Christchurch City Council

Operational pest plant management plan

October 2024

Christchurch City Council

Approvals panel

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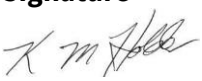
Reviewed by	**Kay Holder** Manager, Regional Parks, Parks Unit.	**Date** 15th April 2024	**Signature** 
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Contents

Executive summary

This Christchurch City Council (Council) operational plant pest management plan has been prepared in response to the Council's statutory obligations to halt the decline of indigenous biodiversity, to mitigate biosecurity threats, and to maintain the integrity of public infrastructure. It has been prepared in accordance with the guidance provided in the Canterbury Regional Pest Management Plan 2018-2038 (RPMP) and the Council's Biodiversity Strategy 2008-2035.

The purpose of the Plan is to enable better coordination of plant pest management on land and water assets owned and managed by the Council. It will be implemented and monitored by the Annual Operational Pest Management Programme, which is to be formulated each year by a cross-Council group of staff representing all the units with operational responsibility for plant pest management.

The Council's Annual Operational Pest Management Programme will be communicated to other stakeholders; most significantly to ECan, DOC and local plant pest control groups.

General operational guiding principles and key performance indicators have been agreed by all units that undertake plant pest management activities on land and water assets owned and managed by the Council. In addition, there are specific operational objectives for the following groups of land and water assets:

- ✓ *Regional Parks and Reserves – terrestrial, wetland and coastal;*
- ✓ *Urban Parks - Cemeteries*
- ✓ *Three Waters -Stormwater network/Sewerage network;*
- ✓ *Road network*
- ✓ *Residential Red Zone*
- ✓ *Other properties*

The highest priority plant pest species known to be present on land owned and managed by the Council are listed in Table 2. Priority plant pest species per key ecosystems (forests; bluffs/cliffs/rock outcrops; wetlands; coastal; shrublands; grasslands/open ground) are also listed from pages 26 - 36.

Increasing our understanding of the presence of plant pest species across the district is important to meet the Council's weed control obligations. To this end, systematic survey, inventory, and monitoring of sensitive sites is identified as key actions for each unit to undertake with plant pest control obligations.

The ability of the Council to adequately meet its plant pest control obligations is limited by responsibilities being shared across a fragmented structure among several Council units that are poorly integrated. As a result, there is a lack of consistency in resourcing, effort, and a serious lack of understanding of weed presence and distribution across the Council's full jurisdiction.

To address this, consideration could be given to establishing a more centralised structure within the Council by establishing a "one stop shop" that has responsibility for all the Council's plant pest control obligations. In any case, all Council units responsible for pest control should dedicate adequate resources to meet its plant pest control obligations, and the control undertaken by each unit should be a key performance measure in annual reporting.

Christchurch pest management plan context

Councils have a core statutory responsibility under the Resource Management Act 1991 (RMA) to protect, maintain and enhance indigenous biodiversity on Council land. They also have responsibility on private land through land use controls in the District Plan and advocating for indigenous biodiversity generally. The Biosecurity Act requires Councils to control organisms declared as pests (plant and animal) in Regional Pest Management Plans (RPMP) on land that they administer and to meet the costs of doing so. Managing plant pests is also important to maintain the operational integrity of core Council assets and infrastructure.

The Christchurch district comprises a diverse assemblage of ecosystems and species. It includes internationally and nationally important habitats for wildlife, population strongholds for numerous threatened and rare species, and many species are only found in the district[1]. Owing to the combined impacts of habitat loss, ecological fragmentation, weed and animal pest invasion, high proportions of what remains of the district's ecosystems and associated biodiversity is today threatened with extinction. At least 22 plant species are now presumed extinct from the Christchurch district. A further 124[2] plant species are now ranked as "Nationally Threatened" or "At Risk" of extinction within the Christchurch district[3]. Indigenous fauna has similarly suffered.

Halting the decline of indigenous biodiversity is a matter of national importance. The New Zealand Biodiversity Strategy 2000 - 2020 (NZBS) sets the broad framework to achieve this. A key objective is to maintain and restore a full range of remaining natural habitats, ecosystems, and viable populations of indigenous species. It includes goals, objectives, and actions to address the decline. The strategy identifies invasive pests as the greatest single threat to indigenous biodiversity.

The Council's Biodiversity Strategy was prepared in response to its obligations for indigenous biodiversity. This strategy prioritises the preparation of pest management plans as an objective **(Objective 1.4. p38: "Pest management plans, policies and initiatives (internal and external) including for domestic animals on Council managed land are prepared, contributed to, coordinated and implemented")**. Synergies also exist with other Council plans, such as the Urban Forest Plan[4].

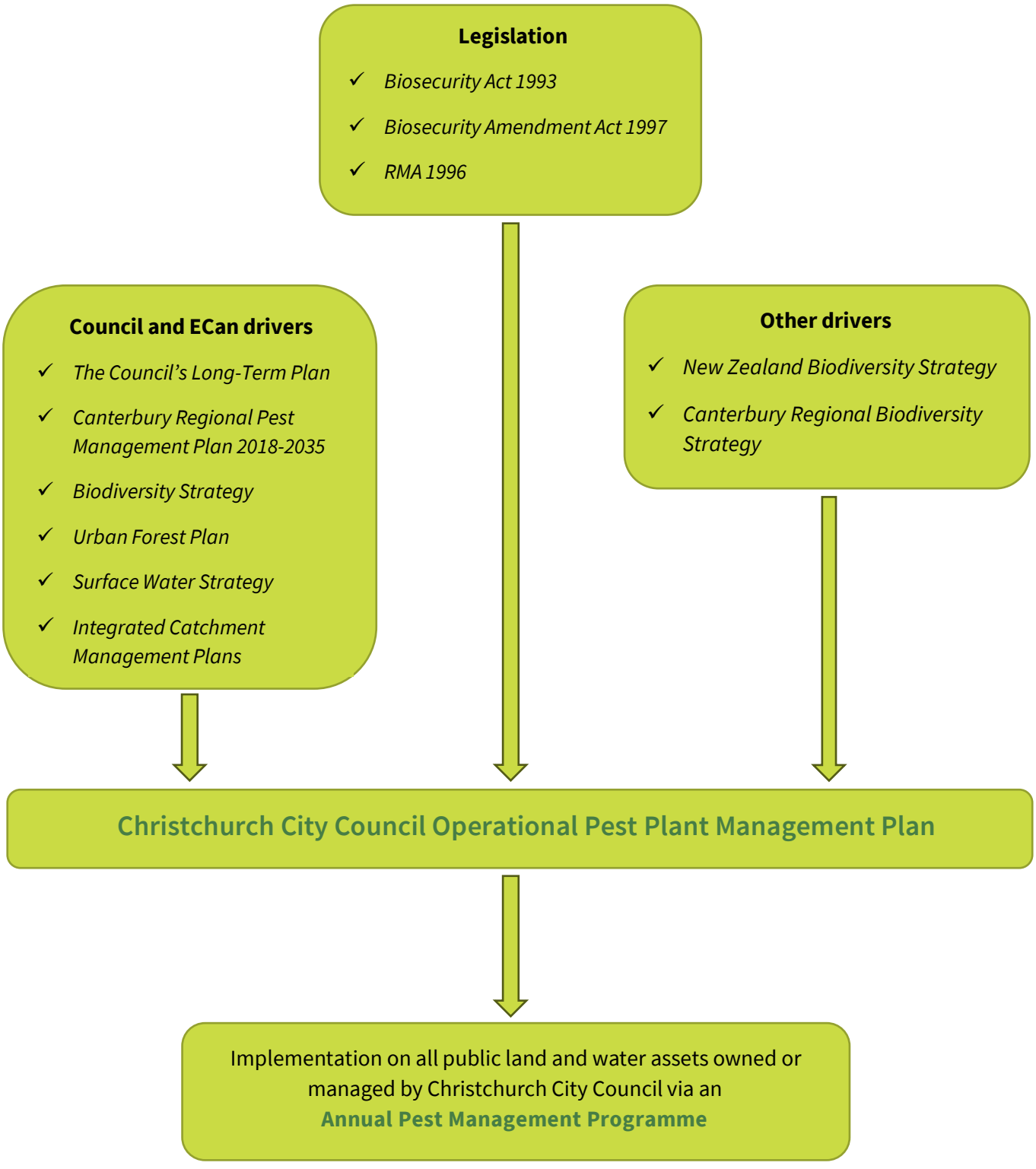
Central Government has recently completed a National Policy Statement on Indigenous Biodiversity (NPS-IB) to guide the management of indigenous biodiversity under the RMA. It provides direction on the management of pests to better protect indigenous biodiversity that will have to be accommodated in District Plans.

Climate change is expected to exacerbate the threat of invasive species in several ways. Warmer temperatures will make the Christchurch district more vulnerable to invasion of species that currently find the district too cold to establish invasive populations. Increased disturbance from severe weather events may spread invasive species into and around the region, and damage intact native ecosystems making them easier to invade. Increased vigilance and timely control of pest populations will be necessary to respond to weed threats exacerbated by climate change.

[1] Banks Peninsula (10 species), the Canterbury Plains (1 species), or at Kaitorete Spit (2 species)
[2] The latest revision of New Zealand's threatened plant species (de Lange et al 2018) identifies (~124)
[3] 12 records included in this total are possibly dubious in that they may represent mis-identifications or their presence in the district has not been formally verified.
[4] Urban Forest Plan 5 12 2022, FOLDER09/3689

In addition, a combination of extensive predator control being undertaken across the district and the expected increase in bird numbers, as well as large areas being retired from farming for the purposes of facilitating natural forest regeneration, increases the threat of bird dispersed weeds spreading across the district. To mitigate this threat necessitates proactive intervention to get ahead of the spread curve by eliminating pest plants in key *'take off'* sites.

Legislative framework



Canterbury regional pest management plan 2018-2035

The Canterbury Regional Pest Management Plan 2018-2035 (RPMP) requires District Councils to control plants and animals declared as pests.

A pest is defined by the RPMP as an organism capable of causing serious and unintended effects in relation to the Canterbury region in one or more of the following.

- ✓ economic wellbeing; or
- ✓ the viability of threatened species or organisms, the survival and distribution of indigenous plants or animals, or the sustainability of natural and developed ecosystems, ecological processes, and biological diversity; or
- ✓ soil resources or water quality; or
- ✓ human health or enjoyment of the recreational value of the natural environment; or
- ✓ the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu and taonga.

44 species are currently listed as pests in the RPMP. A further 58 species are listed as organisms of interest (OOI). Many species listed as OOI are likely to become pests. As a result, they are also a high priority for management owing to the threat they pose to the range of values and assets the Council has obligations for. Weed species listed as pests and OOI in the RPMP are shown in Table 2 (pg. 10).

Pest management programmes

The RPMP also provides a framework for District Councils to undertake pest control that are outlined in five pest management programmes. These programmes (listed below) provide direction to Councils in undertaking appropriate pest management. They reflect the extent of the pest's invasion within the region as well as whether it is realistic to achieve effective control.

- ✓ **Exclusion:** to prevent the establishment of the pest that is present in New Zealand but not yet established in an area.
- ✓ **Eradication:** to reduce the infestation level of the pest to zero levels in an area in the short to medium term.
- ✓ **Progressive Containment:** to contain or reduce the geographic distribution of the pest to an area over time.
- ✓ **Sustained Control:** to provide for ongoing control of the pest to reduce its impacts on values and spread to other properties.
- ✓ **Protecting Values in Places (Site-led):** the pest that can cause damage to a place, is excluded, or eradicated from that place, or is contained, reduced, or controlled within the place to an extent that protects the values of that place.

Council's operational pest management plan

The purpose of the plan

The purpose of this plan is to implement pest plant control that meets the Council's obligations for indigenous biodiversity, addresses biosecurity threats, and maintains the operational integrity of Council infrastructure. It provides a framework consistent with the RPMP that enables prioritised plant pest control to be undertaken across the district by various Council units in a coordinated and systematic manner to:

- ✓ Control plant pests on all public land and water assets owned or managed by Council for economic, social, and cultural well-being; and to protect, enhance and restore native biodiversity.
- ✓ Implement the responsibilities and obligations of Council as a landowner consistent with the Canterbury RPMP.
- ✓ Implement coordinated and effective plant pest management on all public land and water assets owned or managed by Council.
- ✓ Work in an inclusive and practical way with the community to provide safe and sustainable plant pest management on land and water assets owned or managed by Council, which are accessible by the public.
- ✓ Work in an open and inclusive way with other agencies with responsibility for plant pest management, most notably the Department of Conservation, Environment Canterbury, Waimakariri and Selwyn District Councils.

General operational guiding principles

The guiding operational principles for plant pest management apply to all land and water assets owned or managed by the Council as specified below. They do not prevent other plant pest management activities taking place because of annual priority setting, recommendations from monitoring surveys or provisions identified in more detailed management plans.

- ✓ Meet the Council's responsibilities and obligations for plant pest control.
- ✓ Maintain Council land and water assets to the standard required to sustain and enhance the asset, to be a good neighbour[5] and to be environmentally responsible.
- ✓ Work closely with ECan, DOC, Biosecurity New Zealand, neighbouring TLAs and other agencies as appropriate to support integrated and coordinated plant pest management and to respond to biosecurity issues on land and water assets owned or managed by the Council.
- ✓ Work closely with landowners and the community to develop optimal plant pest management on all land in the Council area; integrating community and landowner weed management with the Council's efforts.
- ✓ Promote greater understanding and awareness in all sectors of the community of the importance of weed management and encourage public engagement in good practice such as safe disposal of pest plants.
- ✓ Ensure that plant pest management activities allow for safe public access to public areas of land and water assets owned or managed by the Council.
- ✓ Respond in a timely way to changing weed management requirements or opportunities, such as new species incursions, new funding and resources or new technology.
- ✓ Prevent the spread of plant pests into areas where they have not previously occurred.
- ✓ Undertake plant pest management to minimise or prevent impacts on ecological values on land and water assets owned or managed by the Council.
- ✓ Identify plant pest management priorities on an annual basis and allocate funding and staff resources accordingly.

5

Good neighbour means undertaking reasonable and practicable measures to prevent or minimise the impact of pests on neighbouring properties from land and water assets owned or managed by the Council.

Roles and responsibilities

This Plan applies to all land and water assets owned or managed by Christchurch City Council including:

- ✓ Regional Parks and Reserves
- ✓ Urban Parks - Cemeteries
- ✓ Three Waters -Stormwater network/Sewerage network
- ✓ Road's network
- ✓ Residential Red Zone
- ✓ Other properties.

Pest plants in the Christchurch district

The plant species currently listed as pests in the RPMP is limited to a relatively small subset of the many species that threaten the range of values the Council has responsibilities for. Consequently, for the Council to better meet its responsibilities, for indigenous biodiversity, it has been necessary to identify a more extensive list of priority plant pest species that require control across the district.

To determine priority plant pests, all potential species have been ranked to determine an appropriate threat and pest management regime. The highest threat category for plant pests is a rating of 5.5, decreasing in urgency to 1 being species that currently require very restricted or no control (Refer Table 1).

Table 1: *Threat level scores and management actions*

Threat level	Pest management programme	Action required
5.5	Total Control -all sites	Eradicate all plants at all sites as soon as possible
5	Total Control - selected sites	Eradicate all plants at selected sites as soon as possible
4.5	Progressive Containment - all sites	Control all plants at all sites, aim for eradication over medium term
4	Progressive Containment - selected sites	Control all plants at selected sites, aim for eradication over medium term
3.5	Sustained Control - all sites	Control all plants at all sites, aim to contain spread immediately and reduce population over long term
3	Protecting Values in Places (Site led)	Control all plants at selected sites, aim to contain spread immediately and reduce population over long term
2	Restricted	Do not propagate or distribute. Observe establishment and spread. Control if necessary.
1	No control	Control not currently required

173 plant pest species are identified as requiring management to some extent across the Christchurch district. These species are considered to have the potential to cause significant adverse effects to biodiversity and amenity values, Council assets and infrastructure, and/or the quality of life of the residents of Christchurch. If left unmanaged the losses and costs incurred by these species are expected to be considerable. The species ranked from 5.5 – 2 are listed in Table 2 below.

The highest priorities for management action are the species listed for Total Control and Progressive Containment. There is an expectation that these species will be managed where present on Council land. They occur in two categories based on their abundance, ranked as 5.5 - 5: 4.5 - 4 respectively. For species that are highly restricted in abundance and numbers of locations, it is expected that these species can be eliminated from the district over the short term. Whereas species that are already sufficiently widespread that elimination cannot be expected in the short term, these species will be prioritised by site where the threat is greatest. It is hoped that with repeated control, target species can first be reduced and then elimination can occur.

58 species are identified for Total Control and 44 species are identified for Progressive Control. 70 species occur within or near Council land. For the 28 species (24 and 4 respectively) included that are not yet known to occur on Council land, preventing these species from becoming established is an imperative.

For the species listed for Sustained Control (17 species), Site led (10 species.), Restricted (21 species.), including 5 species not yet known to occur on Council land), No control (17), whether control is warranted will depend on local context. Control will be targeted to the most important and sensitive sites. What constitutes an important /sensitive site is discussed in more detail on page 21.

Specific operational objectives and activities for each Council unit with weed control responsibilities is outlined in pages 22 to 25. Priority weed species per key ecosystems (Forests; Bluffs/Cliffs/Rock Outcrops; Wetlands; Coastal; Shrublands; Grasslands/Open Ground) are listed from pgs. 26-36.

Table 2: *Weed species in the Christchurch district*

Total control – all sites						
Latin name	**Common name**	**Form**	**Habit**	**Distribution**	**Priority**	**RPMP listings**
Achnatherum caudatum	Puna grass	Grass	Open ground	Oxidation ponds only	Total control - all sites	Declared Pest
Andropogon virigincus	Broomsedge	Sedge	Wetlands	No records on CCC land	Total control - all sites	Declared Pest
Aponogeton distachyos *	Cape pondweed	Herb	Wetlands	Localised	Total control - all sites	
Araujia hortorum	Moth plant	Vine	Roadside waste places, forest margins	No records on CCC land	Total control - all sites	Declared Pest
Asparagus scandens *	Climbing asparagus	Vine	Forest margins, shrublands	Sporadic, widespread	Total control - all sites	
Baccharis halimifolia	Baccharis	Shrub	Forest, shrublands	Very localised	Total control - all sites	Declared Pest
Calicotome spinosa	Spiny broom	Shrub	Forest edges to open ground	No records on CCC land	Total control - all sites	Declared Pest
Calotis lappulacea	Bur daisy	Herb	Grassland, open ground	Very localised	Total control - all sites	Declared Pest
Carex longebrachiata	Australian sedge	Sedge	Wetlands	No records on CCC land	Total control - all sites	Declared Pest
Carex pendula *	Hanging sedge	Sedge	Wetland	Localised	Total control - all sites	Organism of interest
Ceratophyllum demersum	Hornwort	Herb	Wetlands	No records on CCC land	Total control - all sites	Declared Pest
Claytonia sibirica *	Pink purslane	Herb	Wetlands, shady	No records on CCC land	Total control - all sites	
Cobaea scandens	Cathedral bells	Herb	?	No records on CCC land	Total control - all sites	Declared Pest
Cyperus rotundus	Nutgrass	Sedge	Wetlands	No records on CCC land	Total control - all sites	Declared Pest
Eragrostis curvula	African love grass	Grass	Open ground, grassland	No records on CCC land	Total control - all sites	Declared Pest
Erica cinerea	Bell heather	Shrub	Open ground	Very localised	Total control - all sites	Declared Pest
Erica lusitanica *	Spanish heath	Shrub	Open ground	Very localised	Total control - all sites	Organism of interest
Fallopia spp	Knotweed	Climber	Forest, shrublands, open ground	No records on CCC land	Total control - all sites	Declared Pest
Galega officinalis	Goat's rue	Herb	Open ground	No records on CCC land	Total control - all sites	Organism of interest
Glyceria maxima *	Reed sweet grass	Grass	Wetlands	Very localised to Heathcote	Total control - all sites	
Gymnocoronis spilanthoides *	Senegal tea	Herb	Aquatic, wetlands	No records on CCC land	Total control - all sites	Organism of interest
Heracleum mantegazzianum *	Giant hogweed	Herb	Waterway margins, broken ground	Localised	Total control - all sites	
Limonium companyonis *	Sea lavender	Succulent	Tidal zones	Localised Heathcote estuary	Total control - all sites	
Lythrum salicaria *	Purple loosestrife	Herb	Wetlands, river margins	Localised	Total control - all sites	Declared Pest
Marsilea mutica	Nardoo	Fern	Aquatic	No records on CCC land	Total control - all sites	Organism of interest
Myriophyllum aquaticum	Parrot's feather	Herb	Aquatic	No records on CCC land	Total control - all sites	Organism of interest
Nassella trichotoma *	Nassella tussock	Grass	Grassland – open ground	Sporadic	Total control - all sites	Declared Pest
Nuphar lutea	Yellow water lily	Herb	Wetlands	Urban ponds	Total control - all sites	Declared Pest
Nymphoides geminata	Entire marshwort	Herb	Wetlands	No records on CCC land	Total control - all sites	Declared Pest
Oxylobium lanceolatum	Oxylobium	Shrub	Shrubland, open ground	No records on CCC land	Total control - all sites	Declared Pest
Pennisetum macrourum	African feather grass	Grass	Open ground, grassland	River margins, wetlands in city	Total control - all sites	Declared Pest
Phragmites australis *	Phragmites	Grass	River margins, wetlands	River margins, wetlands	Total control - all sites	Declared Pest
Rhamnus alaternus *	Evergreen italian buckthorn	Shrub	Forest, shrublands	Sporadic Port Hills	Total control - all sites	
Sagittaria platyphylla	Sagittaria	Herb	Aquatic	No records on CCC land	Total control - all sites	Organism of interest
Setaria palmifolia	Palm grass	Grass	Grassland, open ground	No records on CCC land	Total control - all sites	Declared Pest

Latin name	Common name	Form	Habit	Distribution	Priority	RPMP listings
Setaria pumila	Yellow bristle grass	Grass	Grasslands, open ground	No records on CCC land	Total control - all sites	Declared Pest
Solanum margunatum	White-edged nightshade	Shrub	Sunny open ground	Very localised	Total control - all sites	Declared Pest
Solanum mauritianum	Woolly nightshade	Shrub	Bluffs, open sunny places	No records on CCC land	Total control - all sites	Declared Pest
Spartina anglica *	Cord grass	Grass	Tidal, estuarine	Localised	Total control - all sites	Declared Pest
Themeda triandra	Kangaroo grass	Grass	Grassland-open ground	No records on CCC land	Total control - all sites	Declared Pest
Thymus vulgaris	Wild thyme	Shrub	Bluffs, open sunny places	Mt Cavendish, localised urban	Total control - all sites	Declared Pest
Tussilago farfara	Colts foot	Grass	Grasslands, open ground	No records on CCC land	Total control - all sites	Declared Pest
Xanthium spinosum	Bathurst bur	Herb	Shrubland, open ground	No records on CCC land	Total control - all sites	Organism of interest
Xanthium strumarium	Noogoora bur	Herb	Grassland, open ground	No records on CCC land	Total control - all sites	Declared Pest

Total control – selected sites

Latin name	Common name	Form	Habit	Distribution	Priority	RPMP listings
Ageratina riparia	Mistflower	Herb	Roadside, forest	No records on CCC land	Total control - selected sites	Organism of interest
Arundo donax	Giant reed	Grass	Wetlands	Very localised ?	Total control - selected sites	
Asparagus asparagoides *	Smilax	Scrambler	Shrublands, open ground	Widespread	Total control - selected sites	
*Berberis darwinii**	Darwin's barberry	Shrub	Forest, shrublands	Sporadic/widespread	Total control - selected sites	Declared Pest
Clematis vitalba *	Old man's beard	Vine	Forest, shrublands	Widespread	Total control - selected sites	Declared Pest
Cortaderia selloana *	Pampas	Grass	Open ground	Widespread	Total control - selected sites	
Ehrharta erecta *	Veld grass	Grass	Open ground	Very localised	Total control - selected sites	
Equisetum hyemale	Horsetail	Herb	Wetlands	No records on CCC land	Total control - selected sites	Organism of interest
Erica arborea	Tree heath	Shrub	Open ground	Very localised	Total control - selected sites	
Lagarosiphon major *	Oxygen weed	Herb	Aquatic	Localised to Otukaikino catchment	Total control - selected sites	Declared Pest
Passiflora 'Tacsonia group'	Banana passionfruit	Vine	Forest- open ground	Widespread but localised mostly urban	Total control - selected sites	Declared Pest
Plectranthus spp	Plectranthus	Herb	Forest	No records on CCC land	Total control - selected sites	Organism of interest
Reynoutria sachalinensis *	Giant knotweed	Herb	Open ground	No records on CCC land	Total control - selected sites	
Tropaeolum speciosum *	Chilean flame creeper	Vine	Forest	Sporadic, peri-urban	Total control - selected sites	Organism of interest

Progressive containment – all sites

Latin name	Common name	Form	Habit	Distribution	Priority	RPMP listings
*Arctium minus**	Burdock	Herb	Grasslands, open ground	Sporadic/widespread	Progressive containment - all sites	Organism of interest
Cotoneaster horizontalis	Wall spray	Shrub	Bluffs, open sunny places	Common peri-urban otherwise localised	Progressive containment - all sites	
Cotoneaster simonsii *	Khasia berry	Shrub	Bluffs, open sunny places	Common peri-urban otherwise localised	Progressive containment - all sites	
Eccremocarpus scaber	Chilean glory creeper	Vine	Forest, shrublands	Localised	Progressive containment - all sites	Organism of interest
Egeria densa *	Egeria	Aquatic herb	Waterways	Localised to Avon	Progressive containment - all sites	Declared Pest
Erigeron karvinskianus *	Mexican daisy	Herb	Banks, bluffs	Common in city and Port Hills, otherwise very localised	Progressive containment - all sites	
Galeobdolon luteum *	Aluminium plant	Herb	Forest, shrubland	Common in city and Port Hills, otherwise localised	Progressive containment - all sites	

Latin name	Common name	Form	Habit	Distribution	Priority	RPMP listings
Gunnera tinctoria *	Chilean rhubarb	Herb	Waterway margins	Localised	Progressive containment - all sites	
Lonicera japonica *	Japanese honeysuckle	Vine	Shrublands, forest	Common in city and Port Hills, otherwise localised	Progressive containment - all sites	
Maytenus boaria *	Chilean mayten	Tree	Forest -open ground	Widespread but localised mostly urban	Progressive containment - all sites	Organism of interest
Pinus contorta *	Lodgepole pine	Tree	Forest- open ground	Sporadic	Progressive containment - all sites	Declared Pest
Pittosporum crassifolium *	Karo	Tree	Forest- open ground	Widespread but localised mostly urban and coastal	Progressive containment - all sites	
Pittosporum ralphii	Karo	Tree	Forest- open ground	Widespread but localised mostly urban and coastal	Progressive containment - all sites	
Prunus avium	Sweet cherry	Tree	Forest -open ground	Widespread but localised mostly urban	Progressive containment - all sites	
Pseudotsuga menziesii *	Douglas fir	Tree	Forest- open ground	Widespread	Progressive containment - all sites	
Rubus procerus *	Himalayan giant blackberry	Vine	Forest- open ground	Localised	Progressive containment - all sites	Organism of interest
Setaria verticillata *	Rough bristle grass	Grass	Grasslands, open ground	Localised City	Progressive containment - all sites	
Viburnum tinus *	Laurustinus	Shrub	Shrubland-open ground	Localised to mostly urban	Progressive containment - all sites	

Progressive containment – selected sites

Latin name	Common name	Form	Habit	Distribution	Priority	RPMP listings
Acer pseudoplatanus *	Sycamore	Tree	Roadside, forest	Widespread	Progressive containment - selected sites	Organism of interest
Alisma plantago-aquatica	Water plantain	Herb	Waterways	Localised	Progressive containment - selected sites	
Alnus glutinosa *	Alder	Tree	Wetlands	Widespread	Progressive containment - selected sites	
Berberis glaucocarpa *	European barberry	Shrub	Forest, shrublands	Sporadic/widespread	Progressive containment - selected sites	
Bidens frondosa *	Beggar's ticks	Herb	Wetlands	Localised	Progressive containment - selected sites	Organism of interest
Centranthus ruber *	Spur valerian	Herb	Rocky bluffs, dry banks	Localised	Progressive containment - selected sites	Organism of interest
Chrysanthemoides monilifera *	Boneseed	Shrub	Coastal, sunny slopes	Localised, common peri-urban coastal settlements	Progressive containment - selected sites	Declared Pest
Cotyledon orbiculata *	Pigs ear	Succulent	Sunny coastal bluffs and open ground	Common peri-urban coastal, otherwise localised	Progressive containment - selected sites	Organism of interest
Crataegus monogyna *	Hawthorn	Shrub	Forest, shrublands	Common peri-urban settlements	Progressive containment - selected sites	Organism of interest
Echium candicans *	Pride of Madeira	Shrub	Sunny banks, cliffs, open ground	Common coastal peri-urban	Progressive containment - selected sites	
Hedera helix ssp. helix *	Ivy	Vine	Forest, shrublands, open ground	Widespread	Progressive containment - selected sites	
*Hoheria populnea & sexstylosa**	Houhere	Tree	Forest – open ground	Common in city and Port Hills, otherwise localised	Progressive containment - selected sites	
Ilex aquifolium *	European holly	Tree	Forest -open ground	Widespread but localised	Progressive containment - selected sites	Organism of interest
Iris pseudacorus *	Yellow flag	Herb	Wetlands, river margins	Common in city, otherwise localised	Progressive containment - selected sites	
Juncus gerardii	Saltmarsh rush	Rush	Tidal/estuarine habitats	Uncommon, localised to a lower Heathcote and Avon	Progressive containment - selected sites	
Lycium ferocissimum *	Boxthorn	Shrub	Bluffs, banks, cliffs	Common in city and Port Hills, otherwise localised	Progressive containment - selected sites	Organism of interest
Mahonia aquifolium *	Oregon grape		Open ground	Localised	Progressive containment - selected sites	
Myricaria germanica	False tamarisk	Shrub	Open ground	Localised	Progressive containment - selected sites	Organism of interest
Nassella neesiana	Chilean needle grass	Grass	Grasslands, open ground	Very localised	Progressive containment - selected sites	Declared Pest
Populus alba *	White poplar	Tree	Open ground	Widespread localised	Progressive containment - selected sites	
Salix cinerea *	Grey willow	Tree	Wetlands	Widespread	Progressive containment - selected sites	

Latin name	Common name	Form	Habit	Distribution	Priority	RPMP listings
Salix fragilis *	Crack willow	Tree	Wetlands	Widespread	Progressive containment - selected sites	
Selaginella kraussiana	African clubmoss	Moss	Forest, shady damp	Localised	Progressive containment - selected sites	
Senecio angulatus *	Cape ivy	Vine	Shrublands, coastal open ground	Coastal Port hills, otherwise localised	Progressive containment - selected sites	Organism of interest
Tradescantia fluminensis *	Wandering willie	Herb	Forest-open ground	Widespread, sporadic	Progressive containment - selected sites	
Vinca major *	Periwinkle	Herb	Forest- open ground	Widespread, common mostly peri-urban	Progressive containment - selected sites	

Sustained control – all sites

Latin name	Common name	Form	Habit	Distribution	Priority	RPMP listings
Acacia melanoxylon *	Tasmanian blackwood	Tree	Forest, shrublands, open ground	Widespread	Sustained control - all sites	
Ailanthus altissima *	Tree of heaven	Tree	Roadside, waste places, river margins	Sporadic, mostly urban	Sustained control - all sites	
Aloe maculata	Soap aloe	Succulent	Sunny rocky bluffs banks, cliffs	Peri-urban Port Hills, coastal settlements	Sustained control - all sites	
Buddleja davidii *	Buddleia	Shrub	Shrubland, open ground	Widespread	Sustained control - all sites	Organism of interest
Buddleja salvifolia *	Sth. African buddleia	Shrub	Shrubland, open ground	Widespread	Sustained control - all sites	Organism of interest
Carpobrotus edulis *	Ice plant	Succulent	Coastal	Widespread	Sustained control - all sites	
Delairea odorata	German ivy	Vine	Shrublands, coastal banks	Coastal Port hills, otherwise localised	Sustained control - all sites	Organism of interest
Elaeagnus X reflexa	Elaeagnus	Shrub	Forest, shrubland	Localised to city and Port Hills	Sustained control - all sites	Organism of interest
Fraxinus excelsior *	Ash	Tree	Forest	Common in city and Port Hills, otherwise localised	Sustained control - all sites	Organism of interest
Hypericum androsaemum *	Tutsan	Herb	Open ground	Widespread but localised	Sustained control - all sites	
Larix decidua	Larch	Tree	Forest	Localised	Sustained control - all sites	Declared pest
Ligustrum sinense	Privet -chinese	Shrub	Sunny banks, cliffs, open ground	Localised, widespread	Sustained control - all sites	Organism of interest
Lupinus polyphyllus	Wild Russell lupin	Herb	Sunny open ground	Localised	Sustained control - all sites	Declared Pest
Ribes sanguineum	Red flowering current	Shrub	Forest, shrublands, bluffs	Localised	Sustained control - all sites	Organism of interest
Sorbus aucuparia	Rum cherry	Tree	Forest, shrublands	Localised	Sustained control - all sites	Organism of interest
Sorbus aucuparia	Rowan	Tree	Forest, shrublands	Widespread peri urban	Sustained control - all sites	Organism of interest
Teline monspessulana	Montpellier broom	Shrub	Grasslands, open ground	Widespread, sporadic	Sustained control - all sites	Declared Pest

Site-led control

Latin name	Common name	Form	Habit	Distribution	Priority	RPMP listings
Berberis glaucocarpa	Barberry	Shrub	Forest, shrublands	Localised	Site led control	Organism of interest
Carex flacca *	Blue sedge	Sedge	Wetland	Localised	Site led control	
*Conium maculatum**	Hemlock	Shrub	Open ground	Widespread	Site led control	Organism of interest
Cotoneaster franchetii *	Franchet cotoneaster	Shrub	Bluffs, open sunny places	Common peri-urban otherwise localised	Site led control	
Cotoneaster glaucophyllus & spp	Wild cotoneaster	Shrub	Bluffs, open sunny places	Common peri-urban otherwise localised	Site led control	Organism of interest
Daphne laureola	Spurge laurel	Shrub	Forest edges to open ground	Localised urban	Site led control	Organism of interest
Foeniculum vulgare *	Fennel	Shrub	Open ground	Widespread	Site led control	
Impatiens glandulifera	Himalayan balsam	Herb	Wetlands	Localised urban	Site led control	Organism of interest
Phalaris arundinacea *	Reed canary grass	Grass	River margins, wetlands	Common Heathcote, sporadic elsewhere	Site led control	Organism of interest
Polypodium vulgare *	Common polypody	Fern	Bluffs	Common in city and Port Hills, otherwise localised	Site led control	Organism of interest

Restricted

Latin name	Common name	Form	Habit	Distribution	Priority	RPMP listings
Aeonium haworthii *	Pinwheel aeonium	Succulent shrub	Sunny rocky bluffs banks, cliffs	Peri-urban Port Hills	Restricted	
Ammophila arenaria *	Marram grass	Grass	Coastal dunes, occasionally inland	Widespread	Restricted	
Arctotheca calendula *	Cape weed	Herb	Coastal/open ground	Very localised	Restricted	
*Athyrium filix-femina**	Lady fern	Fern	River margins, forest	Peri-urban, common along Avon	Restricted	
Brachyglottis repanda *	Rangiora	Small tree	Forest	Localised	Restricted	
Calystegia silvatica *	Great bindweed	Vine	Forest, shrubland , open ground	Widespread	Restricted	
Carduus acanthoides	Plumeless thistle	Herb	Grasslands, open ground	No records on CCC land	Restricted	Organism of interest
Carthamus lanatus	Saffron thistle	Herb	Grasslands, open ground	No records on CCC land	Restricted	Declared Pest
Chamaecytisus palmensis	Tree lucern	Tree	Forest, shrublands, open ground	Widespread	Restricted	Organism of interest
Cheiranthus cheiri *	Wallflower	Herb	Rocky bluffs, dry banks	Localised	Restricted	
Cyperus eragrostis *	Umbrella sedge	Sedge	Wetland	Widespread	Restricted	
Cytisus multiflorus *	White broom	Shrub	Sunny open ground	Localised	Restricted	
Cytisus scoparius *	Scotch broom	Shrub	Sunny open ground	Widespread	Restricted	Declared Pest
Dryopteris filix-mas *	Male fern	Fern	Forest, shrublands	Common peri-urban otherwise localised	Restricted	
Euonymus europaeus *	Spindle tree	Shrub	Forest, shrublands, broken ground	Widespread	Restricted	
Leycesteria formosa *	Himalayan honeysuckle	Herb	Forest margins	Widespread	Restricted	Organism of interest
Lupinus arboreus	Tree lupin	Shrub	Roadside, waste places, river margins	Widespread	Restricted	Organism of interest
Melianthus major	Cape honey flower	Herb	Forest, open ground	No records on CCC land	Restricted	Organism of interest
Oxalis pes-caprae	Burmuda buttercup	Herb	Wetlands	No records on CCC land	Restricted	Organism of interest
Pinus radiata *	Radiata pine	Tree	Forest- open ground	Widespread	Restricted	Declared Pest
Potamogeton crispus *	Curled pondweed	Herb	Aquatic	Widespread	Restricted	

Latin name	Common name	Form	Habit	Distribution	Priority	RPMP listings
Ribes sanguineum *	Flowering currant	Shrub	Forest, shrublands, broken ground	Widespread but localised mostly urban	Restricted	
Rosa rubiginosa *	Sweet brier	Shrub	Open ground	Sporadic	Restricted	Organism of interest
Rubus fruticosus agg. *	Blackberry	Vine	Forest- open ground	Widespread	Restricted	Organism of interest
Ulex europaeus *	Gorse	Shrub	Grassland-open ground	Widespread	Restricted	Declared Pest
Urtica dioica	Perennial nettle	Shrub	Forest- open ground	No records on CCC land	Restricted	Organism of interest

No control

Latin name	Common name	Form	Habit	Distribution	Priority	RPMP listings
Acaena agnipila *	Sheep's bur	Herb	Grasslands, coastal sites	Widespread	No control	Organism of interest
Betula pendula	Silver birch	Tree	Shrublands, open ground	Widespread in gardens	No control	Organism of interest
Bromus willdenowii *	Prairie grass	Grass	Grassland, open ground	Widespread	No control	
Carduus nutans	Nodding thistle	Herb	Grassland, open ground	Widespread	No control	
Critesion murinum ssp. murinum *	Barley grass	Grass	Grassland	Widespread, stock camps	No control	
Echium vulgare	Vipers bugloss	Herb	Open ground	Widespread	No control	Organism of interest
Elytrigia repens *	Couch	Grass	Open ground	Widespread	No control	
Geranium robertianum *	Herb Robert	Herb	Forest, shrublands, broken ground	Common in city and Port Hills, otherwise localised	No control	
Hieracium lepidulum	Tussock hawkweed	Herb	Forest – open ground	Localised	No control	Organism of interest
Hieracium pilosella *	Mouse-ear hawkweed	Herb	Open ground	Widespread	No control	
Hypericum perforatum *	St John's wort	Herb	Open ground	Widespread but localised	No control	Organism of interest
Marrubium vulgare	Horehound	Herb	Open ground	Widespread	No control	Organism of interest
Poa labillardierei *	Rough poa tussock	Grass	Tussock grassland	Localised to Port Hills	No control	
Senecio jacobaea *	Ragwort	Herb	Wetlands, damp grasslands	Sporadic	No control	Organism of interest
Silybum marianum *	Variegated thistle	Herb	Grasslands, open ground	Widespread	No control	Organism of interest
Solanum dulcamara *	Bittersweet	Herb	Grasslands, open ground	Widespread	No control	
Solanum jasminoides *	Potato vine	Herb	Grasslands, open ground	Widespread	No control	

New incursions

36 plant pest species on the list have not been recorded in the either Christchurch district or on council land. They are included because of the potential threat they pose, and the imperative to take rapid action if they do arrive. Regular surveillance is important to detect these species, or for any other new weed incursion, and to take timely action to prevent further spread.

If a new pest incursion is found, it should be reported immediately to relevant staff in both CCC and ECan. If it is a new species to the country, then MPI should be informed, and details provided.

Table 2: Species to undergo surveillance as new potential pests in Christchurch

Latin name	Common name	RPMP listings	Priority
Ageratina riparia	Mistflower	Organism of interest	Exclusion
Andropogon virigincus	Broom sedge	Declared Pest	Exclusion
Araujia hortorum	Moth plant	Declared Pest	Exclusion
Calicotome spinosa	Spiny broom	Declared Pest	Exclusion
Carduus acanthoides	Plumeless thistle	Organism of interest	Exclusion
Carex longebrachiata	Australian sedge	Declared Pest	Exclusion
Carthamus lanatus	Saffron thistle	Declared Pest	Exclusion
Ceratophyllum demersum	Hornwort	Declared Pest	Exclusion
Claytonia sibirica	Pink purslane		
Cobaea scandens	Cathedral bells	Declared Pest	Exclusion
Cyperus rotundus	Nutgrass	Declared Pest	Exclusion
Equisetum hyemale	Horsetail	Organism of interest	Exclusion
Eragrostis curvula	African love grass	Declared Pest	Exclusion
Fallopia spp	Knotweed	Declared Pest	Exclusion
Galega officinalis	Goat's rue	Organism of interest	Exclusion
Gymnocoronis spilanthoides *	Senegal tea	Organism of interest	Exclusion
Marsilea mutica	Nardoo	Organism of interest	Exclusion
Melianthus major	Cape honey flower	Organism of interest	Exclusion
Myriophyllum aquaticum	Parrot's feather	Organism of interest	Exclusion
Nuphar lutea	Yellow water lily	Declared Pest	Exclusion
Nymphoides geminata	Entire marshwort	Declared Pest	Exclusion
Oxalis pes-caprae	Burmuda buttercup	Organism of interest	Exclusion
Callistachys lanceolatum	Oxylobium	Declared Pest	Exclusion
Plectranthus spp	Plectranthus	Organism of interest	Exclusion
Sagittaria platyphylla	Sagittaria	Organism of interest	Exclusion
Setaria palmifolia	Palm grass	Declared Pest	Exclusion
Setaria pumila	Yellow bristle grass	Declared Pest	Exclusion
Solanum mauritianum	Woolly nightshade	Declared Pest	Exclusion
Themeda triandra	Kangaroo grass	Declared Pest	Exclusion
Tussilago farfara	Colts foot	Declared Pest	Exclusion
Urtica dioica	Perennial nettle	Organism of interest	Exclusion
Xanthium spinosum	Bathurst bur	Organism of interest	Exclusion
Xanthium strumarium	Noogoora bur	Declared Pest	Exclusion

Implementation

The annual operational plant pest management programme will identify priority weed species, priority sites, monitoring requirements for pest management, and where possible/appropriate allocate resources required to meet the annual priorities. It will also review the year's work and Document what needs to be done for the coming year.

The annual operational programme will be the result of a collaborative, cross-Council process between representatives from the following groups and units:

- ✓ *Regional Parks.*
- ✓ *Urban Parks.*
- ✓ *Residential Red Zone.*
- ✓ *Three Waters Team.*
- ✓ *Contracts and Operations Team (Roads).*
- ✓ *Capital Investigations.*
- ✓ *Botanic Gardens.*

In April/May each year representatives from the groups and units listed above will meet to discuss priorities for plant pest control across the district.

The draft annual programme will be drawn up by May/June each year and passed to DoC, ECan, relevant community groups and rūnanga for comment.

The annual operational plant pest management programme will commence on 1 July each year and will consist of an agreed list of priority species to be managed and a list of sites which afford priority weed management.

A note of the meeting (agreed by all attendees) will be supported by the annual programme, presented in an excel format to enable consistent recording of the weed management priorities throughout the year.

The annual operational plant pest management programme recording system will be utilised to record weed management activity on the ground throughout the year and to monitor the success of the programme and plan annually. A summary will form part of the meeting note relating to the Annual Programme.

The importance of survey, inventory, monitoring and timely responses

Underpinning the successful implementation of this plant pest management plan is the need for survey, inventory, systematic control and ongoing monitoring. Understanding what and where priority weeds are on and near Council land is essential to enable the Council to meet its statutory obligations to ameliorate the impacts of pests. Currently our understanding is varied and often poor to non-existent over many areas of Council land and assets.

Many of the plant pest species listed as a priority for control are not currently known to occur on the land of each Council unit's responsibilities. This largely reflects the lack of survey effort to determine what is present. To improve the Council's performance, survey, inventory, and systematic monitoring of pest presence on key Council land should be a high priority.

Often reports of plant pests present on Council land come from spontaneous observations by staff and the public going about their day-to-day business. Being able to respond in a timely manner to unplanned requests is important to halt further spread and ultimately the increasing cost (environmental and financial) of undertaking control later, or not at all (noting that not all reports will warrant action). To better enable each Council unit to be proactive and fully engaged in meeting its plant pest control obligations, it is recommended that each unit appoints staff members to oversee this function, coupled with an adequate budget to undertake works as required.

Given the district's large varied geographic composition, patterns of urban development, and corresponding variations in plant pest threats and management efficacies, means weed management programmes will vary for each Council unit. Moreover, the large number of plant pest species combined with there being limited resources required to undertake weed control across the entire district, priority is given to sensitive sites. Sensitive sites are natural ecosystems and other lands that have, or are close to (buffer zones), important values/assets that require protection. For most Council units, preliminary survey work needs to occur to identify sensitive sites that in turn should be focal points for weed control.

Sensitive sites are likely to include the following:

- ✓ *All Council Scenic Reserves.*
- ✓ *All land (public and private) that is a site of ecological values.*
- ✓ *All parks and reserves in rural and peri-urban zones.*
- ✓ *All rural cemeteries and cemeteries in peri-urban zones.*
- ✓ *All roads adjoining and near land (public and private) with ecological values.*
- ✓ *All natural rivers and streams.*
- ✓ *Wetland retention basins adjoining and near land (public and private) with identified significant ecological values.*
- ✓ *Council properties/facilities/assets adjoining and near land (public and private) with identified significant ecological values.*

Key Actions

- ✓ *Each Council unit that has plant pest control obligations have a designated a staff member who will be responsible for weed control operations, including cross Council collaboration, reporting, and recording.*
- ✓ *All Council units have identified priority (sensitive) sites by 2025.*
- ✓ *Weed inventories of sensitive sites have been completed by 2026.*
- ✓ *All sites with weed species requiring control have been identified and control plans initiated by 2025.*
- ✓ *Weed monitoring schedules for all weed pests and sites are completed 2024 and being implemented.*
- ✓ *All staff involved in control work are fully trained in weed identification, control methods and data recording protocols.*

Key Performance Indicators

- ✓ *All plant pests listed in this plan are controlled on council land where they directly threaten ecological values and sites important for public amenity and recreation.*
- ✓ *80% of target species are high priority species as are outlined in this plan.*
- ✓ *There is a measurable decline in the number of priority weed species present on Council land, and/or a reduction in abundance, cover and age structure of priority weed presence on Council land.*
- ✓ *All new occurrences of priority species identified on Council land are inspected and action is taken within a timely fashion.*
- ✓ *Weed management undertaken is consistent with the expectation in the RPMP, complies with legal obligations and good neighbour rules.*
- ✓ *All pest locations and all pest work undertaken is appropriately recorded and reported within the Council's GIS platform for pest plant management:*[6]

[6] https://gis.ccc.govt.nz/portal/apps/sites/#/citizen/app/634ff87beade46d9a375d4c630808cba

Specific operational objectives and activities

Regional parks

For all Regional Parks that are gazetted under the Reserves Act there is an obligation to undertake plant pest control to protect and enhance natural values. Many other 'generically' gazetted areas have very high ecological values that also fall under Regional Parks' management. Although these areas may not be strictly gazetted as "reserves', they can also be a high priority for weed management.

All reserves are vulnerable to edge effects and invasion from adjoining land. As a result, the incorporation of buffer zones into weed management programmes, and where practicable undertaking weed control on land surrounding reserves, is necessary to protect the ecological integrity of Reserves ecological values.

Objectives

- ✓ Set a good example in plant pest management practices in the Council's regional parks, urban parks, beaches, amenity areas, reserves, and sports grounds.
- ✓ Contribute to community understanding and awareness of pest management issues.
- ✓ Liaise and coordinate with the rest of Council asset managers about plant pest management.
- ✓ Liaise and coordinate with DoC, ECan, Ngai Tahu and the community about plant pest management.

Activities

- ✓ Identify priority plant pest species for management or control via the annual pest management programme
- ✓ Set up monitoring for all pest management operations.
- ✓ Where suitable, adopt management techniques that contribute to the minimisation of pesticide use by encouraging more sustainable methods of plant pest plant control such as woodchip mulch, native revegetation planting and biological control.
- ✓ Monitor and control as necessary (to prevent spread of weeds) the dumping of garden waste onto land and water assets owned or managed by the Council.
- ✓ Seek sufficient funding and resources to enable effective implementation of the Plant Pest Management Plan in parks and reserves.
- ✓ Share information and resources across the Council and with other key agencies and the community.

Urban parks

For urban parks, the practicalities of undertaking effective plant pest control in many instances is constrained by the urban environment - private gardens and the proliferation of all many of undesirable species. Consequently, weed programmes are largely site led programmes prioritising sensitive sites.

Sensitive sites will largely be parks and cemeteries in peri-urban/rural zones, those adjoining or close to ecological reserves and other important sites for indigenous biodiversity or public amenity. Weed species in urban parks and cemeteries per se that have long distance seed dispersal mechanisms should also be a priority for control. Where removal of a designated weed in parks is of previously planted species, if replacement of that species is to occur, it should default to native species suitable for the environment.

Inventory of sensitive urban parks and cemeteries is a high priority given the possibility of harbouring plant pests and their proximity to natural areas of high ecological values.

Objectives

- ✓ Set a good example in plant pest management practices in Council parks, beaches, amenity areas, reserves, and sports grounds.
- ✓ Contribute to community understanding and awareness of plant pest management issues.
- ✓ Liaise and coordinate with the rest of Council asset managers about plant pest management.
- ✓ Liaise and coordinate with DoC, ECan, Ngai Tahu and the community about plant pest management.
- ✓ Ensure no weed species or potential plant pest species is planted in urban parks.

Activities

- ✓ Prepare a list of urban parks and cemeteries within sensitive zones.
- ✓ Undertake weed surveys to identify and record the locations of pest plants in urban parks in sensitive zones and repeat every 3 years.
- ✓ Identify priority plant pest species for management or control via the annual weed pest management programme.
- ✓ Plan for the staged removal of tree weeds in urban parks to be replaced with appropriate native species consistent with the Urban Tree Plan.
- ✓ Set up monitoring for all pest management operations.
- ✓ Where practicable, adopt management techniques that contribute to the minimisation of pesticide use by encouraging more sustainable methods of pest plant control such as woodchip mulch, native revegetation planting and biological control.
- ✓ Monitor and control as necessary (to prevent spread of weeds) the dumping of garden waste onto land and water assets owned or managed by the Council.

Three waters: stormwater & wastewater network

Weeds are a primary concern to maintain effective and efficient operation of infrastructure, but many stormwater sites also have high ecological values for waterfowl. In addition, many of the district's waterways are listed as significant ecological sites (SES) in the District Plan, such as the Avon, Opawaho/Heathcote, and Styx Rivers, for which the Council has an obligation to protect and enhance.

Waterways are also key dispersal routes throughout wider catchments. Inventory and regular monitoring of sensitive waterways is a high priority. Key sensitive waterways include von, Ōpāwaho/Heathcote, Styx, Otukaikino, Kaituna, Okana and all permanently flowing Banks Peninsula streams.

Objectives

- ✓ Maintain Christchurch City Council water service networks in such a way as to ensure that plant pests and weed management practices cause no impediment to its proper use and safety of users, neighbours, and the environment.
- ✓ Maintain Christchurch City Council sewerage service networks in such a way as to ensure that plant pests and weed management practices cause no impediment to its proper use and safety of users, neighbours, and the environment.
- ✓ Set a good example in weed management practices in the stormwater network.
- ✓ Contribute to community understanding and awareness of weed management issues.
- ✓ Liaise and coordinate with the rest of Council asset managers about weed management.
- ✓ Liaise and coordinate with DoC, Biosecurity New Zealand ECan, Ngai Tahu, and the community about pest management.
- ✓ Ensure no plant pests or potential weed species is planted in waterways and any other 3 waters asset.

Activities

- ✓ Undertake weed surveys of key Three Waters assets and their immediate surroundings to identify and record the locations of pest plants and repeat every 2 years.
- ✓ Identify annual weed control priorities within budget and resource constraints to sustain the assets, to be a good neighbour and to be as environmentally friendly as practically possible.
- ✓ Identify priority weed species for management or control via the Annual Pest Management Programme.
- ✓ Set up monitoring for all weed management operations.
- ✓ Where practicable, adopt management techniques that contribute to the minimisation of pesticide use by encouraging more sustainable methods of pest plant control such as woodchip mulch, native revegetation planting and biological control.
- ✓ Seek sufficient funding and resources to enable effective implementation of the Pest Plant Management Plan in the stormwater network.
- ✓ Share information and resources across the Council and with other key agencies and the community.

Residential Red Zone

Owing to previously being a residential area and residual gardens that contained all manner of weed species presents a considerable challenge.

Objectives

- ✓ Prioritise adaptive pest-management strategies, and practices, to protect and enhance the restoration of indigenous ecosystems, as well as and mahinga kai values, across the Residential Red Zone and wider landscape.
- ✓ Contribute to community understanding and awareness of weed management issues.
- ✓ Liaise and coordinate with the rest of Council asset managers about weed management.
- ✓ Liaise and coordinate with DoC, ECan, Ngai Tahu and the community about weed management.
- ✓ Ensure no weed species or potential weed species is planted in the residential re zone.

Activities

- ✓ Ensure relevant staff are internally trained in weed identification and management principles.
- ✓ Identify priority weed species for management or control via the annual pest management programme.
- ✓ Identify annual weed control priorities within budget and resource constraints, with focuses on prevention, being a good neighbour, and to be as environmentally friendly as practically possible.
- ✓ Where practicable adopt management techniques that contribute to the minimisation of pesticide use by encouraging more sustainable methods of pest plant control such as woodchip mulch, native revegetation planting and biological control.
- ✓ Utilise monitoring for all weed management operations.
- ✓ Engage with the local community to proactively participate in weed management, where feasible.
- ✓ Seek sufficient funding and resources to enable effective implementation of the Pest Plant Management Plan within the Residential Red Zone.
- ✓ Proactively share information and resources across the Council and with other key agencies and the community.

Road network

As long, linear landscape features, transport corridors (road and rail) are widely recognised as facilitating the spread of plant and animal pests. Transport corridors, however, also present several management challenges, including operational safety constraints, as well as being very narrow and affected by numerous neighbouring properties.

It is also important to distinguish between the management and maintenance of roadside landscape vegetation and street trees within the road corridor. For street trees there are other statutory considerations e.g., the District Plan tree protection rules, the Tree Policy, and Urban Forest Plan, as well as reference to the Delegations Register when it comes to decision making on tree removal. Currently there is no designated control (i.e., budget or resource) of tree species as plant pest management given the other demands and priority for tree management across the city. Tree removals are based primarily on their condition rating, but consideration may be given to their species and site as part of this plan. For instance, there are seventeen genus (22 species) of which three 'tree' plants listed as declared pests and five as Organisms of Interest. None are currently listed as surveillance.

While control of weeds throughout the transport corridor network is clearly desirable, the challenge of achieving this is unrealistic given the large scale of the road network. As such, this plan largely uses the site-led programme to prioritise control to parts of the road network passing through sensitive areas. Sensitive areas are those that support high ecological or amenity values, such as conservation areas, retention basins, and public walkways/cycleways. Survey and inventory for the presence of priority plant pests along the road network that passes close to sensitive areas, as well as timely weed control, should be a priority. Key roads for inventory include the Summit Road and the Banks Peninsula Road network that traverse multiple sensitive areas, as does the river network (Avon, Opawaho/Heathcote & Styx).

As land occupiers, transport corridor operators have responsibilities in respect of all land occupier rules throughout this plan. Road reserves include the land on which the formed road lies and the verge area that extends to adjacent property boundaries. The Biosecurity Act allows the option of making either roading authorities (NZ Transport Agency and District/City Councils) or adjoining land occupiers responsible for pest management in road reserves (see s6(1) of the Biosecurity Act). The RPMP makes roading authorities responsible for pest management in road reserves, except along unformed legal roads where it is the adjoining landowner responsibility.

This plan also recognises that control will be most effective if all land occupiers in an area are undertaking coordinated control, rather than lack of control on the transport network undermining control on adjacent land, or vice versa.

Objectives

- ✓ That the road network does not contribute the spread of priority plant pests throughout the district.
- ✓ Increase our understanding of the presence of priority plant pests within the road network.
- ✓ Be responsive in controlling priority plant pests in a timely manner along road network where they threaten ecological or amenity values.
- ✓ Implement methods to manage and/or prevent the spread of priority plant pests along road corridors (as required by the Canterbury RPMP and to act as a good neighbour) or as determined by the Annual Operations Management Plan.

- ✓ Maintain Christchurch City Council's Road network in such a way as to ensure that plant pests and weed management practices cause no impediment to its proper use and safety of users, neighbours, and the environment.
- ✓ Ensure no plant pest species or potential weed species are planted within the road network.
- ✓ Liaise and coordinate with the rest of Council asset managers about weed management, where and when required.
- ✓ Liaise and coordinate with DoC, ECan, Ngai Tahu and the community about weed management, where and when required.

Activities

- ✓ Identify key roads for survey and inventory of priority plant pests that are in the vicinity of sensitive areas.
- ✓ Undertake surveys to identify the locations of priority plant pests on the 'sensitive' road corridor network.
- ✓ Systematically monitor the presence and spread of priority plant pest species within the road network over time.
- ✓ Be responsive to reports of priority plant pests where they exist within the road network and undertake timely control as appropriate.
- ✓ Seek sufficient funding and resources to enable effective implementation of weed management on the road network.
- ✓ Assess the value and effectiveness of the development of a Road Network Pest Management Plan to form a discreet part of this Plan.
- ✓ All priority plant pest locations and control work undertaken is appropriately recorded and reported within the Council's GIS platform for pest plant management.

Other properties

Inventory is a primary priority as there is little information available on what may be present on Council properties.

Objective

- ✓ Maintain Christchurch City Council owned and managed properties to the standard required by the Canterbury RPMP, to be a good neighbour and to implement pest management measures as required.
- ✓ Ensure no weed species or potential weed species is planted in any Council property.

Activities

- ✓ Undertake weed surveys to identify and record the locations of pest plants within Council properties and repeat every 2 years Control invasive pests that are threatening and/or spreading to neighbouring properties.
- ✓ Respond promptly to complaints about weeds on land owned or managed by the Council.
- ✓ Identify and monitor weed management requirements in Council owned or managed properties.

Community and tangata whenua engagement in pest management

Objectives

- ✓ Promote community involvement in plant pest management issues.
- ✓ Acknowledge tangata whenua cultural values in respect of pest management to promote effective coordinated management where appropriate.

Activities

- ✓ Promote understanding and identification of priority weeds via a coordinated programme of website information, presentations, field days, training sessions and other opportunities that arise.
- ✓ Continue to support community and volunteer groups involved in pest management, including development of collaborative projects and programmes.
- ✓ Encourage the public to report priority weeds.
- ✓ Act promptly to public reports of weed problems.
- ✓ Support landowners where appropriate as they carry out their weed management responsibilities and support mutually beneficial weed management projects.
- ✓ Seek community and tangata whenua feedback to measure how the Council is performing in relation to weed management and consider options for improvement because of feedback.

Priority pest plants for control in key ecosystems

Forests

Latin name	Common name	Form	Distribution in district	Priority	RPMP Listings
Acer pseudoplatanus *	sycamore	Tree	Widespread	Progressive containment	Organism of interest
Asparagus asparagoides *	smilax	Vine	Widespread	Progressive containment	
Asparagus scandens *	climbing asparagus	Vine	Forest margins, shrublands	Progressive containment	
Berberis darwinii*	Darwin's barberry	Shrub	Sporadic/widespread	Progressive containment	Declared Pest
Berberis glaucocarpa*	European barberry	Shrub	Localised	Sustained control	Organism of interest
Brachyglottis repanda *	rangiora	Tree	Localised	Site led	
Clematis vitalba *	old man's beard	Vine	Widespread	Site led	Declared Pest
Cotoneaster spp		Shrubs	Widespread	Progressive containment	Organism of interest
Crataegus monogyna *	hawthorn	Shrub	Common peri-urban settlements	Progressive containment	Organism of interest
Eccremocarpus scaber	Chilean glory creeper	Vine	Localised	Progressive containment	Organism of interest
Elaeagnus X reflexa	elaeagnus	Shrub	Localised to city and Port Hills	Sustained control	Organism of interest
Euonymus europaeus *	spindle tree	Tree	Widespread	Site led	
Hedera helix ssp. helix *	ivy	Vine	Widespread	Sustained control	
Hoheria populnea & sexstylosa*	houhere/karo	Tree	Common in city and Port Hills, otherwise localised	Progressive containment	
Ilex aquifolium *	European holly	Tree	Widespread but localised	Progressive containment	Organism of interest
Lonicera japonica *	Japanese honeysuckle	Vine	Common in city and Port Hills, otherwise localised	Sustained control	
Maytenus boaria *	Chilean mayten	Tree	Widespread but localised mostly urban	Sustained control	Organism of interest
Passiflora 'Tacsonia group'	passionfruit	Vine	Widespread but localised mostly urban	Progressive containment	Declared Pest
Pittosporum crassifolium/ralphii *	karo	Tree	Widespread but localised mostly urban and coastal	Site led	
Rhamnus alaternus *	evergreen Italian buckthorn	Shrub	Sporadic Port Hills	Eradication	
Selaginella kraussiana	African clubmoss	Moss	Localised	Progressive containment	
Sorbus aucuparia	rowan	Tree	Widespread peri urban	Site led	Organism of interest
Sorbus aucuparia	rum cherry	Tree	Localised	Site led	Organism of interest
Tropaeolum speciosum *	Chilean flame creeper	Vine	Sporadic, peri-urban	Site led	Organism of interest

Bluffs, cliffs & rock outcrops

Latin name	Common name	Form	Distribution in district	Priority	RPMP Listings
Aeonium haworthii *	pinwheel aeonium	Succulent shrub	Peri-urban Port Hills	Site led	
Aloe maculata	soap aloe	Succulent	Peri-urban Port Hills, coastal settlements	Site led	
Centranthus ruber *	spur valerian	Herb	Localised	Progressive containment	Organism of interest
Cheiranthus cheiri *	wallflower	Herb	Localised	Site led	
Cotoneaster franchetii *	franchet cotoneaster	Shrub	Common peri-urban otherwise localised	Sustained control	
Cotoneaster glaucophyllus	wild cotoneaster	Shrub	Common peri-urban otherwise localised	Sustained control	Organism of interest
Cotoneaster horizontalis	wall spray	Shrub	Common peri-urban otherwise localised	Sustained control	
Cotoneaster simonsii *	khasia berry	Shrub	Common peri-urban otherwise localised	Sustained control	
Cotyledon orbiculata *	pigs ear	Succulent	Common peri-urban coastal, otherwise localised	Progressive containment	Organism of interest
Cytisus scoparius *	Scotch broom	Shrub	Widespread	Site led	Declared Pest
Erigeron karvinskianus *	Mexican daisy	Herb	Common in city and Port Hills, otherwise very localised	Progressive containment	
Foeniculum vulgare *	fennel	Shrub	Broken ground	Widespread	
Ligustrum sinense	privet -Chinese	Shrub	Localised, widespread	Site led	Organism of interest
Lupinus polyphyllus	wild Russell lupin	Herb	Localised	Site led	Declared Pest
Lycium ferocissimum *	boxthorn	Shrub	Common in city and Port Hills, otherwise localised	Progressive containment	Organism of interest
Mahonia aquifolium *	Oregon grape	Shrub	Localised	Progressive containment	
Myricaria germanica	false tamarisk	Shrub	Localised	Progressive containment	Organism of interest
Polypodium vulgare *	common polypody	Fern	Common in city and Port Hills, otherwise localised	Sustained control	Organism of interest
Ulex europaeus *	gorse	Shrub	Widespread	Site led	Declared Pest

Wetlands

Freshwater

Latin name	Common name	Form	Distribution in district	Priority	RPMP Listings
Alisma plantago-aquatica *	water plantain	Herb	Localised	Progressive containment	
Alnus glutinosa *	alder	Tree	Widespread	Progressive containment	
Aponogeton distachyos *	cape pondweed	Herb	Localised	Eradication	
Arundo donax	giant reed	Grass	Very localised	Eradication	
Bidens frondosa *	beggar's ticks	Herb	Localised	Progressive containment	Organism of interest
Carex flacca *	blue sedge	Sedge	Localised	Sustained control	
Carex pendula *	hanging sedge	Sedge	Localised	Progressive containment	Organism of interest
Egeria densa *	Egeria	Herb	Localised to Avon	Progressive containment	Declared Pest
Epilobium hirsutum	great willowherb	Herb	Very localised	Eradication	MPI exclusion
Glyceria maxima *	reed sweet grass	Grass	Very localised to Heathcote	Eradication	
Gymnocoronis spilanthoides *	Senegal tea	Herb	No records?	Progressive containment	Organism of interest
Gunnera tinctoria *	Chilean rhubarb	Herb	Localised	Progressive containment	
Heracleum mantegazzianum *	giant hogweed	Herb	Localised	Eradication	
Impatiens glandulifera *	Himalayan balsam	Herb	Localised urban	Site led	Organism of interest
Iris pseudacorus *	yellow flag	Herb	Common in city, otherwise localised	Progressive containment	
Lagarosiphon major *	oxygen weed	Herb	Localised to Otukaikino catchment	Progressive containment	Declared Pest
Lythrum salicaria *	purple loosestrife	Herb	Localised	Progressive containment	Declared Pest
Phalaris arundinacea *	reed canary grass	Grass	Common Heathcote, sporadic elsewhere	Sustained control	Organism of interest
Phragmites australis *	phragmites	Grass	River margins, wetlands	Eradication	Declared Pest
Salix cinerea *	grey willow	Tree	Widespread	Site led	
Salix fragilis *	crack willow	Tree	Widespread	Site led	

Saline/estuarine

Latin name	Common name	Form	Distribution in district	Priority	RPMP Listings
Juncus gerardii *	saltmarsh rush	Rush	Uncommon, localised to a lower Heathcote and Avon	Progressive containment	
Limonium companyonis *	sea lavender	Succulent	Localised Heathcote estuary	Progressive containment	
Spartina anglica *	cord grass	Grass	Localised	Eradication	Declared Pest

Coastal

Latin name	Common name	Form	Distribution in district	Priority	RPMP Listings
Arctotheca calendula *	cape weed	Herb	Very localised	Site led	
Chamaecytisus palmensis	tree lucern	Tree	Widespread	Site led	Organism of interest
Chrysanthemoides monilifera *	boneseed	Shrub	Localised, common peri-urban coastal settlements	Progressive containment	Declared Pest
Conium maculatum*	hemlock	Shrub	Widespread	Site led	Organism of interest
Cortaderia selloana *	pampas	Grass	Widespread	Sustained control	
Cotyledon orbiculata *	pigs ear	Succulent	Common peri-urban coastal, otherwise localised	Progressive containment	Organism of interest
Erica arborea	tree heath	Shrub	Very localised	Eradication	
Erica cinerea	bell heather	Shrub	Very localised	Eradication	Declared Pest
Erica lusitanica *	Spanish heath	Shrub	Very localised	Eradication	Organism of interest
Euphorbia helioscopia	sun spurge	Herb	Widespread	Site led	
Foeniculum vulgare *	fennel	Shrub	Widespread	Site led	
Lycium ferocissimum *	box thorn	Shrub	Widespread	Progressive containment	Organism of interest
Myricaria germanica	false tamarisk	Shrub	Localised	Progressive containment	Organism of interest
Pittosporum crassifolium/ralphii *	karo	Tree	Widespread but localised mostly urban and coastal	Site led	
Populus alba *	white poplar	Tree	Widespread localised	Site led	
Rhamnus alaternus *	evergreen Italian buckthorn	Shrub	Sporadic Port Hills	Eradication	
Senecio angulatus *	cape ivy	Vine	Coastal Port hills, otherwise localised	Progressive containment	Organism of interest
Ulex europaeus *	gorse	Shrub	Widespread	Site led	Declared Pest

Estuarine

Latin name	Common name	Form	Distribution in district	Priority	RPMP Listings
Juncus gerardii *	saltmarsh rush	Rush	Uncommon, localised to a lower Heathcote and Avon	Progressive containment	
Limonium companyonis *	sea lavender	Succulent	Localised Heathcote estuary	Progressive containment	
Spartina anglica *	cord grass	Grass	Localised	Eradication	Declared Pest

Shrublands

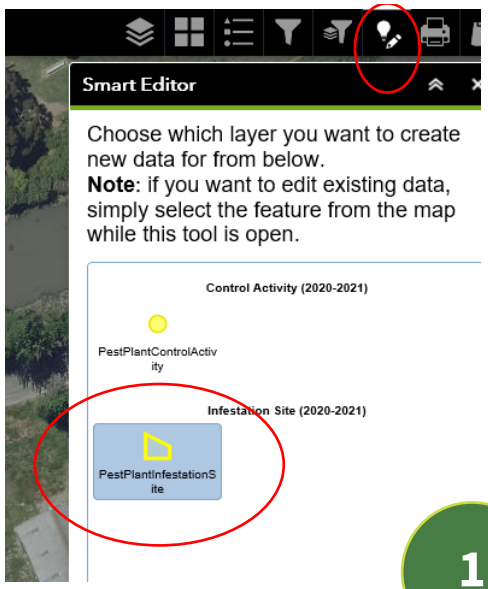
Latin name	Common name	Form	Distribution in district	Priority	RPMP Listings
Acer pseudoplatanus *	sycamore	Tree	Widespread	Progressive containment	Organism of interest
Asparagus asparagoides *	smilax	Scrambler	Widespread	Progressive containment	
Baccharis halimifolia	baccharis	Shrub	Very localised	Eradication	Declared Pest
Berberis darwinii*	Darwin's barberry	Shrub	Sporadic/widespread	Progressive containment	Declared Pest
Berberis glaucocarpa *	European barberry	Shrub	Sporadic/widespread	Progressive containment	Organism of interest
Clematis vitalba *	old man's beard	Vine	Widespread	Sustained control	Declared Pest
Chamaecytisus palmensis	tree lucern	Tree	Widespread	Site led	Organism of interest
Cotoneaster spp	cotoneaster	Shrub	Widespread	Progressive containment	Organism of interest
Crataegus monogyna *	hawthorn	Shrub	Common peri-urban settlements	Progressive containment	Organism of interest
Cytisus scoparius *	broom	Shrub	Widespread	Site led	Declared Pest
Eccremocarpus scaber	Chilean glory creeper	Vine	Localised	Progressive containment	Organism of interest
Elaeagnus X reflexa	elaeagnus	Shrub	Localised to city and Port Hills	Sustained control	Organism of interest
Euonymus europaeus *	spindle tree	Tree	Widespread	Site led	
Hedera helix ssp. helix *	ivy	Vine	Widespread	Sustained control	
Hoheria populnea & sexstylosa*	houhere	Tree	Common in city and Port Hills, otherwise localised	Progressive containment	
Lonicera japonica *	Japanese honeysuckle	Vine	Common in city and Port Hills, otherwise localised	Sustained control	
Lupinus arborea	yellow tree lupin	Shrub	Widespread	Site led	
Passiflora 'Tacsonia group'	passionfruit	Vine	Widespread but localised mostly urban	Progressive containment	Declared Pest
Rhamnus alaternus *	evergreen Italian buckthorn	Shrub	Sporadic Port Hills	Eradication	
Viburnum tinus *	laurustinus	Shrub	Localised to mostly urban	Progressive containment	
Ulex europaeus *	gorse	Shrub	Widespread	Site led	Declared Pest

Grassland & open ground weeds

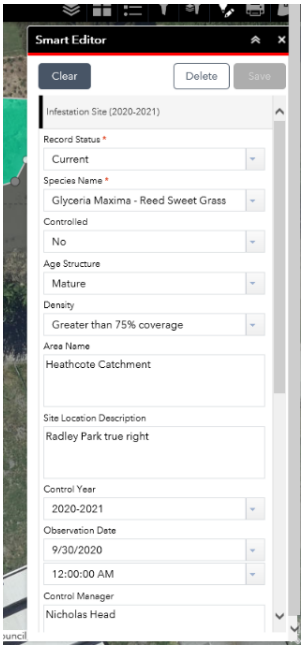
Latin name	Common name	Form	Distribution in district	Priority	RPMP Listings
Acer pseudoplatanus *	sycamore	Tree	Widespread	Progressive containment	Organism of interest
Achnatherum caudatum	puna grass	Grass	Oxidation ponds only know sites Bromley	Eradication	Declared Pest
Asparagus asparagoides *	smilax	Scrambler	Widespread	Progressive containment	
Calotis lappulacea	bur daisy	Herb	Very localised	Eradication	Declared Pest
Conium maculatum*	hemlock	Shrub	Widespread	Site led	Organism of interest
Cortaderia selloana *	pampas	Grass	Widespread	Sustained control	
Cotyledon orbiculata*	pigs ear	Succulent	Widespread	Site led	Organism of interest
Crataegus monogyna *	hawthorn	Shrub	Widespread	Progressive containment	Organism of interest
Cytisus scoparius *	Scotch broom	Shrub	Widespread	Site led	Declared Pest
Ehrharta erecta *	veld grass	Grass	Very localised	Site led	
Erica arborea	tree heath	Shrub	Very localised	Eradication	
Erica cinerea	bell heather	Shrub	Very localised	Eradication	Declared Pest
Erica lusitanica *	Spanish heath	Shrub	Very localised	Eradication	Organism of interest
Foeniculum vulgare *	fennel	Shrub	Widespread	Site led	
Lupinus polyphyllus	wild Russell lupin	Herb	Localised	Site led	Declared Pest
Lycium ferocissimum *	box thorn	Shrub	Widespread	Progressive containment	Organism of interest
Mahonia aquifolium *	Oregon grape		Localised	Progressive containment	
Myricaria germanica	false tamarisk	Shrub	Localised	Progressive containment	Organism of interest
Nassella neesiana	Chilean needle grass	Grass	Very localised	Progressive containment	Declared Pest
Nassella trichotoma *	nassella tussock	Grass	Sporadic	Sustained control	Declared Pest
Pennisetum macrourum	African feather grass	Grass	River margins, wetlands in city	Eradication	Declared Pest
Populus alba *	white poplar	Tree	Widespread localised	Site led	
Setaria verticillata *	rough bristle grass	Grass	Localised City	Site led	
Solanum margunatum	white-edged nightshade	Shrub	Very localised	Sustained control	Declared Pest
Ulex europaeus *	gorse	Shrub	Widespread	Site led	Declared Pest

Appendix 1: Guide to weed data entry into CIPA weed management GIS portal[7]

Step 1: Click on top icon, and draw polygon by activating (Pest Plant Infestation Site) icon as per below



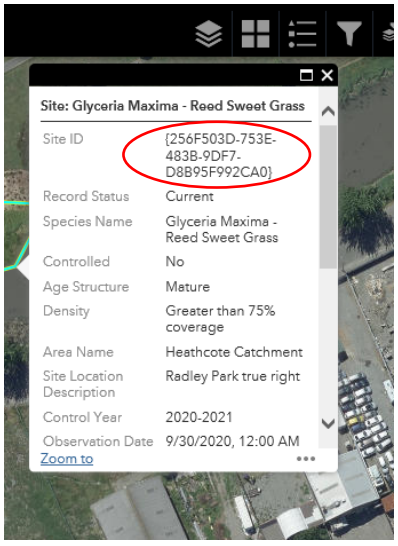
1



Step 2: Fill out standard attributes table as per below and save (go automatically back to smart editor box). Close smart editor box to exit drawing polygon.

2

Stel 3: To enter control activity data, copy global site id reference from site data table (click on site polygon)

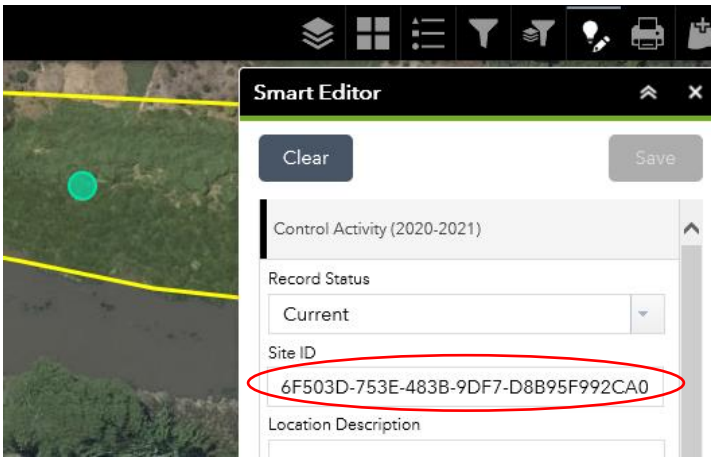


3

[7] https://gis.ccc.govt.nz/portal/apps/sites/#/citizen/app/634ff87beade46d9a375d4c630808cba

Step 4: Close the site box, click on smart editor to open control activity data table then click within polygon to create control activity data point

4



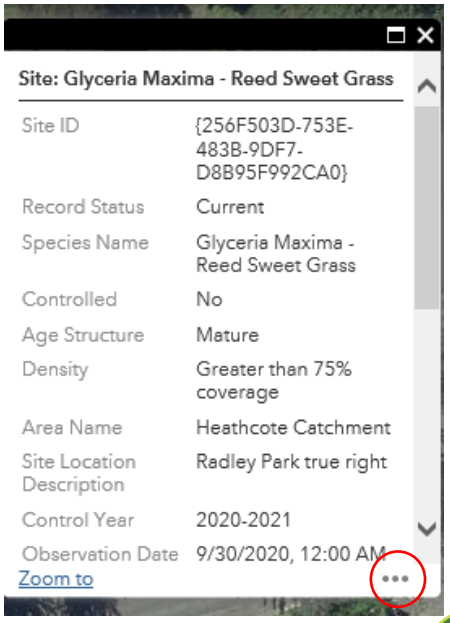
Step 5: Copy and paste the global ID into the site ID box in activity data attributes table

5

Step 6: Fill out the control activity attributes and save

6

Step 6: To edit either the site table activity table: click on polygon edge or control activity dot to activate the attribute table, then click the 3 dots at the bottom right of the attribute table.



7

Christchurch City Council

APPENDIX 2: Additional information and links

Christchurch City Council

- ✓ **CCC Operational Pest Management Plan 2010 - HPERM 10/63688**
  https://ccc.govt.nz/assets/DoCuments/Environment/Biodiversity/pest-management-plan.DoC

- ✓ **Local Pest Plant Priority - by habitats type - 2010 HPERM 19/165155**
  https://ccc.govt.nz/assets/DoCuments/Environment/Biodiversity/pest-plant-priorities.xls

- ✓ **War on Weeds – guidance on pest practice – HPERM 18/1298078**
  https://ccc.govt.nz/assets/DoCuments/Environment/Biodiversity/War-on-Weeds.pdf

Department of Conservation

- ✓ **Pests and Threats and the war on weeds:** Includes common weeds, identifying weeds, preventing the spread of garden pest plants, managing weeds, and education link for Inquiry Learning, which includes links to 12 fact sheets, posters and Webinars.
  https://www.DoC.govt.nz/nature/pests-and-threats/war-on-weeds/

- ✓ **2017 Dirty Dozen:** An annual list of the Dirty Dozen was done annually as a national awareness programme that will target a dozen weeds each year. The plants may vary from year to year and are considered on a national scale.
  https://www.DoC.govt.nz/nature/pests-and-threats/war-on-weeds/

Environment Canterbury

- ✓ **Canterbury Regional Pest Management Plan**
  https://www.ecan.govt.nz/your-region/plans-strategies-and-bylaws/canterbury-regional-pest-management-plan/

- ✓ **Weed of the Month brochures:** Information on pest plant species including control information. Use search function in the DoCument library.
  https://www.ecan.govt.nz/data/DoCument-library/

Ministry for Primary Industries

- ✓ **National Pest Plant Accord: A** system that prevents the sale distributions and propagation of a list of pest plant species .
  https://www.biosecurity.govt.nz/protection-and-response/long-term-pest-management/national-pest-plant-accord/

Parliamentary Commissioner for the Environment

- ✓ **Space invaders:** A review of how New Zealand manages weeds that threaten native ecosystems https://www.pce.parliament.nz/media/197143/space-invaders-report-pdf-68mb.pdf

Weedbusters

- ✓ **Information on pest plant species including control information** - https://www.weedbusters.org.nz/weed-information/weed-list/
- ✓

Christchurch City Council