

Action statement

Flora & Fauna Guarantee Act 1988

Betka Bottlebrush (*Callistemon kenmorrisonii*)

Taxon ID: 504571

Action statements are developed under the *Flora and Fauna Guarantee Act 1988* (FFG Act). Their preparation and implementation complement the FFG Act strategy *Protecting Victoria's Environment – Biodiversity 2037* and its vision that “Victoria's biodiversity is healthy, valued and actively cared for”.

Species and Distribution



Betka Bottlebrush. Image by Russell Larke.



Betka Bottlebrush Victorian Biodiversity Atlas (VBA) records since 1970. See [NatureKit](#) for an interactive map.

Conservation Status

Critically Endangered

Listing criteria: 3.1.2 (a), (b)(iii,v) and 3.1.3(a) of the Flora and Fauna Guarantee Regulations 2020.

This means that:

- its geographic distribution is extremely restricted; and
- the distribution of the population or habitat of the species is severely fragmented; and
- it is restricted to a limited number of areas that are subject to the same threat or suite of threats that can impact all individuals present; and
- there is a continuing decline or reduction in:
 - the area, extent or quality of habitat; and
 - the number of mature individuals; and
- the total number of mature individuals is very low, and the number is expected to continue to decline at a very high rate.

Corresponding International Union for the Conservation of Nature (IUCN) criteria: B1ab(iii,v)+2ab(iii,v); C1.

More information on IUCN listing criteria can be found here: [IUCN Red List of Threatened Species](#)

Species Information

Species information such as its description, distribution, ecology and references are provided in the [Betka Bottlebrush Species Forecast Report](#) and [VicFlora](#).

Threats

Threats listed below have been identified through species expert elicitation, consultation, published literature and spatial analysis.

Threat	Description
Climate change	
Altered rainfall regime	<ul style="list-style-type: none"> Reduced rainfall, alteration in timing and intensity of rainfall and/or increased evaporation may reduce the stability, quality and availability of the riparian habitat for the species.
Increased frequency and/or length of droughts	<ul style="list-style-type: none"> More frequent and severe droughts increase the risk of repeated high severity bushfires.
Fire	
Altered fire regimes	<ul style="list-style-type: none"> Frequent or intense bushfires are likely to reduce regeneration capacity for the species and may lead to plant deaths, and destruction of canopy-borne seed. Frequent or intense fire may also lead to habitat degradation, including by promotion of exotic weeds and introduced animals.
Fire management activities	<ul style="list-style-type: none"> Fire management operations such as creation of fuel breaks (soil disturbance, slashing) may remove habitat, cause mortality of individuals, and reduce regeneration. A strategic fuel break located along Stony Peak Road may cause damage to plants from increased sedimentation, due to maintenance works by heavy machinery.
Human disturbance	
Mining	<ul style="list-style-type: none"> There has been a licence sought for mineral exploitation in the Roger Track area. Mining activity has the potential to affect the local hydrology and could also result in physical disturbance to the population and habitat.
Road and track maintenance	<ul style="list-style-type: none"> Roadside populations are vulnerable to disturbance from run-off, soil erosion, and weed and pathogen introduction during road maintenance and fire suppression. Any works in the Stony Peak Road and Roger Track areas may impact the species. Active erosion has been observed in the vicinity of the bridge at the Stony Peak Road population.
Habitat loss, degradation or modification	
Forestry operations	<ul style="list-style-type: none"> Forestry operations, including timber harvesting, can damage and degrade habitat. Mitigations are in place to reduce this threat.
Introduced Species	
Deer	<ul style="list-style-type: none"> Sambar deer (<i>Cervus unicolor</i>) preferentially occupy moist and densely shaded riparian habitats and may threaten the Betka Bottlebrush through wallowing and trampling.

Threat	Description
Weeds	<ul style="list-style-type: none"> Introduced plants such as Forest Blackberry (<i>Rubus polyanthemus</i>) and Tutsan (<i>Hypericum androsaemum</i>) may compete with Betka Bottlebrush, degrading habitat and impacting recruitment and survival.
Population dynamics	
Loss of genetic diversity	<ul style="list-style-type: none"> This species is classified as Very High on the Genetic Risk Index. Low genetic diversity can impact the species' ability to adapt to environmental change.

Conservation Objectives

Conservation objectives are informed by the conservation status and criteria under which the species was listed under the FFG Act. This provides a framework to understand how we can work towards recovery and improve the species' conservation status over time, as per the objectives of the FFG Act.

The key objectives of this action statement are:

- Mitigate threats to populations and habitat to reduce the likelihood of future decline in population size.
- Increase the Betka Bottlebrush's range and/or extent by facilitating opportunities for natural movement.
- Increase knowledge of biology, ecology, distribution, demography, emerging threats, and conservation requirements.
- Support community participation and improve awareness of the Betka Bottlebrush.

Conservation Actions

The actions below have been identified through expert consultation, published literature and spatial analysis. Actions are listed in alphabetical order to allow all interested parties to prioritise based on their context, capacity and capability. Landscape scale actions may mitigate threats for other species. For more information on where to undertake actions that benefit multiple species and identify the most beneficial locations to undertake actions for this species, please refer to [NatureKit](#).

Action	Description
Avoid and/or mitigate impacts associated with fire management	<ul style="list-style-type: none"> Ensure that species distribution data and ecological information is available and considered in fire management activities. Undertake biodiversity values check prior to fuel management in areas of the species habitat, to confirm treatment suitability and timing.
Collect and store reproductive material	<ul style="list-style-type: none"> Maintain seed collections from target populations within the Victorian Conservation Seedbank at the Royal Botanic Gardens Victoria (RBGV). Determine seed viability and germination requirements.
Community engagement	<ul style="list-style-type: none"> Identify, promote and support opportunities for community involvement in conservation efforts.
Control deer*	<ul style="list-style-type: none"> Implement effective Sambar deer control and monitor the impacts of deer at all populations.
Control weeds*	<ul style="list-style-type: none"> Conduct effective weed control as required.

Action	Description
Develop, update and apply forestry protections	<ul style="list-style-type: none"> Maintain prescriptions for this species under the <i>Code of Practice for Timber Production 2014 (as amended in 2022)</i> (the Code). Where relevant, incorporate species-specific protection measures into plans and permits relating to timber harvesting operations in native forest on private land.
Ex-situ management	<ul style="list-style-type: none"> Maintain ex-situ living collections. Include mature plants, representing a range of genotypes from both subpopulations, in cultivation at the RBGV Cranbourne, and other ex situ living collections such as private collections in East Gippsland.
Manage habitat to prevent and control erosion	<ul style="list-style-type: none"> Ensure the Stony Peak Rd bridge on the Betka River is maintained to minimise potential for movement of rock baffles at the bridge under extreme weather.
Manage road and track works	<ul style="list-style-type: none"> Avoid damage during road or bridge works using appropriate temporary on-site signage and mapping and database warnings in advance of on-ground works.
Protect habitat from physical disturbance	<ul style="list-style-type: none"> Avoid direct and indirect impacts of native vegetation clearing on Betka Bottlebrush populations e.g. from activities such as mining and mineral exploration.
Research	<ul style="list-style-type: none"> Evaluate if cross-pollination between subpopulations could be beneficial for the long-term persistence of the species in the wild. Investigate and determine an appropriate burning regime for the species.
Survey and monitoring	<ul style="list-style-type: none"> Undertake targeted searches for the species in areas of suitable habitat to locate any additional populations. Implement a monitoring program to assess population size/trends, habitat condition/degradation, fire tolerance, recruitment and longevity across the species' range. Monitor populations following heavy rainfall events or post-fire, to assess population risks.

**Indicates landscape-scale actions that may deliver benefits to multiple species*

Past Actions

The key conservation management actions listed below have been delivered in the past 10 years.

Past action	Description
Biodiversity values checking	<ul style="list-style-type: none"> Values checking and risk mitigation advice has been completed by DEECA's Natural Environment Program team in Gippsland.
Collect and store reproductive material	<ul style="list-style-type: none"> Seed is stored in the RBGV Victorian Conservation Seedbank.
Conservation and management planning	<ul style="list-style-type: none"> The Final National prioritisation of Australian plants affected by the 2019-20 bushfire season, released in 2020, identified interactive effects of fire and drought and high fire severity as key risks to Betka Bottlebrush, with the species listed as high priority for immediate action.
Control Deer	<ul style="list-style-type: none"> Deer populations have been controlled since the 2019-2020 bushfires as part of Victorian Government's Bushfire Biodiversity Response and Recovery program in 2020

Past action	Description
Develop, update and apply forestry protections	<ul style="list-style-type: none"> The species has a current species-specific prescription in the Code: <ul style="list-style-type: none"> In the East Gippsland Forest Management Area: Apply a management area of 200 m radius over populations. Conduct a site inspection and detailed planning in consultation with the Department to ensure the species is adequately protected during timber harvesting operations. The risk of forestry operations was assessed for this species in 2020 under the Victorian Government Threatened Species and Communities Risk Assessment. Additional permanent protections were not found to be required.
Establish ex-situ population	<ul style="list-style-type: none"> An insurance population of 30-40 plants has been established in Mallacoota on private properties. A small number of plants was established, and as of December 2022 were being maintained, at the at RBGV Cranbourne.
Research	<ul style="list-style-type: none"> In 2022, genomic research undertaken by Envite Environment, La Trobe University and Friends of Mallacoota determined six genotypes within the population.
Surveys and monitoring	<ul style="list-style-type: none"> Site information collected during past surveys was entered into the VBA. Populations were monitored post the 2019-2020 bushfires as part of Victorian Government's Bushfire Biodiversity Response and Recovery program in 2020. Site threat assessments were conducted at the Stony Creek Bridge population by DEECA in 2020. Populations were surveyed in 2021 by Envite Environment, La Trobe University and Friends of Mallacoota. A total of 93 surviving plants were recorded in situ.

Decision Support Tools

Decision making for conservation actions is supported through the following Victorian Government tools which may be of assistance in choosing the most appropriate or beneficial actions for biodiversity:

- [Choosing actions for nature: NatureKit](#)
- [Biodiversity Knowledge Framework](#)

Further Information

- [Betka Bottlebrush Species Forecast Report](#)
- [Threatened Species Assessment report – Betka Bottlebrush \(*Callistemon kenmorrisonii*\)](#)
- [Commonwealth Species Profile and Threats database](#)
- [Threatened Species and Communities Risk Assessment](#)
- [Code of Practice for Timber Production 2014](#)
- [Victoria's changing climate – understanding the impacts of climate change in Victoria](#)
- [Victorian Bushfire Biodiversity Response and Recovery](#)
- [Victorian Deer Control Strategy](#)
- [Flora and Fauna Guarantee Regulations 2020](#)
- [IUCN Red List criteria descriptions](#)

Get Involved and Take Action

If you are interested in supporting this species' recovery, there are some important things you need to consider.

The Department of Energy, Environment and Climate Action (DEECA) is committed to engaging and partnering with Traditional Owners on how they wish to be involved in the planning and implementation of actions for this species. Steps must be taken to avoid harm and where appropriate ensure actions can deliver cultural benefits.

You can find advice about required approvals, land manager / owner permissions, options and incentives for private land conservation, and engagement with Traditional Owners and public land managers here: [Action statements \(environment.vic.gov.au\)](https://environment.vic.gov.au)

To identify the relevant Traditional Owners, use the [Aboriginal Cultural Heritage Register and Information System \(ACHRIS\) Welcome to Country and Acknowledgements Map](#).

Interested parties are encouraged to work together across community, government, private and public land managers and Traditional Owners to undertake these actions and secure funding for their implementation.

You can also register your interest in taking action so we can connect you to other people or organisations working to help us secure the future for this species at threatened.species@deeca.vic.gov.au

Reporting Actions

Activity data is critical to monitoring the implementation and progress of actions and evaluating action statements. These data are also used to:

- Determine progress towards achieving the contributing targets for [Protecting Victoria's Environment – Biodiversity 2037](#).
- Inform the five-yearly State of the Environment Report.

For guidance on reporting actions undertaken on this species, refer to [Activity Data](#).

Submitting Monitoring Data

The Victorian Biodiversity Atlas (VBA) provides a foundational dataset showing where biodiversity occurs across the Victorian landscape and how it may have changed over time. As a core input for decision support tools that inform conservation action, public land management, research activities and reporting, we encourage all participants in the delivery of on-ground actions to submit species records and observations, including for introduced plants and animals, as they carry out their projects.

For further information see: Victorian Biodiversity Atlas (environment.vic.gov.au)

Sign up and begin submitting your data today at: <https://vba.biodiversity.vic.gov.au/>

Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



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