HONEYEATER BUSHLAND RESERVE WEED MANAGEMENT PLAN

Prepared for Junortoun Community Action Group

Karl Just, March 2025

Victorian Landcare Grants

VICTORIA State Government

EXECUTIVE SUMMARY

The Honeyeater Bushland Reserve Weed Management Plan was developed for the Junortoun Community Action Group (JCAG) as part of a Victorian Landcare Grant initiative. The plan provides a comprehensive assessment of weed species within the 17.02-hectare reserve and establishes a five-year strategy to manage high-threat weeds while promoting ecological restoration.

Key Findings

- A total of 180 plant species were recorded during the September 2024 survey, of which 117 (65%) were indigenous and 63 (35%) were introduced.
- 23 high-threat weed species were identified, including **Acacia baileyana* (Cootamundra Wattle), **Phalaris aquatica* (Toowoomba Canary-grass) and **Oxalis pes-caprae* (Soursob), which pose a risk to native vegetation.
- Weed presence was most significant in disturbed areas, particularly near soil fill zones and wetlands, while remnant bushland areas had low weed coverage.

Weed Management Strategy

The plan outlines targeted control methods for each weed species, including:

- Hand removal and cut-paint techniques for woody weeds.
- Herbicide application for species difficult to remove manually, with strict guidelines for responsible use.
- Soil fill management to minimize weed introduction and ensure long-term stabilization of the ecosystem.
- A five-year work schedule to systematically reduce weed populations while allowing for adaptive management based on ongoing monitoring.

Five-Year Implementation Plan (2025–2029)

The structured approach includes:

- Gradual removal of invasive species, ensuring habitat stability for native fauna.
- Annual monitoring of soil fill and new weed threats.
- Reduction of key high-threat species by 50% by 2029, with complete eradication targets for some.
- Revegetation efforts to enhance ecosystem resilience and prevent weed re-establishment.

Key Performance Indicators (KPIs)

By 2029–2030, success will be measured through:

- Eradication of mature woody weeds.
- Significant reduction of high-priority species such as One-leaf Cape-tulip, Soursob, and Blue Periwinkle.
- Ongoing identification and control of emerging weed threats.

Conclusion

This plan provides a clear, actionable framework to protect the Honeyeater Bushland Reserve's ecological integrity. Regular monitoring, adaptive management, and community involvement will be crucial to its success. By following this structured approach, JCAG can ensure long-term weed control and habitat restoration within the reserve.

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1.0 INTRODUCTION

1.1 Context

In spring 2024, the Junortoun Community Action Group (JCAG) received a Victorian Landcare Grant through the North Central Catchment Management Authority (NCCMA) to have a weed management plan prepared for Honeyeater Bushland Reserve (HBR). The reserve was previously quarried for gravel, but JCAG took over as committee of management in 2019 with the purpose of restoring environmental and recreational values.

The aim of the weed management plan was to map and document the introduced plants occurring within the reserve and to prepare a five-year strategy to guide management of these species. The project brief included the following tasks:

- Site visit, inspection and survey.
- Identification of which weeds were present at HBR and a brief summary of the risks posed.
- Preparation of a map showing location of high threat weeds across the reserve.
- Development of a weed management strategy for the reserve.
- Preparation of an actionable 5-year action plan to address specific weeds, with priorities identified and details of most appropriate treatment method provided. Indication of likely ongoing (long-term) monitoring and treatment that would be required.
- Identify risks and limitations from certain treatment methods.
- KPIs and success measures that JCAG can use over the life of the action plan.
- Strategy and Plan to be written so as to provide flexibility and responsiveness to adapt and respond to new and emerging weed threats.
- Guidelines for HBR volunteers and external providers when introducing 'clean fill' to the Reserve.
- A briefing to the JCAG Committee (HBR CoM) and HBR volunteers on your findings and the documents you prepare

This report presents the results of the weed survey, including a map showing the location of high threat weed species and a clear strategy for managing these weed species over the next five years.

1.2 Study area

Honeyeater Bushland Reserve is 17.02 hectares and is located to the south of Honeyeater Lane in Junortoun. Most of the central areas of the reserve have been significantly modified by past gravel extraction and clearance of trees, with several areas converted to small wetlands. Honeyeater Dam is located in the north-central part of the site. The outer parts of the reserve contain areas of important remnant bushland. There are a number of walking trails and benches throughout the reserve and a NBN fixed-wireless tower is located in the eastern section.

1.3 About the author

Karl Just is a botanist and zoologist with over 18 years' experience in the ecological industry, including in consultancy, research, bushland management and plant propagation. He has been working as an ecological consultant for over 15 years, during which time he has played a leading role in over 150 conservation-based projects. He is considered an expert in the ecology and conservation of Victoria's terrestrial orchids and on the vegetation of Victoria's wetlands. Karl's experience includes management of threatened species, vertebrate fauna surveys, EVC mapping, condition assessments, vegetation monitoring, weed and fire ecology and grassland management. Karl also has many years of experience in practical bushland management work where he has assisted in restoring plant communities and recovering threatened flora and fauna. This has included weed control, fencing, plant propagation, planting and management of endangered orchid populations. Karl has written over 200 ecological reports and has submitted numerous articles for several nature journals. He served as the Ecological Information Officer for the Indigenous Flora and Fauna Association (IFFA) between 2011-2016 and is a director of Nooramunga Land and Sea, a not-for profit organization committed to the protection of coastal vegetation and habitat in the Gippsland region.

2.0 METHODS

The field survey was undertaken on the 6th of September 2024. The entire reserve was traversed on foot and a list of all plant species observed was compiled. All high threat weeds observed were mapped using a GPS, with notes taken on the extent of each population.

Three additional high threat weed species were observed by JCAG members in the months following the field survey. The locations of these species was added to the mapping dataset and recommendations provided for their control.

For this report, 'high threat' weeds are defined as those that can be highly invasive, with or without disturbance, and which have the potential to degrade bushland unless subject to management.

2.1 Taxonomy

Plant taxonomy in this report follows the Royal Botanic Gardens (VicFlora 2014), with some consideration to the Victorian Biodiversity Atlas (VBA). Throughout this report, each plant species is presented with the scientific name in italics followed by the common name in brackets.

2.2 Limitations

Flora surveys often fail to record all species present within an area due to a number of limitations. Many species can be very cryptic, or flower at specific times of year. It is therefore likely some species were over-looked, and that a more detailed survey across multiple seasons would likely record additional plant species.

3.0 RESULTS OF THE FIELD SURVEY

During the September 2024 survey, a total of 180 flora species were recorded across the reserve (Appendix 1). Of these, 117 (65%) were indigenous and 63 (35%) were introduced. Two of the indigenous flora species recorded are listed as threatened under the *Flora and Fauna Guarantee* (*FFG*) *Act*, including *Acacia ausfeldii* (Ausfeld's Wattle) and *Acacia williamsonii* (Whirrakee Wattle).

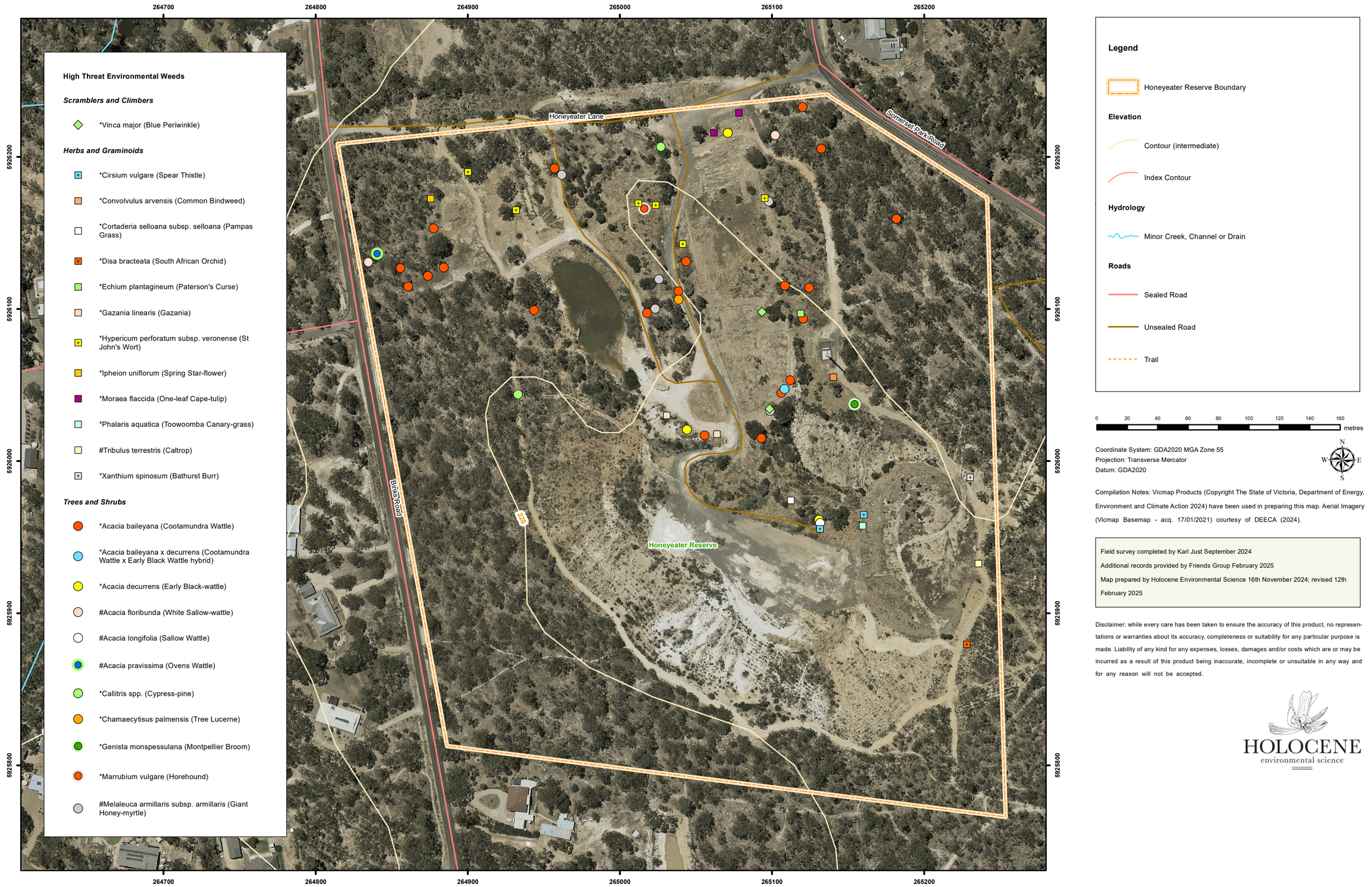
Overall, the cover of both common and high threat weeds was found to be low across the reserve. The bushland areas around the periphery of the site supported very few weeds at all, with the majority of herbaceous weeds observed in more disturbed areas in the central part of the reserve and across areas of soil fill.

Of the 63 introduced species recorded, 23 were identified as 'high threat' species that should be subject to control. The most frequent high threat weed was **Acacia baileyana* (Cootamundra Wattle), with approximatively 50 small to large plants scattered throughout the reserve. Most other high threat species were restricted to one to several patches or plants. The high threat grass **Phalaris aquatica* (Phalaris) was locally common around the lower wetlands, but was rare to absent throughout the remainder of the reserve.

The distribution of high threat weeds is shown in Figure 1 and described in Table 1.

Table 1 High threat weed species recorded at Honeyeater Bushland Reserve in 2024

Scientific Name	Common Name	Distribution
Acacia baileyana	Cootamundra Wattle	Approximately 50 plants scattered throughout the reserve.
Acacia baileyana x decurrens	Cootamundra Wattle x Early Black Wattle hybrid	One mature plant observed to the south-west of the NBN fixed-wireless tower.
Acacia decurrens	Early Black-wattle	Mature plants recorded near the reserve entrance and to the south of the main dam.
Acacia floribunda	White Sallow-wattle	Two mature plants observed in the north-east and north-west of the reserve.
Acacia longifolia	Sallow Wattle	One mature plant observed next to the southern wetland.
Acacia pravissima	Ovens Wattle	One mature plant observed near the western boundary of the reserve.
Chamaecytisus palmensis	Tree Lucerne	One mature plant observed on the west side of the access track to the east of the main dam.
Cirsium vulgare	Spear Thistle	Several plants observed around the southern wetland.
Convolvulus arvensis	Common Bindweed	Small patch recorded by JCAG around the NBN enclosure in January 2025.
Cortaderia selloana subsp. selloana	Pampas Grass	One mature plant observed on the edge of the southern wetland.
Disa bracteata	South African Orchid	One plant observed in the southern portion of the reserve.
Echium plantagineum	Paterson's Curse	Several plants recorded to the north-west of the NBN fixed-wireless tower.
Gazania linearis	Gazania	Several plants recorded adjacent to the track to the south of the main dam.
Genista monspessulana	Montpellier Broom	One mature plant recorded to the south-east of the NBN fixed-wireless tower.
Ipheion uniflorum	Spring Star-flower	One small patch observed in the north of the reserve.
Marrubium vulgare	Horehound	Several plants recorded in an area between the reserve entrance and the main dam.
Melaleuca armillaris subsp. armillaris	Giant Honey-myrtle	Scattered large and mature plants recorded in the northern portion of the reserve, predominately above the track on the eastern side of the main dam.
Moraea flaccida	One-leaf Cape-tulip	Patch of approximately 100 plants recorded near the reserve entrance.
Oxalis pes-caprae	Soursob	Scattered patches recorded throughout the reserve, predominately on disturbed soil.
Tribulus terrestris	Caltrop	Recorded by JCAG in late 2024 on the rim walk where soil fill had recently been spread.
Phalaris aquatica	Toowoomba Canary-grass	Scattered throughout the reserve, predominately in patches around the southern wetland.
Vinca major	Blue Periwinkle	Two small patches observed below the NBN fixed-wireless tower.
Xanthium spinosa	Bathurst Burr	Recorded by JCAG in late 2024 on the rim walk where soil fill had recently been spread.



Coordinate System: GDA2020 MGA Zone 55
Projection: Transverse Mercator
Datum: GDA2020

Compilation Notes: Vicmap Products (Copyright The State of Victoria, Department of Energy, Environment and Climate Action 2024) have been used in preparing this map. Aerial Imagery (Vicmap Basemap - acq. 17/01/2021) courtesy of DEECA (2024).

Field survey completed by Karl Just September 2024
Additional records provided by Friends Group February 2025
Map prepared by Holocene Environmental Science 16th November 2024; revised 12th February 2025

HOLOCENE
environmental science

Figure 1 High threat weeds, Honeyeater Bushland Reserve, September 2024

Plate 1 *Acacia floribunda* (White Sallow) along the western boundary of the reserve.

Plate 2 **Vinca major* (Blue Periwinkle) and **Oxalis pes-caprae* (Soursob) west of the NBN fixed-wireless tower.

Plate 3 bushland along the eastern perimeter of the reserve, where weed cover is very low.

Plate 4 **Moraea flaccida* (One-leaf Cape Tulip) adjacent to the carpark in the north of the reserve.

4.0 WEED MANAGEMENT STRATEGY

This strategy outlines a proposed program of works to control all high threat weed species, including those identified in 2024 and any new and emerging species identified in future. For most of these species, the proposed works should lead to eradication from the reserve within the next five years, whereas others will require ongoing control due to persistent seed banks, rhizomes or bulbs.

4.1 Summary of control methods

This section provides guidance on control methods that are outlined for each species in 4.2.

Using herbicides

Herbicides should ideally only be used when other control techniques are not likely to be effective. For example, larger patches of **Vinca major* (Blue Periwinkle) are extremely difficult to dig out and have only been known to be effectively controlled using herbicides.

Great care should always be taken when using herbicides, including:

- Wearing appropriate Personal Protective Equipment (PPE) such as gloves and face masks/respirators.
- Following all instructions on the label of the herbicide product.
- Not applying within five metres of water, unless it can be ensured that the herbicide will not enter the water.
- Not applying on windy days or during or preceding moderate to heavy rains.
- Ensuring that the operator has good plant identification skills, to ensure there is no 'off-target' damage to indigenous plant species.

Hand-removal

Hand removal is the recommended technique for many high threat species where possible, including for herbs and young shrubs. For most species, this is easiest to achieve over the winter-spring months when the soil is moist, however it can be undertaken at all times of year.

Hand-removal includes pulling plants out by hand, which is best undertaken wearing gloves to protect the hands. It also includes chipping plants out using a mattock or other appropriate tool.

In all cases, care must be taken to remove all roots or tubers from the ground to prevent re-growth of the target weeds. Any reproductive material must be removed from the site to prevent re-establishment.

Cut-paint

Cut-paint refers to cutting woody species at ground level and then painting the stem with a small amount of Glyphosate. Plants need to be cut as close to ground level as possible to prevent re-shooting further along the stem or trunk. Once the cut has been made, herbicide must be applied within 10-20 seconds, otherwise the plant will form a protective film and the herbicide will not translocate through the plant.

Herbicide application

Herbicide application should only be required in relatively small amounts, so this should only be undertaken using a backpack spray unit. Most herbaceous weeds are best treated using this method when they are actively growing in the winter-spring period. An appropriate wetting agent should always be added to improve the spread and penetration of the herbicide. However, wetting agents can be toxic to aquatic life and so care must be taken around all waterbodies. As noted above, herbicide should not be sprayed within five meters of a waterbody, unless it can be ensured that the herbicide does not enter the water.

4.2 Summary of control methods for each species

A summary of control methods and timing for each species is presented in Table 2.

Table 2 Recommended control techniques for high threat weed species identified at Honeyeater Bushland Reserve

Scientific Name	Common Name	Method	Timing
Acacia baileyana	Cootamundra Wattle	Hand-pull young plants when soil is moist in winter-spring. Cut-paint larger plants. Remove larger plants from the site to prevent smothering of the ground-layer.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Acacia baileyana x decurrens	Cootamundra Wattle x Early Black Wattle hybrid	Hand-pull young plants when soil is moist in winter-spring. Cut-paint larger plants.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Acacia decurrens	Early Black-wattle	Hand-pull young plants when soil is moist in winter-spring. Cut-paint larger plants.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Acacia floribunda	White Sallow-wattle	Hand-pull young plants when soil is moist in winter-spring. Cut-paint larger plants.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Acacia longifolia	Sallow Wattle	Hand-pull young plants when soil is moist in winter-spring. Cut-paint larger plants.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Acacia pravissima	Ovens Wattle	Hand-pull young plants when soil is moist in winter-spring. Cut-paint larger plants.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Chamaecytisus palmensis	Tree Lucerne	Hand-pull young plants when soil is moist in winter-spring. Cut-paint larger plants.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Cirsium vulgare	Spear Thistle	Chip out plants using a mattock prior to seeding. Alternately, plants can be spot-sprayed using a broad-leaf specific herbicide or Glyphosate. Any seed heads should be cut and removed from site.	Chip out plants anytime. Spot-spraying in late winter-early spring.
Convolvulus arvensis	Common BIndweed	Spot-spray with Glyphosate.	Summer, when plants are flowering
Cortaderia selloana subsp. selloana	Pampas Grass	Dig out plants with a mattock when soil is moist in winter-spring. May first require brush-cutting of foliage to improve access to the centre of the plant.	Anytime.
Disa bracteata	South African Orchid	Dig plants out when soil is most in winter-spring, taking care to remove all tubers and disposing off-site.	Winter-spring.
Echium plantagineum	Paterson's Curse	Chip out plants using a mattock prior to seeding. Alternately, plants can be spot-sprayed using a	Chip out plants anytime. Spot-spraying in late winter-early spring.

Scientific Name	Common Name	Method	Timing
		broad-leaf specific herbicide or Glyphosate. Any seed heads should be cut and removed from site.	
Gazania linearis	Gazania	Chip out plants using a mattock prior when soil is moist in winter-spring.	Winter-spring.
Genista monspessulana	Montpellier Broom	Hand-pull young plants when soil is moist in winter-spring. Cut-paint larger plants.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Ipheion uniflorum	Spring Star-flower	Chip out plants using a mattock prior when soil is moist in winter-spring, taking care to remove all roots.	Winter-spring.
Marrubium vulgare	Horehound	Chip out plants using a mattock prior when soil is moist in winter-spring. Alternatively, spot-spray plants with Metsulfuron methyl.	Chip out plants in winter-spring. Spot-spraying in spring.
Melaleuca armillaris subsp. armillaris	Giant Honey-myrtle	Hand-pull young plants when soil is moist in winter-spring. Cut-paint larger plants. Remove larger plants from the site to prevent smothering of the ground-layer.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Moraea flaccida	One-leaf Cape-tulip	Spot-spray plants with Metsulfuron methyl, mixed with appropriate wetting agent.	Late winter-early spring.
Oxalis pes-caprae	Soursob	Spot-spray plants with Metsulfuron methyl, mixed with appropriate wetting agent.	When plants are flowering, around early spring.
Phalaris aquatica	Toowoomba Canary-grass	Spot-spray plants with Glyphosate, mixed with appropriate wetting agent.	September-November.
Tribulus terrestris	Caltrop	Chip out scattered plants, making sure to remove all seed. Larger infestations can be controlled using Glyphosate and Metsulfuron Methyl.	September-November.
Vinca major	Blue Periwinkle	Slash patches to stimulate fresh growth, then spot-spray plants with Glyphosate, mixed with appropriate wetting agent.	Slash in autumn-winter, spot-spray in spring when plants are actively growing.
Xanthium spinosa	Bathurst Burr	Chip out scattered plants, making sure to remove all seed. Larger infestations can be controlled using a foliar herbicide such as MCPA or Fluroxypyr.	September-November.

4.3 Management of soil fill

In the last several years, JCAG have organized for large areas of soil fill to be spread across parts of the central area of the reserve. This is to assist with remediation of the former quarry areas, where nearly all former top-soil was removed. Although great care has been taken to ensure that the soil is not contaminated with weed seed, it should be noted that nearly any soil brought into the reserve will carry the seeds of some weeds. During the field survey, no high threat weed species were observed across the areas of soil fill, however there was widespread growth of less noxious exotic grasses and herbs.

It is recommended that these less noxious weeds be left to grow across the soil piles, as they will help stabilize the soil and prevent sedimentation of the wetlands below. At a minimum, the soil piles could be managed by mowing and slashing to keep the height of these weeds low, whilst any weeds around revegetation plantings should be controlled by hand-removal. Application of mulch will also assist with suppressing weeds and stabilizing the soil.

All soil piles and newly introduced fill should be regularly monitored for any new and emerging high threat weeds, which if recorded should be subject to appropriate control measures.

As JCAG progressively revegetate the soil piles with trees and shrubs, over time this will lead to suppression of many of the exotic grasses and herbs. Once such plantings have matured and have taken over the role of soil stabilisation, it may then be appropriate to begin removing any weeds surviving in the understorey.

If further soil is to be brought into the reserve in future, similar precautions must be taken to ensure it is not contaminated with high threat weeds or other pathogens (e.g. coming from an area known to support *Phytophthora cinnamomi* (Cinnamon Fungus)). No soil fill should be spread within 20 metres of remnant vegetation due to the potential for weeds to then invade these areas.

Plate 5 Soil recently brought into the reserve. On the right it can be seen that the water in the wetlands is highly turbid due to run-off from the soil piles. Revegetation and mulching will over time assist with suppressing weeds and stabilising the soil.

Plate 6 *Malva parviflora* (Small-flower Mallow) and other weeds growing on soil piles in the north-western portion of the reserve. Removal of these weeds will be required around plantings, but otherwise should be left in the short-term to assist with stabilising the soil.

4.4 Five-year schedule of works

The below schedule of works aims to guide the weed control program over the next five years. Although the works program should follow the schedule where possible, it is recognized that its implementation will depend on available resources and the success of each stage. The works program should ideally be an adaptive process that uses the schedule as a guide but is modified where considered necessary and more effective.

Table 3 Five-year schedule of works for Honeyeater Bushland Reserve

Year 1 (2025)		
Task	**Comments**	**Timing**
Remove at least one third of the Cootamundra Wattle population.	Plant as many local wattles as Cootamundra Wattle removed to ensure no habitat loss for native birds.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Remove at least one third of all other woody weeds.	Through hand removal and cut-paint.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Spot-spray all Cape Tulip plants.	Currently known from near carpark but may occur elsewhere.	Late winter-early spring.
Spot-spray all Common Bindweed plants		Summer, when plants are flowering.
Monitor areas of soil fill for new and emerging high threat weeds. Control where necessary.		Late winter-early spring.
Remove Pampas Grass, or cut and remove any seeds if resources don't allow control in year 1.		Winter-spring.
Remove all (or as many as possible) Spear Thistle, Caltrop, Bathurst Burr, South African Orchid, Patterson's Curse, Gazania, Spring Star-flower.	Through hand removal or herbicide application.	Winter-spring.
Spot-spray or hand remove all Horehound.		Chip out plants in winter-spring. Spot-spraying in spring.
Spot-spray at least a third of all Soursob patches (as measured in 2024).		Winter-spring, when flowering.
Year 2 (2026)		
Task	**Comments**	**Timing**
Remove at least another third of the Cootamundra Wattle population (as measured in 2024).	Plant as many local wattles as Cootamundra Wattle removed to ensure no habitat loss for native birds.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Remove at least another one third of all other woody weeds (as measured in 2024).	Through hand removal and cut-paint.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days

		above 30 degrees.
Spot-spray any remaining Cape Tulip plants.	Currently known from near carpark but may occur elsewhere.	Late winter-early spring.
Monitor areas of soil fill for new and emerging high threat weeds. Control where necessary.		Late winter-early spring.
Remove Pampas Grass, or cut and remove any seeds if resources don't allow control in year 2.		Winter-spring.
Remove all (or as many as possible) Spear Thistle, Caltrop, Bathurst Burr, South African Orchid, Patterson's Curse, Gazania, Spring Star-flower.	Through hand removal or herbicide application.	Winter-spring.
Spot-spray or hand remove any remaining Horehound.		Chip out plants in winter-spring. Spot-spraying in spring.
Spot-spray at least another third of all Soursob patches (as measured in 2024).		Winter-spring, when flowering.
Brush-cut Blue Periwinkle in winter, then spot-spray new growth in spring.		Slash in autumn-winter, spot-spray regrowth in spring when plants are actively growing.
Spot-spray Phalaris around wetlands.		September-November

Year 3 (2027)

Task	Comments	Timing
Remove at least another third of the Cootamundra Wattle population (as measured in 2024).	Plant as many local wattles as Cootamundra Wattle removed to ensure no habitat loss for native birds.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Remove at least another one third of all other woody weeds (as measured in 2024).	Through hand removal and cut-paint.	Hand-pull in winter-spring. Cut-paint in spring and summer, avoiding hot days above 30 degrees.
Spot-spray any remaining Cape Tulip plants.	Currently known from near carpark but may occur elsewhere.	Late winter-early spring.
Monitor areas of soil fill for new and emerging high threat weeds. Control where necessary.		Late winter-early spring.
Remove all (or as many as possible) Spear Thistle, South African Orchid, Patterson's Curse, Gazania, Spring Star-flower.	Through hand removal or herbicide application.	Winter-spring.
Spot-spray or hand remove any remaining Horehound.		Chip out plants in winter-spring. Spot-spraying in spring.
Spot-spray at least another third of all Soursob patches (as measured in 2024).		Winter-spring, when flowering.
Brush-cut Blue Periwinkle in winter, then spot-spray new growth in spring.		Slash in autumn-winter, spot-spray regrowth in spring when plants are actively growing.
Spot-spray Phalaris around wetlands.		September-November

Year 4 (2028)

Task	Comments	Timing

Monitor for any remaining plants of Cootamundra Wattle and control as necessary.		
Monitor for any remaining woody weeds and control as necessary.		
Spot-spray any remaining Cape Tulip plants.	Currently known from near carpark but may occur elsewhere.	Late winter-early spring.
Monitor areas of soil fill for new and emerging high threat weeds. Control where necessary.		Late winter-early spring.
Monitor for and control any Spear Thistle, South African Orchid, Patterson's Curse, Gazania, Spring Star-flower.	Through hand removal or herbicide application.	Winter-spring.
Spot-spray or hand remove any remaining Horehound.		Chip out plants in winter-spring. Spot-spraying in spring.
Monitor for any remaining Soursob and control as necessary.		Winter-spring, when flowering.
Brush-cut Blue Periwinkle in winter, then spot-spray new growth in spring.		Slash in autumn-winter, spot-spray regrowth in spring when plants are actively growing.
Follow-up control of Phalaris around wetlands.		September-November

Year 5 (2029)

Task	Comments	Timing
Monitor for any remaining plants of Cootamundra Wattle and control as necessary.		
Monitor for any remaining woody weeds and control as necessary.		
Spot-spray any remaining Cape Tulip plants.	Currently known from near carpark but may occur elsewhere.	Late winter-early spring.
Monitor areas of soil fill for new and emerging high threat weeds. Control where necessary.		Late winter-early spring.
Monitor for and control any Spear Thistle, South African Orchid, Patterson's Curse, Gazania, Spring Star-flower.	Through hand removal or herbicide application.	Winter-spring.
Spot-spray or hand remove any remaining Horehound.		Chip out plants in winter-spring. Spot-spraying in spring.
Monitor for any remaining Soursob and control as necessary.		Winter-spring, when flowering.
Brush-cut Blue Periwinkle in winter, then spot-spray new growth in spring.		Slash in autumn-winter, spot-spray regrowth in spring when plants are actively growing.
Follow-up control of Phalaris around wetlands.		September-November

4.5 Key Performance Indicators

Key Performance Indicators (KPIs) can assist with evaluating the success of a project. The below KPIs should be used to measure the effectiveness of weed control at Honeyeater Bushland Reserve at the end of the five-year period. The trajectory or works against the five-year targets should also be reviewed annually. These KPIs have been developed so as to be SMART (Specific, Measurable, Achievable, Relevant and Time-bound).

KPIs to be evaluated in 2029-2030

- All mature woody weeds have been eliminated from the reserve.
- One-leaf Cape-tulip, Soursob and Blue Periwinkle have been reduced by at least 50% from the extent documented in 2024.
- Horehound, Pampas Grass, South African Orchid, Spring Starflower and Gazania have all been eliminated from the reserve.
- Spear Thistle has been eliminated or maintained at low numbers (less than 50 plants).
- Any new and emerging weeds have been identified and subject to control programs.

5.0 CONCLUSION

The 2024 field survey revealed that Honeyeater Bushland Reserve generally supports a low cover of both common and high threat weeds. However, unless subject to management and control, many of these high threat species are likely to continue to proliferate.

This weed management plan has documented the distribution of all high threat weeds identified and provided guidelines and techniques for their control. The success of control works should be evaluated using the KPIs provided, including annually (progress towards targets) and at the end of the five-year period. Following this evaluation, a new strategy for the following five-year period should then be developed.

Appendix 1 Flora species recorded at Honeyeater Bushland Reserve in September 2024

* = introduced taxon.
# = non-indigenous native taxon.
P – planted, not known from remnant plants within the reserve.
FFG – listed as threatened under the *Flora and Fauna Guarantee* (FFG) *Act* 1988.

Origin	Scientific Name	Common Name	Status
	Acacia acinacea	Gold-dust Wattle	
	Acacia aspera	Rough Wattle	
	Acacia ausfeldii	Ausfeld's Wattle	FFG
#	*Acacia baileyana*	Cootamundra Wattle	
#	*Acacia baileyana x decurrens*	Cootamundra Wattle x Early Black Wattle hybrid	
	Acacia dealbata	Silver Wattle	
P	*Acacia deanei*	Deane's Wattle	
#	*Acacia decurrens*	Early Black-wattle	
P	*Acacia euthycarpa*	Wallowa	
#	*Acacia floribunda*	White Sallow-wattle	
	Acacia genistifolia	Spreading Wattle	
	Acacia implexa	Lightwood	
#	*Acacia longifolia*	Sallow Wattle	
	Acacia mearnsii	Black Wattle	
P	*Acacia melanoxylon*	Blackwood	
	Acacia montana	Mallee Wattle	
	Acacia paradoxa	Hedge Wattle	
#	*Acacia pravissima*	Ovens Wattle	
	Acacia provincialis	Wirilda	
	Acacia pycnantha	Golden Wattle	
	Acacia williamsonii	Whirrakee Wattle	FFG
*	*Acetosella vulgaris*	Sheep Sorrel	
*	*Aira elegantissima*	Delicate Hair-grass	
*	*Allium vineale*	Crow Garlic	
*	*Aphanes arvensis*	Parsley Piert	
*	*Arctotheca calendula*	Cape Weed	
*	*Aristea ecklonii*	Blue Stars	
	Arthropodium strictum s.l.	Chocolate Lily	
	Austrostipa mollis	Supple Spear-grass	
*	*Avena sativa*	Oat	
	Brachyloma daphnoides	Daphne Heath	
	Brachyscome perpusilla	Rayless Daisy	
*	*Brassica rapa*	White Turnip	
*	*Briza maxima*	Large Quaking-grass	
*	*Bromus catharticus*	Prairie Grass	
	Burchardia umbellata	Milkmaids	

Origin	Scientific Name	Common Name	Status
	Bursaria spinosa	Sweet Bursaria	
	Caladenia fuscata	Dusky Fingers	
	Callitris spp.	Cypress-pine	
	Calochilus robertsonii s.l.	Purple Beard-orchid	
	Calytrix tetragona	Common Fringe-myrtle	
	Carex appressa	Tall Sedge	
	Carex inversa	Knob Sedge	
	Cassinia sifton	Drooping Cassinia	
	Cassytha glabella	Slender Dodder-laurel	
	Centipeda cunninghamii	Common Sneezeweed	
*	*Chamaecytisus palmensis*	Tree Lucerne	
	Cheilanthes sieberi	Cloak fern	
	Cheiranthera linearis	Finger-flower	
*	*Cirsium vulgare*	Spear Thistle	
*	*Cortaderia selloana subsp. selloana*	Pampas Grass	
*	*Cotula bipinnata*	Ferny Cotula	
	Crassula decumbens var. decumbens	Spreading Crassula	
*	*Crassula natans var. minus*	Water Crassula	
	Cynodon dactylon	Couch	
*	*Cyperus eragrostis*	Drain Flat-sedge	
	Cyrtostylis reniformis	Small Gnat-orchid	
	Daviesia ulicifolia	Gorse Bitter-pea	
	Dianella admixta	Black-anther Flax-lily	
*	*Disa bracteata*	South African Orchid	
	Diuris pardina	Leopard Orchid	
	Drosera aberrans	Scented Sundew	
	Drosera glanduligera	Scarlet Sundew	
	Drosera hookeri	Branched Sundew	
	Drosera macrantha subsp. planchonii	Climbing Sundew	
*	*Echium plantagineum*	Paterson's Curse	
*	*Ehrharta erecta*	Panic Veldt-grass	
	Eleocharis acuta	Common Spike-sedge	
	Enchylaena spp.	Ruby Saltbush	
	Epilobium billardiereanum subsp. cinereum	Grey Willow-herb	
	Epilobium hirtigerum	Hairy Willow-herb	
*	*Erodium botrys*	Big Heron's-bill	
*	*Erodium cicutarium*	Common Heron's-bill	
	Eucalyptus camaldulensis	River Red-gum	
	Eucalyptus leucoxylon	Yellow Gum	
	Eucalyptus macrorhyncha	Red Stringybark	
	Eucalyptus melliodora	Yellow Box	
	Eucalyptus microcarpa	Grey Box	
	Eucalyptus nortonii	Silver Bundy	

Origin	Scientific Name	Common Name	Status
	Eucalyptus polyanthemos	Red Box	
	Eucalyptus viridis	Green Mallee	
	Exocarpos cupressiformis	Cherry Ballart	
*	*Fumaria bastardii*	Bastard's Fumitory	
	Gahnia radula	Thatch Saw-sedge	
*	*Gazania linearis*	Gazania	
*	*Genista monspessulana*	Montpellier Broom	
	Geranium sp. 5	Naked Crane's-bill	
*	*Gladiolus undulatus*	Wild Gladiolus	
	Glossodia major	Wax-lip Orchid	
	Gonocarpus tetragynus	Common Raspwort	
	Goodenia blackiana	Black's Goodenia	
	Grevillea alpina	Cat's Claw Grevillea	
	Hakea decurrens	Bushy Needlewood	
	Hardenbergia violacea	Purple Coral-pea	
	Hibbertia crinita	Hoary Guinea-flower	
	Hibbertia exutiacies	Spiky Guinea-flower	
	Hyalosperma demissum	Moss Sunray	
	Hydrocotyle callicarpa	Small Pennywort	
	Hydrocotyle laxiflora	Stinking Pennywort	
*	*Hypericum perforatum subsp. veronense*	St John's Wort	
*	*Hypochaeris glabra*	Smooth Cat's-ear	
*	*Hypochaeris radicata*	Flatweed	
*	*Ipheion uniflorum*	Spring Star-flower	
	Juncus remotiflorus	Diffuse Rush	
	Juncus subsecundus	Finger Rush	
	Kunzea ericoides s.l.	Burgan	
	Lachnagrostis filiformis s.l.	Common Blown-grass	
	Laphangium luteoalbum	Jersey Cudweed	
*	*Lepidium africanum*	Common Peppercress	
	Lepidosperma curtisiae	Little Sword-sedge	
	Lepidosperma laterale	Variable Sword-sedge	
	Leptospermum myrsinoides	Heath Tea-tree	
	Leucopogon virgatus	Common Beard-heath	
	Levenhookia dubia	Hairy Stylewort	
	Lomandra filiformis	Wattle Mat-rush	
	Lomandra multiflora subsp. multiflora	Many-flowered Mat-rush	
	Lomandra nana	Dwarf Mat-rush	
	Lythrum hyssopifolia	Small Loosestrife	
*	*Malva parviflora*	Small-flower Mallow	
*	*Marrubium vulgare*	Horehound	
*	*Medicago polymorpha*	Burr Medic	
#	*Melaleuca armillaris subsp. armillaris*	Giant Honey-myrtle	
	Melaleuca decussata	Totem-poles	

Origin	Scientific Name	Common Name	Status
	Melaleuca parvistaminea	Rough-barked Honey-myrtle	
	Melaleuca wilsonii	Violet Honey-myrtle	
	Microlaena stipoides	Weeping Grass	
	Microseris scapigera s.l.	Yam Daisy	
	Microtis angustata ms.	Onion Orchid	
*	*Moraea flaccida*	One-leaf Cape-tulip	
*	*Moraea fugacissima*	Galaxia	
	Oxalis exilis	Shade Wood-sorrel	
	Oxalis perennans	Grassland Wood-sorrel	
*	*Oxalis pes-caprae*	Soursob	
	Ozothamnus obcordatus	Grey Everlasting	
	Pelargonium australe	Austral Stork's-bill	
	Pelargonium rodneyanum	Magenta Stork's-bill	
	Persoonia rigida	Hairy Geebung	
*	*Phalaris aquatica*	Toowoomba Canary-grass	
	Philotheca verrucosa	Fairy Wax-flower	
	Pimelea humilis	Common Rice-flower	
	Pimelea linifolia	Slender Rice-flower	
*	*Plantago lanceolata*	Ribwort	
*	*Poa bulbosa*	Bulbous Meadow-grass	
	Poa labillardierei	Common Tussock-grass	
	Poa sieberiana	Grey Tussock-grass	
*	*Polygonum arenastrum*	Wireweed	
	Pterostylis ampliata	Large Autumn Greenhood	
	Pterostylis cycnocephala	Swan Greenhood	
	Pterostylis nana	Dwarf Greenhood	
	Pterostylis parviflora s.l.	Tiny Greenhood	
	Pultenaea largiflorens	Twiggy Bush-pea	
	Rhodanthe pygmaea	Pygmy Sunray	
	Rhytidosporum procumbens	White Marianth	
*	*Romulea minutiflora*	Small-flower Onion-grass	
*	*Romulea rosea var. australis s.s.*	Common Onion-grass	
*	*Rumex crispus*	Curled Dock	
	Rytidosperma bipartitum s.l.	Leafy Wallaby-grass	
	Rytidosperma pallidum	Silvertop Wallaby-grass	
	Rytidosperma setaceum	Bristly Wallaby-grass	
	Schoenus apogon	Common Bog-sedge	
*	*Sonchus asper s.l.*	Rough Sow-thistle	
*	*Stellaria pallida*	Lesser Chickweed	
	Stylidium graminifolium s.l.	Grass Triggerplant	
	Styphelia humifusa	Cranberry Heath	
	Styphelia rufa	Ruddy Beard-heath	
	Tetratheca ciliata	Pink-bells	
	Thelymitra spp.	Sun Orchid	

Origin	Scientific Name	Common Name	Status
	Thysanotus patersonii	Twining Fringe-lily	
*	*Tribulus terrestris*	Caltrop	
*	*Trifolium dubium*	Suckling Clover	
*	*Urtica urens*	Small Nettle	
*	*Veronica hederifolia*	Ivy-leaf Speedwell	
	Veronica plebeia	Trailing Speedwell	
*	*Vicia hirsuta*	Tiny Vetch	
*	*Vinca major*	Blue Periwinkle	
*	*Vulpia bromoides*	Squirrel-tail Fescue	
	Wahlenbergia stricta subsp. stricta	Tall Bluebell	
*	*Xanthium spinosum*	Bathurst Burr	
	Xerochrysum viscosum	Shiny Everlasting	