycarpus fortunei</i>	Lily of the valley vine	<i>Salpichroa organifolia</i>
Dusky coral pea	<i>Kennedia rubicunda</i>	Norfolk Island hibiscus	<i>Lagunaria patersonia</i> subsp. <i>patersonia</i>
English ivy	<i>Hedera helix</i>	Sharp rush	<i>Juncus acutus</i>

### Objectives (Five Year)

- To assess the risks, impacts and options for managing these species.
- To raise public awareness of the economic, biodiversity, social and cultural impacts of plant pests.

### Pest Management Methods

- The NRC will undertake surveillance, research and raise public awareness of risk assessment pests to assist with classifying these pests and managing them appropriately.
- The NRC will provide advice and information to the public, and will support initiatives to minimise any adverse impacts they have.
- If surveillance indicates that a risk assessment pest poses a threat to the region, and eradication is achievable, control may be carried out by the NRC and their contractors or, with agreement, by other agencies.

### Rules

1. Where a management agency has undertaken initial control work and/or supplied resources to reduce pest population densities to a level agreed to in a management plan for the area, the pests shall be maintained at the agreed level by the signatories to the management plan.

***A breach of these rule, without reasonable excuse, is an offence under Section 154(r) of the Act.***