



**HUON VALLEY
COUNCIL**



Huon Valley

Weed Management Strategy

2018-2023

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EXECUTIVE SUMMARY

The purpose of the Huon Valley Weed Management Strategy ('the Strategy') is to support land managers to develop weed management programs and plans for their land through strategic prioritisation of resources. The Strategy also provides support for land managers to seek funding for additional resources.

The Strategy is integral to meeting Strategic Objective 1 – A Great Environment of the *Huon Valley Council Strategic Plan 2015-2025* and expands on the relevant aspects from the *Huon Valley Council Natural Resource Management (NRM) Strategy 2015* and the *NRM Strategy for Southern Tasmania 2015-2020 (NRM South, 2016)*.

The overarching goals for the Strategy have remained the same since the initial Strategy was developed in 2007 – to 'prevent the establishment of new weeds' and 'reduce the extent of priority weeds' in the Huon Valley. This review has seen the addition of a third goal – to 'reduce the impact of weeds on natural values in the Huon Valley'. This new goal reflects the importance of effectively protecting natural values from the threat of weeds.

Priority weeds are divided into six categories based on their legislative classifications and the species' distribution in the Huon Valley, in that weeds with a limited distribution are categorised as a higher priority. These lists are dynamic and will change as new species and infestations are recorded through the five year period of the Strategy.

It is acknowledged that meeting Targets and delivering against Actions is resource dependent for all land managers. The approach to the Strategy's actions is based on the importance of prioritisation of resources and activities based on high priority species, key sites to protect from the threat of weed infestations and sites and activities that are a high risk of spreading or introducing weeds. These actions cover a range of weed management initiatives from on-ground treatment plans to maintaining networks and raising awareness. There is also a clear distinction between the public land managers, who are tasked with complying with legislation and implementing the Strategy, and private land managers, who are provided with support to comply with legislation and effectively manage weeds on their properties.

The measurable targets for each action allows for the evaluation of the effectiveness of the Strategy at achieving the objectives. New high priority species recorded and considered as

established, along with the distribution of recently recorded species, during the five year period of the Strategy will also be utilised to evaluate the effectiveness of the Strategy in meeting the goals.

1. VISION

The vision for the *Huon Valley Weed Management Strategy* is:

“The Huon Valley is being protected from the threat of weeds by everyone doing their part in weed management.”

2. WEEDS AND THE HUON VALLEY

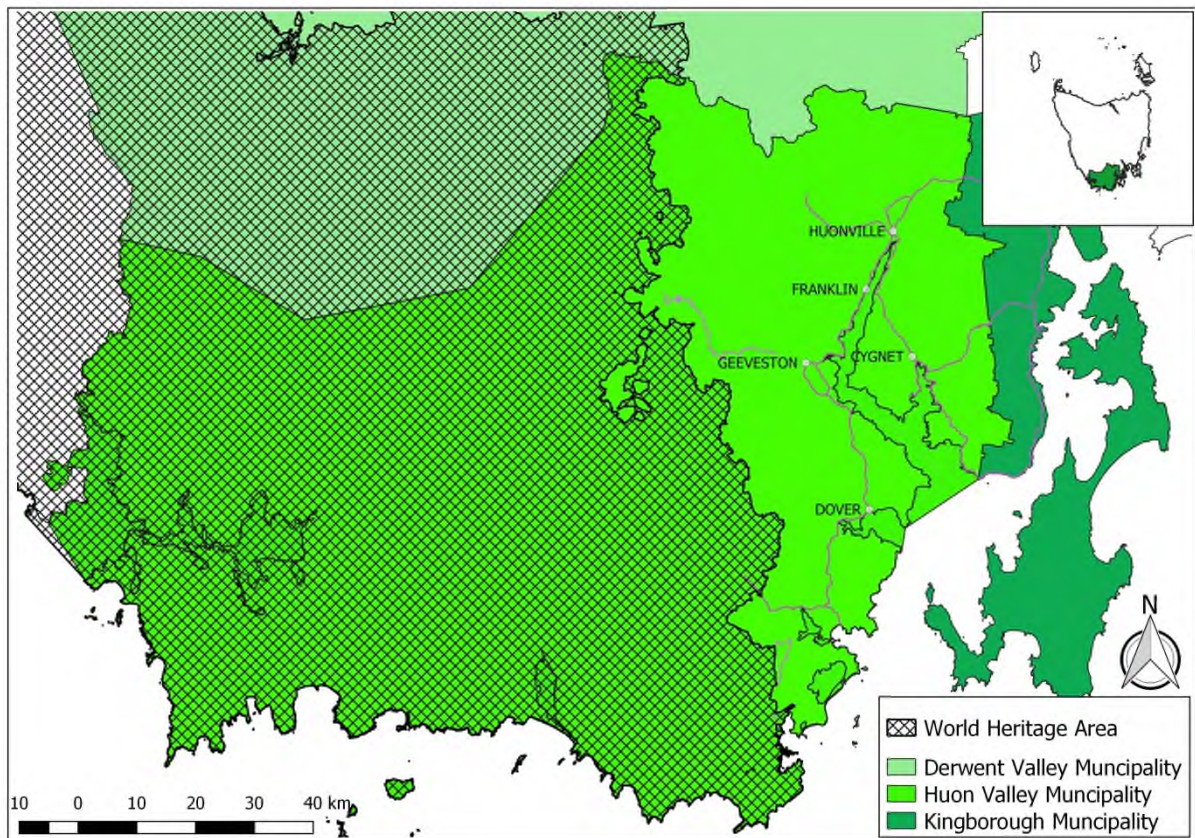
2.1 The Area

The Huon Valley is located in southern Tasmania and consists of one local government municipal area: the Huon Valley Council (Map 1). It is home to almost 17,000 people across an area of 5,497 square kilometres, including the south-western section of the Tasmanian Wilderness World Heritage Area (TWWHA). The Huon Valley municipal area is bordered by the Kingborough municipal area to the east and the Derwent Valley municipal area to the north.

The Huon Valley's economic development is closely related to the natural resource base of the area. The five main natural resource-based industries of the Huon Valley are: agriculture (particularly orcharding), aquaculture, fishing, forestry, and tourism.

The Huon Valley has extensive natural heritage reflected by the numerous areas that are formally reserved to protect their conservation and biodiversity values. These include part of the South West National Park, Southport Lagoon Conservation Area, Snug Tiers State Recreation Area, Egg Islands Conservation Area, Ninepin Point Marine Reserve and Hastings Caves State Reserve.

This Strategy covers all of the Huon Valley Council municipal area, including the TWWHA. The Tasmanian Wilderness World Heritage Area Management Plan 2016 (DPIPWE, 2016) also has a strong emphasis on biosecurity to help mitigate the introduction and spread of weeds and management at access points where weeds are most likely to be introduced.



Map 1 – Locality Map

2.2 Definition of a Weed

A weed is a plant that has, or has the potential to have, detrimental effects on environmental, economic or social values (ARMCANZ, ANZECCF Ministers, 1999). It is simply a plant that is growing where it is not wanted. For instance, grass is valued as part of a lawn, but viewed as a weed in a vegetable garden. Declared weeds are species listed in the *Weed Management Act 1999* as plants that have been identified by DPIPWE as having potentially adverse impacts in Tasmania. Non-declared weeds, while not listed in the Act are still considered to be non-native plants that invade bushland and threaten the natural values through competing for resources and replacing habitat as well as posing a threat to agriculture through competing with preferred species.

2.3 Importance of Weed Management

Weed management is an integral part of the sustainable management of natural resources and the environment. Effective weed management protects natural values, productive land and industries reliant on a healthy environment. Threats that may lead to the introduction and spread of weeds include climate change, soil disturbance and erosion, lack of weed hygiene (biosecurity) practices, and the failure to treat infestations in a timely manner.

2.4 Legislation

The *Weed Management Act 1999* (the Act) provides the principal legislative framework for weed management in Tasmania. The purpose of the Act is to provide for the control and eradication of declared weeds and to promote a strategic and sustainable approach to weed management in Tasmania. The Act is administered by Biosecurity Tasmania within the Department of Primary Industries, Parks, Water and Environment (DPIPWE).

There are currently 147 weeds, or groups of weeds, declared under the Act (see the weed index on the DPIPWE website for a full list of declared weed species). These plants have been declared because they have potentially significant adverse impacts on Tasmania's productive capacity, natural or physical resources, genetic diversity or ecological processes.

Twenty-eight declared weed species are known to be present in the Huon Valley municipal area. The exact number of declared weeds present is difficult to determine due to limited or decentralised records and the limited extent of surveys conducted across the municipal area. All Weeds of National Significance (WoNS) are listed as declared weeds in Tasmania and seven species or groups of species have been recorded in the Huon Valley.

Land managers have a legal requirement to control declared weeds on their land. Failure to control declared weeds when required to do so may result in a fine under the Act. It is an offence under the Act to sell, distribute, or transport a declared weed or weed material, including soil contaminated with weed material.

Weed Inspectors authorised to enforce the Act are employed by the Huon Valley Council and are the principal contact to report suspected high priority weed species sightings in the Huon Valley municipal area.

Each declared weed has a Statutory Weed Management Plan, which states the management zone in each municipal area in Tasmania:

Zone A - the management objective is eradication, that is, complete removal or destruction of the weed infestation (see Table 4 for a list of these weeds recorded in the Huon Valley).

Zone B - the management objective is containment; that is, prevention of spread to areas free of the weed, and includes buffer distances from property boundaries, waterways and roads (see Table 5 for a list of these weeds recorded in the Huon Valley).

Other Relevant Legislation

The Department of Primary Industries, Parks, Water and Environment (DPIPWE) also administer the *Plant Quarantine Act 1997* and the *Seeds Act 1985*. The *Plant Quarantine Act 1997* regulates the importation of plant material, plant products and other material that may carry pests and diseases of plants into Tasmania. The *Seeds Act 1985* regulates the importation of plant seed into Tasmania.

The *Agricultural and Veterinary Chemicals (Control of Use) Regulations 2012* and the *Agricultural and Veterinary Chemicals (Control of Use) Act 1995* detail the legal requirements for the application of a chemical product by aerial or ground spraying.

2.5 Land Managers

There are four main public land managers that are all responsible for weed management in the Huon Valley and the implementation of the Strategy. In addition, private land managers are also responsible for weed management on their land and require support, advice and capacity building to implement effective weed management practices.

Huon Valley Council (HVC)

HVC is responsible for weed management on all HVC owned and managed land, including roadsides, parks, Waste Transfer Stations and quarries.

HVC has the lead role in the implementation of the Strategy and employs Weed Inspectors authorised to enforce the Act. Weed management is conducted across HVC departments, including a high priority weeds treatment program coordinated by a Weed Inspector and conducted by weed treatment professionals.

Department of State Growth (State Growth)

State Growth manages the sections of state road that are within the Huon Valley municipal area.

Weeds are managed within the Network Planning area of State Growth through the implementation of the State Roads Weed Strategy and the use of weed treatment professionals.

Department of Primary Industries, Parks, Water and Environment's (DPIPWE's) Parks and Wildlife Service (PWS) incorporating Crown Land Service (CLS)

PWS is responsible for management of state reserves and Tasmanian Wilderness World Heritage Area within the Huon Valley municipal area.

The control of weeds in these areas is undertaken as part of the regular reserve management and is carried out in conjunction with specific management plans for some parks and reserves.

The Tasmanian Wilderness World Heritage Area Weed Buffer Project is a collaborative effort of relevant land managers to protect the TWWHA from the threat of weeds.

CLS is responsible for management of crown reserves, including Future Potential Production Forest, riparian/foreshores and road reserves within the Huon Valley municipal area.

Weeds are often treated under the instruction or guidance of a Weed Inspector and carried out by weed treatment professionals.

Sustainable Timber Tasmania (STT)

STT (previously known as Forestry Tasmania) manages large areas of state forest (Permanent Timber Production Zone Land) within the Huon Valley municipal area.

Weed control amongst native forest, plantations and along all forestry roads are key responsibilities of this organisation and are managed and carried out by STT staff or weed treatment professionals.

Private Land Managers

Private land managers include all non-public managers of land, including tenants, property and farm managers. This large and diverse group also have a significant role to play in the management of weeds in the Huon Valley municipal area.

Private land managers must also comply with the Act and often require support and advice to do so effectively. Some private land managers have Weed Management Plans as part of a management plan for a specific species or as part of a Conservation Covenant or Part 5 Agreement.

Other Stakeholders

A number of other organisations such as TasNetworks and TasWater also have assets and conduct works within the Huon Valley municipal area and therefore have weed management obligations. Other interested parties include NRM South, Inland Fisheries Service (aquatic weeds) and Marine and Safety Tasmania (MAST) (aquatic weeds).

3. STRATEGY DEVELOPMENT

3.1 Background

The purpose of the Strategy is to support land managers to develop weed management programs and plans for their land through prioritisation of resources based on weed species, sites and assets to protect from the threat of weed infestations and sites and activities that are at high risk of spread or introduction.

The initial *Huon Valley Weed Management Strategy 2007–2012* was developed in response to the significant threats posed by weeds, and in recognition that the most practical and effective way to manage a number of these is through coordinated and cooperative effort between land managers.

In 2012, the *Huon Valley Weed Management Strategy 2007–2012* was reviewed and simplified to allow the progress of the strategy to be more easily measured and reviewed. This review formed the *Huon Valley Weed Management Strategy 2013-2018*.

To ensure the Strategy is comprehensive and relevant to land managers' weed management needs, consultation was undertaken as part of the development of all three Strategies.

The Strategy links to the *Huon Valley Council Natural Resource Management (NRM) Strategy 2015* via Objective 3 'To manage and reduce existing invasive weeds, pests and diseases in the Huon Valley and to prevent and act on new incursions' and to the *NRM Strategy for Southern Tasmania 2015-2020 (NRM South, 2016)* via Management Target LMT4 'Response to new and existing agricultural and environmental weed, pest and disease incursions is actively coordinated' and Management Target BMT3 'Active monitoring, prevention and control of new and existing invasive species and disease incursions that impact on biodiversity are coordinated'.

3.2 Huon Valley Weed Management Strategy 2013-2018 Progress

The progress of the strategy over the period of the 2013-2018 is presented below through the results of the Strategy Evaluation Performance Indicators (see Table 1) and key

achievements. No new priority weed species have been recorded in the Huon Valley since 2013.

Table 1. Strategy Evaluation 2013-2017

Code	Performance Indicator	Measurement Method	Timing	Result
E1	Number of new priority weeds recorded in the Huon Valley.	A count of any additional declared weed species recorded as present in the Huon Valley after 2012.	End of 2017	0
E2	Number of established new priority weeds	An assessment of any of E1 identified declared weed species that would be considered not easy to eradicate.	End of 2017	0
E3	Number of priority weeds eradicated or under effective annual control.	Proportion of sites known to be under effective annual control on Watch List, Priority 1 and Priority 2 weeds.	End of 2017	58%
E4	Extent of priority weeds.	Spatial polygons used to assess whether a Watch List, Priority 1 or Priority 2 weed has increased or decreased in extent.	End of 2017	44% increased 25% decreased 18% Controlled 13% No change

Key Strategy achievements 2013-2017:

- Weed Management Workshops.
A number of well-received weed management focused workshops were run by the Huon Valley Council that build capacity in Huon Valley land managers to effectively manage weed infestations on their properties.
- Weed Notifications.
Positive outcomes from Weed Notifications indicates that most land managers do

take the threats that weeds pose seriously and are willing to comply with weed management requirements when they are informed and supported with effective treatment methods.

- **Tasmanian Wilderness World Heritage Area (TWWHA) Weed Buffer Project.**
A successful cross-tenure initiative to protect the TWWHA commenced in 2016, which gained support and secured resources for the development of action plans and on-ground weed treatment.
- **State Roads Weed Strategy.**
The recent development and implementation of the State Roads Weed Strategy means that the approach to priority weeds on state roads is now strategic and proactive.

3.3 2018 Strategy Review

The following process occurred over a period of two years in order to review the Strategy:



4. PRIORITY WEEDS

These priority weed lists are designed to clarify the highest priority weed species for the Huon Valley municipal area. The priority weeds lists are strongly linked to the legislation classifications. Refer to Section 2.4 for definition of Zone A classification of weed species declared under the Act. The common names of these weed species align with those used by DPIPW. It is expected that new species will be recorded and that known species will be eradicated over the five year period of the Strategy, therefore these lists are dynamic and will be kept current on the HVC website.

4.1 Priority Weed Species

The priority weeds were classified into six categories, each with a defined management approach, as described in Table 2 below.

Table 2. Priority Weed Categories and Approach. Prioritisation and management approach dictate resource allocation to weed management activities.

Priority	Category	Approach	No. of Species
Declared Alert	Declared weed species not currently known in the Huon Valley	Confirm accurate identification. Notify Biosecurity Tasmania. Record. Act to eradicate urgently.	20 (Table 3)
1	Declared Zone A weed species with limited distribution in the Huon Valley	Eradicate over next 10 years.	11 (Table 4)
2	Declared Zone A weed species with broad distribution in the Huon Valley	Eradicate over next 20 years.	4 (Table 4)
3	Declared Zone B weed species with limited distribution in the Huon Valley	Control and contain isolated infestations and where threatening assets or values, over next 20 years.	3 (Table 5)
4	Declared Zone B weed species with broad distribution in the Huon Valley	Reduce the extent of isolated infestations over next 20 years. Control and contain over next 20 years where threatening assets or values.	10 (Table 5)
Non-declared Alert	Non-declared weed species not currently known, or with limited distribution, in the Huon Valley	Notify Biosecurity Tasmania. Assess level of threat and resource availability to record, control and contain infestations. Act accordingly.	5 (Table 6)

Table 3. Declared Weeds Alert List. Declared weeds that are not currently known in the Huon Valley, but there is a higher risk for infestations establishing in the region than for other Zone A declared weed species. The aim is to prevent these weeds from establishing in the Huon Valley. For details on the infestations in Kingborough mentioned below refer to the *Weed Management Strategy and Action Plan Kingborough Municipal Area 2017-2027* (Kingborough Council, 2016).

Scientific Name	Common Name	Threat
<i>Amsinckia Species</i>	fiddleneck	Infestations recently recorded in the Kingborough municipal area.
<i>Calluna vulgaris</i>	heather	Previously recorded in Mountain River area. No recent records.
<i>Cardaria draba</i>	whiteweed	Infestations recently recorded in the Kingborough municipal area.
<i>Carduus nutans</i>	nodding thistle	Previously recorded in Dover area. No recent records.
<i>Datura spp.</i>	thornapple	Previously recorded in Lucaston area. No recent records.
<i>Equisetum sp.</i>	horsetail	Previous unrecorded and unverified infestations in Cygnet and previously recorded in the Kingborough municipal area.
<i>Erica arborea</i>	tree heath	Previously recorded in Huonville area. Infestations recently recorded in the Kingborough municipal area.
<i>Erica baccans</i>	berry heath	Previously recorded in Nicholls Rivulet area. No recent records. Infestations recently recorded in the Kingborough municipal area.

Scientific Name	Common Name	Threat
<i>Erica caffra</i>	water heath	Infestations recently recorded in the Kingborough municipal area.
<i>Erica discolour</i>	bicolored heath	Infestations recently recorded in the Kingborough municipal area.
<i>Erica holosericea</i>	-	Infestations recently recorded in the Kingborough municipal area.
<i>Hieracium aurantiacum</i>	orange hawkweed	Infestations recently recorded in the Kingborough municipal area.
<i>Lycium ferocissimum</i>	African boxthorn	Infestations recently recorded in the Kingborough municipal area.
<i>Myriophyllum aquaticum</i>	parrots feather	Previously recorded in Petcheys Bay area. No recent records.
<i>Nassella leucotricha</i>	Texas needle grass	Infestations recently recorded in other southern municipal areas. High priority species for Tasmania.
<i>Nassella neesiana</i>	Chilean needle grass	Infestations recently recorded in other southern municipal areas. High priority species for Tasmania.
<i>Nassella tenuissima</i>	Mexican feather grass	Infestations recently recorded in the Kingborough municipal area. High priority species for Tasmania.
<i>Nassella trichotoma</i>	serrated tussock	Infestations recently recorded in the Kingborough municipal area. High priority species for Tasmania.
<i>Solanum marginatum</i>	white-edged nightshade	Previously recorded at unknown locations. No recent records.

Scientific Name	Common Name	Threat
<i>Urospermum dalechampii</i>	Mediterranean daisy	Infestations recently recorded in the Kingborough municipal area.

See the Department of Primary Industries, Parks, Water and Environment (DPIPWE)'s Weed Index under the Invasive Species section of their website (<http://dPIPWE.tas.gov.au/invasive-species/weeds/weeds-index/declared-weeds-index>) for a full list of all declared weeds for Tasmania.

Table 4. Declared Zone A Weeds List. Declared Zone A weeds recorded in the Huon Valley (priority 1 and 2 weed species). Weed species considered to be of limited distribution in the Huon Valley by DPIPWE and which land managers are required to eradicate under legislation. If there is a priority 1 weed species only located on property managed by a single land manager then that weed species is the highest priority for that land manager.

Scientific Name	Common Name
Priority 1 Weed Species	
<i>Asparagus asparagoides</i> *	bridal creeper
<i>Berberis darwinii</i>	Darwin's barberry
<i>Coprosma robusta</i>	karamu
<i>Cyperus esculentus</i>	yellow nut grass / sedge
<i>Echium plantagineum</i>	Paterson's curse
<i>Eragostis curvula</i>	African lovegrass
<i>Hypericum perforatum</i>	perforated St John's wort
<i>Hypericum tetrapterum</i>	square-stemmed St John's wort
<i>Marrubium vulgare</i>	horehound
<i>Opuntia spp. (excluding Opuntia ficus-indica)</i> *	Opuntoid cacti
<i>Rorippa sylvestris</i>	creeping yellowcress
Priority 2 Weed Species	
<i>Carex flagellifera</i>	New Zealand sedge
<i>Cortaderia spp.</i>	pampas grass
<i>Cenchrus macrourus</i>	African feathergrass
<i>Salix alba, S. cinerea, S. Xrubens, S. purpurea</i> *	seeding willow species (white willow, grey willow, basket willow, purple osier)

* Weeds of National Significance (WoNS).

Table 5. Declared Zone B Weeds List. Declared Zone B weeds recorded in the Huon Valley (priority 3 and 4 weed species). Weed species considered to have a widespread distribution in the Huon Valley by DPIPW and which land managers are required to contain from spreading under legislation.

Scientific Name	Common Name	Buffer (m) [#]
Priority 3 Weed Species		
<i>Chrysanthemoides monilifera</i> subsp. <i>Monilifera</i> *	boneseed	10
<i>Leycesteria formosa</i>	Elisha's tears	10
<i>Senecio jacobaea</i>	ragwort	50
Priority 4 Weed Species		
<i>Carduus</i> spp.	slender thistles	50
<i>Cirsium arvense</i>	Californian thistle	10
<i>Cytisus scoparius</i> *	English broom	10
<i>Erica lusitanica</i>	Spanish heath	50
<i>Foeniculum vulgare</i>	fennel	50
<i>Genista monspessulana</i> *	Montpellier broom	10
<i>Ilex aquifolium</i>	holly	50
<i>Rubus fruticosus aggregate</i> *	blackberry	10
<i>Salix fragilis</i> *	crack willow	50
<i>Ulex europaeus</i>	gorse	10

* Weeds of National Significance (WoNS).

Distance of buffer from property boundaries and waterways where this weed species should be controlled as stated in the Statutory Weed Management Plan for this species.

Table 6. Non-declared Weeds Alert List. There are a number of highly invasive plant species that are not currently known to be present in the Huon Valley, but to which we need to remain alert. This list includes weeds that are not declared (listed under legislation) and therefore there is no head of power for a Weed Inspector to require eradication or containment measures to be taken, but there is a risk of infestations establishing or of small infestations present to become widespread. New species may be introduced to Tasmania during the five year period of the Strategy that are considered a high level threat by invasive species professionals. The same approach will be taken for those new species.

Scientific Name	Common Name	Threat
<i>Euphorbia paralias</i>	sea spurge	Previously recorded in Franklin and Cockle Creek areas.
<i>Kunzea spp. (except ambigua)</i>	kunzea	Increased threat with increased climatic warming.
<i>Juncus acutus</i> [^]	spiny rush	Degrading estuaries in other parts of Tasmania.
<i>Spartina anglica</i>	ricegrass	High invasive potential. Poisonous.
<i>Spartium junceum</i>	Spanish broom	High invasive potential. Recorded in other parts of Tasmania.

[^]Not to be confused with the native and very widespread species Australian native sea rush (*Juncus kraussii*).

Other Important Weeds

A number of species, not declared under the Act, are considered a threat to the Huon Valley. These plants have been listed in this strategy as ‘Other Important Weeds’ (Appendix A).

These are not declared (listed under legislation) and therefore there is no head of power for a Weed Inspector to require eradication or containment measures to be taken. However, they are considered a threat to natural values in the Huon Valley (eg, by outcompeting native vegetation species and/or replacing habitat), and can also be a threat to agriculture (eg, by competing with preferred species and/or reducing pasture). Also see the Department of Primary Industries, Parks, Water and Environment (DPIPWE)'s Common Environmental Weeds List (non-declared weeds) under their Invasive Species section of their website (<http://dpiipwe.tas.gov.au/invasive-species/weeds/environmental-weeds/common-environmental-weeds>) for more information.

The approach for 'Other Important Weeds' is to eradicate or contain them to protect key sites, such as important natural values (ie, threatened vegetation communities or threatened species).

4.2 Categorisation Method

Weed species were prioritised using the criteria described in Table 7 below.

Table 7. Categorisation Method. Description of the method employed to categorise weed species in order of priority.

Prioritisation Criteria	Description of Criteria	Species Priority Categorisation
Legislative status	Determined by DPIPWE and considers potential significant adverse impact on Tasmania's productive capacity, natural or physical resources, genetic diversity or ecological processes.	<ul style="list-style-type: none"> • Declared Alert List – Table 3 • Zone A List (priority 1 & 2)– Table 4 • Zone B List (priority 3 & 4)– Table 5
	Species with management objective in Statutory Weed Management Plan: eradicate	<ul style="list-style-type: none"> • Declared Alert List – Table 3 • Zone A List (priority 1 & 2)– Table 4
	Species with management objective in Statutory Weed Management Plan: contain	<ul style="list-style-type: none"> • Zone B List (priority 3 & 4)– Table 5
Known distribution	Species with ' limited ' known infestation distribution within Statutory Weed Management Plan management objective.	<ul style="list-style-type: none"> • Priority 1 (Zone A) – Table 4 • Priority 3 (Zone B) – Table 5
	Species with ' broad ' known infestation distribution within Statutory Weed Management Plan management objective.	<ul style="list-style-type: none"> • Priority 2 (Zone A) – Table 4 • Priority 4 (Zone B) – Table 5
Invasive potential / threat	Declared species that are considered a threat of being introduced into, and establishing in, the Huon Valley.	<ul style="list-style-type: none"> • Declared Alert List – Table 3

Prioritisation Criteria	Description of Criteria	Species Priority Categorisation
	<p>Non-declared species that are considered a high threat of being introduced into, and establishing in, the Huon Valley.</p>	<ul style="list-style-type: none"> • Non-declared Alert List – Table 6

5. GOALS, OBJECTIVES AND ACTIONS

This section consists of three overarching goals, six objectives and 22 associated actions. While some actions may contribute to multiple objectives they have been grouped with the most relevant objective. Responsible parties are listed in bold in the targets and when timing is relevant it is stated in the target, otherwise the target is to be reached within the 5-year period of the Strategy. While the actions achieved over the period of the Strategy are resource dependent, in turn, these actions and targets provide a guide to the prioritisation of resources that are available for weed management.

Goals

The overarching goals for weed management in the Strategy are to:

Goal 1 – Prevent the establishment of new weeds in the Huon Valley.

Goal 2 – Reduce the extent of priority weeds in the Huon Valley.

Goal 3 – Reduce the impact of weeds on natural values in the Huon Valley.

Objective 1 - Public land managers progress the Strategy.

Action #	Action	Target
1.1	Allocate suitable levels of resourcing (financial and human) to the implementation of this strategy by public land managers.	<ul style="list-style-type: none"> Improved resourcing by public land managers to implement this strategy. All public land managers employ personnel responsible for weed management.
1.2	Develop/update and implement action plans for all priority 1 weed species.	<ul style="list-style-type: none"> Development of action plan for each priority 1 species is coordinated by Weed Inspector. Implementation of action plan for each priority 1 species is coordinated with relevant land managers by Weed Inspector, including: <ul style="list-style-type: none"> Annual contact by Weed Inspector with land managers with priority 1 species to determine progress/effectiveness of treatment and weed hygiene measures. Weed hygiene measures in place for all works on sites with priority 1 weed species and audited by Weed Inspector regularly for duration of works.
1.3	Update species priority lists as required.	<ul style="list-style-type: none"> Species priority lists are kept current by Weed Inspector and available to land managers (eg, HVC website).
1.4	Provide annual report on implementation of strategy to key decision makers.	<ul style="list-style-type: none"> Report against Strategy implementation is tabled at HVC Council meeting annually. Weed management strategy and program overview is presented at a HVC Councillor workshop in 2019 and 2022.

Objective 2 – Appropriately prioritise and conduct weed management activities.

Action #	Action	Target
2.1	Strategically prioritise resources for annual weed treatment.	<ul style="list-style-type: none"> • Annual weed treatment programs by public land managers strategically prioritise: <ul style="list-style-type: none"> ○ high priority species (Zone A), ○ follow up of previous treatment work (eg, infestation treated last season, containment lines), ○ outliers of Zone B species, ○ key sites (eg, TWHHA), and ○ monitoring of high risk sites. • Containment zones and lines are established by Weed Inspector for relevant priority species and communicated to relevant land managers. • Containment zones and lines for relevant priority species reduced annually through effective treatment by public land managers.
2.2	Define and protect key sites from weed incursions.	<ul style="list-style-type: none"> • Criteria developed by public land managers for what constitutes a ‘key site’ (eg, significant natural asset protection). • Annual weed treatment programs by public land managers strategically prioritise key sites. • Suitable and effective weed hygiene equipment and tools are provided by public land managers for use when conducting works on or near key sites. • Cooperative Weed Management Agreements for initial and follow up weed treatment work are utilised by public land managers when appropriate.

Action #	Action	Target
2.3	Identify and effectively manage sites and activities at high risk for spread or introduction of weeds.	<ul style="list-style-type: none"> • Criteria to identify high risk sites and activities are developed by Weed Inspector. • Weed inspections of high risk sites are conducted (at least) biennially by Weed Inspector. • 5 high risk activities or projects by public land managers or other stakeholders (eg, TasNetworks) identified by Weed Inspector and weed management and hygiene measures in place for these are assessed against compliance with the Act and impacts on natural values (eg, sufficient rehabilitation carried out). • Declared weeds are treated annually in operational quarries (including when used to store fill) by public land managers. • 3 methods to reduce risk of weed spread due to green waste are implemented at each HVC Waste Transfer Station.

Action #	Action	Target
2.4	Adhere to the <i>Tasmanian Weed and Disease Planning and Hygiene Guidelines</i> for machinery, vehicle and equipment hygiene for works and recreational activities.	<ul style="list-style-type: none"> • Suitable and effective weed hygiene equipment and tools are provided by public land managers for use when conducting works (particularly on or near key sites). • Key personnel are provided with biennial training by public land managers in weed hygiene principles and measures. • Public land managers' Safe Operating Procedures for weed hygiene measures are implemented for: <ul style="list-style-type: none"> ○ sites with priority 1 weed species, ○ key sites, and ○ high risk sites. • Current biosecurity infrastructure for recreational areas is maintained in working order by relevant land managers. • New biosecurity infrastructure for recreational areas is installed when required (eg, new entrances to TWWHA) by relevant land managers.

Action #	Action	Target
2.5	Liaise between public land managers to support and coordinate weed management.	<ul style="list-style-type: none"> • Annual (at least) contact is made between public land managers, regarding: <ul style="list-style-type: none"> ○ the alignment of treatment program plans, ○ priority species actions, changes to prioritisation categories, infestations locations, effective control methods, ○ key sites (cross tenure approach required), ○ resourcing, ○ weed hygiene equipment, tools, training and SOPs, current practices, ○ progress of Strategy actions, ○ containment zones/lines, ○ high risk sites/activities, ○ data collection (method and surveys conducted), monitoring, management and communication, ○ learnings on species impacts on natural values, and ○ Cooperative Weed Management Agreements. • Networks are maintained by public land managers to support weed species identification.
2.6	Locally manage selected weeds where they have the potential to spread into the Tasmanian Wilderness World Heritage Area (TWWHA).	<ul style="list-style-type: none"> • All relevant land managers are treating selected weeds as part of the TWWHA weed buffer initiative. • Public land managers' Safe Operating Procedures for weed hygiene measures are implemented for TWWHA sites and TWWHA weed buffer zone.
2.7	Provide support to volunteers conducting weed management activities on public land.	<ul style="list-style-type: none"> • Weed treatment equipment is available from relevant public land managers for volunteer groups.

Objective 3 – Enforce the *Weed Management Act 1999* (the Act).

Action #	Action	Target
3.1	Enforce the <i>Weed Management Act 1999</i> .	<ul style="list-style-type: none"> • 90% of weed notifications to private and public land managers from Weed Inspector result in treatment outcomes within 42 days (and requirement notice action taken when treatment not conducted within specified timeframe). • Annual follow-up inspections are conducted by Weed Inspector for 75% of sites where Requirement Notice action taken in previous 24 month period. • Weed hygiene measures are in place for all works on sites with priority 1 weed species and are audited by Weed Inspector regularly for duration of works. • Weed inspections of high risk sites are conducted (at least) biennially by Weed Inspector.
3.2	Authorise Weed Inspectors under the Act.	<ul style="list-style-type: none"> • At least one Weed Inspector is authorised at HVC to enforce the Act.

Objective 4 – Map, effectively manage data and increase knowledge of extent of weeds.

Action #	Action	Target
4.1	Establish and maintain effective data collection, monitoring and management tools and processes for weed infestations.	<ul style="list-style-type: none"> • Annual contact is made between public land managers, regarding their data collection, monitoring and management tools and processes for weed infestations.
4.2	Continue to collect weed infestation data.	<ul style="list-style-type: none"> • Weed surveys of roadsides in the Huon Valley municipal area are conducted by relevant public land managers to identify opportunities to: <ul style="list-style-type: none"> ○ locate Zone A weed infestations; ○ control outliers/isolated infestations (particularly of Zone B species); ○ determine currently unknown extent of P2-4 species; ○ define containment lines for relevant priority species (eg, boneseed) and reduce area annually; and ○ identify relatively weed free zones for protection.
4.3	Map and communicate weed infestation data.	<ul style="list-style-type: none"> • Data on (at least) Zone A weeds is uploaded by public land managers onto Natural Values Atlas (NVA) annually. • Annual (at least) contact is made between public land managers, regarding new Zone A weed infestations. • Annual contact is made between public land managers, regarding how they communicate weed infestation maps/data and associated actions to relevant stakeholders.

Objective 5 – Raise awareness about weed management.

Action #	Action	Target
5.1	Support and enable/encourage land managers and community groups in weed species identification and notification to a Weed Inspector.	<ul style="list-style-type: none"> • HVC webpage ‘Weeds and the Huon Valley’ is maintained, including updating of priority weed species lists and identification support. • Weed management focused workshop, including weed identification as a topic, is held annually by Weed Inspector. • Volunteers conducting weed management activities on public land are provided with weed species identification information by Weed Inspector to assist in locating priority weeds. • Weed identification skills are expanded within HVC beyond Weed Inspectors.
5.2	Promote land manager responsibilities under the Act.	<ul style="list-style-type: none"> • Weed management focused workshop, including legislation as a topic, is held annually by Weed Inspector. • HVC webpage ‘Weeds and the Huon Valley’ is actively maintained (at least) annually, including legislative responsibilities for land managers and best methods of disposal of weed materials to reduce spread. • New Residents Welcome Packs sent out by HVC include information on weed management, including legislation.

Action #	Action	Target
5.3	Promote strategic weed management planning and prioritisation to land managers.	<ul style="list-style-type: none"> • Weed Management Planning Guidelines and plan template is available to land managers on HVC website. • HVC webpage ‘Weeds and the Huon Valley’ is actively maintained (at least) annually, including strategic weed management planning support and current priority weed species lists. • Weed management focused workshop, including strategic weed management planning as a topic, is held annually by Weed Inspector.
5.4	Promote effective weed treatment method options to land managers.	<ul style="list-style-type: none"> • Weed management focused workshop, including effective weed treatment method options as a topic, is held annually by Weed Inspector. • HVC webpage ‘Weeds and the Huon Valley’ is actively maintained (at least) annually, including links to treatment method options.
5.5	Promote weed hygiene (prevention of spread of weeds) measures to land managers.	<ul style="list-style-type: none"> • Weed management focused workshop, including weed hygiene as a topic, is held annually by Weed Inspector. • Simple weed hygiene practices are promoted annually by Weed Inspector to land managers, particularly for high risk activities (eg, hay cutting and carting, farm tours). • Machinery hygiene and clean-down procedures are promoted to private machinery operators by Weed Inspector.

Objective 6 – Increase understanding about how weeds impact natural values.

Action #	Action	Target
6.1	Increase understanding about how specific weed species impact natural values.	<ul style="list-style-type: none"> • Information on how specific weed species impact on natural values is shared between public land managers. • Information on weed species impacts on natural values is sought out by Weed Inspector.
6.2	Consider impact of weed treatment on other important values.	<ul style="list-style-type: none"> • Weed Inspector to include consideration of treatment on other important values within the infestation site in Weed Management Guidelines (available on HVC webpage).

6. ASSESSMENT OF THE STRATEGY

To measure the success of this Strategy two levels of monitoring and evaluation have been developed:

1. Monitoring the progress of Strategy implementation.
2. Evaluating the effectiveness of the Strategy at addressing the goals and objectives.

Strategy Implementation

An annual report on the implementation of the strategy will be provided to key decision makers.

Strategy Effectiveness

Accumulation of the measurable targets for each action allows evaluation of the effectiveness of the Strategy at achieving the objectives.

The overarching goals for weed management in the Strategy are to:

Goal 1 – Prevent the establishment of new weeds in the Huon Valley.

Goal 2 – Reduce the extent of priority weeds in the Huon Valley.

Goal 3 – Reduce the impact of weeds on natural values in the Huon Valley.

The performance indicators in Table 8 below evaluate how effective the Strategy has been at addressing each overarching goal.

Table 8. Broad Strategy Evaluation Performance Indicators. With increased survey work, improved data management and information sharing additional high priority weed species and infestations are likely to be found in the Huon Valley. When an infestation is identified it does provide the opportunity to eradicate it before the weed species becomes established in the Huon Valley.

Goal	Code	Performance Indicator	Measurement Method	Timing
1	E1	Less than 5 new Zone A weeds recorded in the Huon Valley.	A count of any additional declared weed species recorded as present in the Huon Valley after 2016.	End of 2022
	E2	No established new Zone A weeds	An assessment of any of E1 identified declared weed species that would be considered not easy to eradicate.	End of 2022
2	E3	No increase in number of priority 1 or 2 weed species infestations.	A count of infestations per Zone A weed species compared with 2017.	End of 2022
	E4	80% of Zone A weed infestations eradicated or under effective annual control.	Proportion of Zone A <u>sites</u> known to be under effective annual control.	End of 2022
3	E5	Increased understanding of impact on natural values by all weeds in 'Non-declared Weeds	A count of weed species which Weed Inspectors have gained/increased knowledge of impact on natural values.	End of 2022

Goal	Code	Performance Indicator	Measurement Method	Timing
		Alert List’.		

Next Strategy Review

The next Strategy review will be conducted in 2022, 15 years after the initial strategy was developed. The assessment of the current strategy will dictate the approach for the next five-year period.

7. REFERENCES

Agricultural and Resource Management Council of Australia and New Zealand, Australia and New Zealand Environment and Conservation Council and Forestry Ministers, (1999) *The National Weeds Strategy- a strategic approach to weed problems of national significance*. Revised Edition. Commonwealth of Australia. Canberra.

DPIPWE (2015) *Weed and Disease Planning and Hygiene Guidelines – Preventing the spread of weeds and diseases in Tasmania*. (Eds.) Karen Stewart and Michael Askey-Doran. Department of Primary Industries, Parks, Water and Environment, Hobart.

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NRM South, (2016), *Natural Resource Management Strategy for Southern Tasmania 2015-2020*. NRM South, Hobart.

Temple-Smith, Ruth (2011) *Southern Tasmanian Weed Strategy 2011-2016*, NRM South, Hobart.

APPENDIX A - OTHER IMPORTANT WEEDS

These are not declared (listed under legislation) and therefore there is no head of power for a Weed Inspector to require eradication or containment measures to be taken, but they are considered a threat to natural values in the Huon Valley, outcompete native vegetation species and replace habitat. Also see the Department of Primary Industries, Parks, Water and Environment (DPIPWE)'s Common Environmental Weeds List (non-declared weeds) under their Invasive Species section of their website (<http://dPIPWE.tas.gov.au/invasive-species/weeds/environmental-weeds/common-environmental-weeds>) for more information.

The approach for 'Other Important Weeds' is to eradicate or contain them to protect key sites, such as important natural values (ie threatened vegetation communities or threatened species).

Land managers are strongly encouraged to ensure these species do not spread beyond their property boundaries if they already have them on their land and not to plant them on their property.

Scientific Name	Common Name
<i>Acacia baileyana</i>	Cootamundra wattle
<i>Acer pseudoplatanus</i>	sycamore maple
<i>Agapanthus praecox subsp. orientalis</i>	African lily / agapanthus
<i>Ammophila arenaria</i>	marram grass
<i>Arctotheca calendula</i>	capeweed
<i>Billardiera heterophylla</i>	bluebell creeper
<i>Calystegia silvatica</i>	great bindweed
<i>Carpobrotus edulis</i>	yellow pigface
<i>Centranthus ruber</i>	red valerian
<i>Chamaecytisus palmensis</i>	tree lucerne

Scientific Name	Common Name
<i>Cirsium vulgare</i>	spear thistle
<i>Coprosma repens</i>	mirror bush
<i>Cotoneaster spp.</i>	cotoneaster species
<i>Crataegus monogyna</i>	hawthorn
<i>Crocsmia Xcrocsmiiflora</i>	montbretia
<i>Cyperus eragrostis</i>	flatsedge / nutgrass / umbrella sedge
<i>Delairea odorata</i>	cape ivy
<i>Digitalis purpurea</i>	foxglove
<i>Disa bracteata</i>	South African weed orchid
<i>Echium candicans</i>	Pride of Madeira
<i>Euryops abrotanifolius</i>	winter euryops
<i>Fuchsia magellanica</i>	fuchsia
<i>Gazania spp.</i>	gazania
<i>Genista stenopetala</i>	madeira broom
<i>Glyceria maxima</i>	reed sweetgrass
<i>Hebe elliptica</i>	shore hebe
<i>Hedera helix</i>	ivy
<i>Hypericum androsaemum</i>	tutsan
<i>Leptospermum laevigatum</i>	coast teatree
<i>Leucanthemum vulgare</i>	oxeye daisy
<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Lupinus arboreus</i>	tree lupin
<i>Melaleuca ericifolia</i>	coast paperbark
<i>Oenothera stricta</i>	evening primrose

Scientific Name	Common Name
<i>Paraserianthes lophantha subsp. lophantha</i>	Cape Leeuwin wattle
<i>Passiflora tarminiana</i>	banana passionfruit
<i>Phormium tenax</i>	New Zealand flax
<i>Pinus radiata</i>	radiata pine
<i>Pittosporum undulatum</i>	sweet pittosporum
<i>Polygala myrtifolia</i>	myrtleleaf milkwort
<i>Psoralea pinnata</i>	blue butterflybush
<i>Pyracantha spp.</i>	firethorn
<i>Rosa rubiginosa</i>	sweet briar / briar rose
<i>Senecio angulatus</i>	scrambling / climbing groundsel
<i>Solanum nigrum</i>	blackberry nightshade
<i>Tropaeolum majus</i>	Nasturtium
<i>Typha latifolia</i>	cumbungi / bulrush
<i>Tradescantia fluminensis</i>	wandering creeper
<i>Verbascum Thapsus</i>	great mullein
<i>Vinca major</i>	blue periwinkle
<i>Watsonia spp.</i>	watsonia
<i>Zantedeschia aethiopica</i>	arum lily

APPENDIX B - ABBREVIATIONS

DPIPWE	Department of Primary Industries, Parks, Water and Environment
HVC	Huon Valley Council
NRM	Natural Resource Management
PWS	Parks and Wildlife Service
STT	Sustainable Timber Tasmania
TWWHA	Tasmanian Wilderness World Heritage Area
WoNS	Weeds of National Significance

APPENDIX C - DEFINITIONS

Below is a list of terminology that is used throughout the Strategy.

Biosecurity Tasmania	The part of the Department of Primary Industries, Parks, Water and Environment (DPIPWE) responsible for administering the <i>Weed Management Act 1999</i> .
Contain / Containment	The prevention of spread to areas outside of the infestation.
Control	Weed management measures taken to reduce the size of the infestation.
Declared weed species	The weeds, or groups of weeds, listed under the Act.
Non-declared weed species	Weeds that are not declared (listed under legislation), but they are considered a threat to natural values and outcompete native vegetation species and often to agriculture through outcompeting preferred species.
Eradicate / Eradication	Measures taken that result in the complete removal or destruction of the weed infestation.
Established	A description used to indicate a weed species that would be considered not easy to eradicate.
Extent	The area defined by the outer edges of a particular weed species' infestations.
High Priority weed species	Usually refers to Zone A weed species, which are priority 1 or 2 weeds.
High risk sites or activities	Sites, properties or activities that have a high potential for weed spread and establishment, such as quarries and Waste Transfer Stations.
Isolated	Indicating weed species with limited distribution (not considered to have widespread or broad distribution).

Key sites	Sites, properties or zones that have high natural values that require protection, including riparian areas, such as the Tasmanian Wilderness World Heritage Area and its immediate surrounds and entry roads and tracks.
Land managers	All people with weed management responsibilities in the Huon Valley eg, private land holders/owners, tenants, public land managers like Huon Valley Council.
Natural values	An element or group of elements of the environment that are of special value, vulnerable to harm or serve an important ecological function.
Priority weed species	Species listed in the tables under section 4.1 ‘Priority Weed Species’ of the Strategy.
Private land managers	All non-publically owned land managers including tenants, property and farm managers.
Public land managers	Public land managers: Huon Valley Council, State Growth, Sustainable Timber Tasmania (previously Forestry Tasmania), Parks & Wildlife Service, Crown Land Service.
Riparian	Relating to or situated on the banks of a waterway.
Spread	Widening distribution of a weed species or infestation area.
Stakeholders	Individuals who have a special interest in a topic or specific information as it either impacts on them or they are required to act upon it.
Statutory Weed Management Plan	A plan developed by DPIPWE for each declared weed and weed group, which states the management zone in each municipal area in Tasmania, ie Zone A or Zone B.
The Act / legislation	<i>Weed Management Act 1999.</i>
The Strategy	This document. The Huon Valley Weed Management Strategy. Note the Huon Valley Weed Management Strategy 2007-2012

and Huon Valley Weed Management Strategy 2013-2018 are referred to by their full titles.

Volunteer groups	Wildcare, Landcare, Coastcare and 'Friends of' groups predominantly, but also schools and environment user groups such as mountain bike riders, horse riders, hikers and kayakers.
Weed hygiene / biosecurity	Practices and measures used to reduce the spread of weeds, pests and diseases.
Weed Inspector	Huon Valley Council officers authorised to enforce the Act and the principal contact to report suspected priority 1 or 2 weed species sightings in the Huon Valley municipal area. Note that Biosecurity Tasmania also has Weed Inspectors authorised to enforce the Act.
<i>Weed Management Act 1999</i>	The principal legislative framework for weed management in Tasmania. Also referred to as 'the Act'.
Widespread	Indicating weed species with broad distribution (not considered to have isolated or limited distribution).
Zone A weed species	A species for which the Statutory Weed Management Plan's management objective is <u>eradication</u> .
Zone B weed species	A species for which the Statutory Weed Management Plan's management objective is <u>containment</u> .