



Habitat
Innovation & Management

Annual Report – *Eucalyptus canobolensis*
Enhancement Plan – April 2025

Errowanbang, NSW

Wiradjuri Country

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Contents

Introduction and Background.....	1
Population Enhancement Actions	3
Population Enhancement Action 1: Annual weed control	3
1.1 Works completed to date	3
1.2 Remaining works to be completed.....	3
1.3 Issues, opportunities and adaptive management	4
Population Enhancement Action 2: Retain all buds, fruits and seed pods on site.....	4
Population Enhancement Action 3: Carving and installation of 'Log Hollows'	4
3.1 Works completed to date	4
3.2 Remaining works to be completed.....	4
3.3 Issues, opportunities and adaptive management	5
Population Enhancement Action 4: Community Planting Event at Lake Canobolas.....	6
4.1 Works completed to date	6
4.2 Remaining works to be completed.....	8
4.3 Issues, opportunities and adaptive management	8
Population Enhancement Action 5: Educational and Awareness Raising Program	9
5.1 Works completed to date	9
5.2 Remaining works to be completed.....	10
5.3 Issues, opportunities and adaptive management	10
Population Enhancement Action 6: Annual Reporting and Adaptive Management.....	10
Conclusion and Recommendations	12

Introduction and Background

Iberdrola Australia Limited is a leading renewable energy company that has a demonstrated commitment to the improvement of the environment within the regions in which it operates.

With the assistance of Habitat Innovation and Management, Flyers Creek Wind Farm Pty Ltd (FCWF), a subsidiary of Iberdrola Australia Limited, has developed the *Eucalyptus canobolensis* Enhancement Plan. The purpose of that plan is to enhance the population of the threatened Silver-Leaf Candlebark (*Eucalyptus canobolensis*), which grows in and near the vicinity of the Flyers Creek Wind Farm.

This species was updated from Vulnerable to Endangered under the NSW Biodiversity Conservation Act 2016 (BC Act) on 16 December 2022 and is listed as Endangered under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

As a result of the threatened status of this species, as well as its limited distribution, it has been assigned to the site-managed species management stream under the NSW Government's Saving our Species (SoS) program. A priority management site has been identified which is the Mount Canobolas State Conservation Area, located across both the Orange and Cabonne Local Government Areas, and managed by the NSW National Parks and Wildlife Service.

The *Eucalyptus canobolensis* Enhancement Plan (Habitat Innovation and Management, 2022) provides details of population enhancement actions that are being undertaken to ensure a positive net gain for the overall population of Silver-Leaf Candlebark including:

- Population enhancement actions to be undertaken by FCWF
- Stakeholders involved in order to deliver on the population enhancement actions
- Timing of when population enhancement actions will be undertaken
- Annual project updates provided to NSW Department of Planning & Environment (DPE)

This report represents the second annual project update to be provided to DPE to outline the population enhancement actions undertaken to date, the actions that are still in the planning phase, and any issues and adaptive management undertaken to ensure the successful delivery of the project.



Figure 1: Silver-Leaf Candlebark Population Enhancement Actions

Population Enhancement Actions

The *Eucalyptus canobolensis* Enhancement Plan and the included Population Enhancement Actions were developed based on a review of relevant literature as detailed in that plan. In summary there are a range of risks and opportunities identified that are being addressed through appropriate actions relating to the broad themes of weed infestation and control; increasing the number and range of the species; and public education and awareness.

Population Enhancement Action 1: Annual weed control

Annual weed control has been planned adjacent to the 132 kV transmission line constructed as part of the Flyer's Creek Windfarm project. The site represents a very small pocket of land bound by pine plantations, the transmission line easement, and roads and is further referred to as Site 1. This location is where a single mature Silver-Leaf Candlebark Tree is located.

Given the limited size this location, and the surrounding land use (as described above), annual weed control is being conducted to facilitate the natural recruitment (seedling establishment) of Silver-Leaf Candlebark trees.

A suitably qualified and experienced weed control/bush regeneration specialist has been engaged to conduct the annual weed control works at this site for a period of 5 years. The primary focus is the control of wilding pines (*Pinus radiata*) and Blackberry (*Rubus fruticosus*) spreading from the surrounding pine plantation, with all other exotic plant species targeted during works. Best management practice weed control has been adopted including hand pulling of pine seedlings, felling of pine saplings, spot spraying of blackberry and other weeds, and 'cut & paint' herbicide application to blackberry and other woody weeds as appropriate.

1.1 Works completed to date

Initial weed control works were conducted on 23 May 2023 with follow up weed control on 15 December 2023 and 1 October 2024. As anticipated the majority of weeds present were blackberry and pine spreading from the adjoining pine plantation with small amounts of other exotic pasture species also controlled.

1.2 Remaining works to be completed

Follow up weed control works are planned to continue at Site 1 each spring up to and including 2026. These works are scheduled for October in 2025 and 2026.

1.3 Issues, opportunities and adaptive management

The initial weed control works conducted at Site 1 appeared to show that the majority of the weeds present were spreading from the adjoining pine plantation where significant blackberry infestations were recorded. The extent of weeds that reinfested the area were recorded during the 2023 control period to identify if the weed species of concern are continuing to spread from the plantation. This was completed by establishing photo monitoring points and provision of mapping of current infestations to provide a robust monitoring framework and to guide future works. Additionally, Habitat Innovation and Management will consult with FCWF management to discuss the potential to raise the issue with relevant staff from Forestry Corporation NSW with a view to requesting them to prioritise weed control within their plantations adjacent to the site.

Population Enhancement Action 2: Retain all buds, fruits and seed pods on site

All buds, fruits and seed pods from existing native vegetation at Site 1 as described above, has been retained on site to ensure that any viable seed material has the opportunity to germinate.

This action has been completed.

Population Enhancement Action 3: Carving and installation of 'Log Hollows'

Experienced ecologists specialising in hollow dependent fauna were engaged to create 'log hollows' from a previously felled tree at Site 1. This was achieved by cutting suitably sized limbs to appropriate lengths for the target species of animals and carving hollows directly into the timber.

The recorded presence of Squirrel Gliders (*Petaurus norfolcensis*) in the woodland vegetation adjacent to Track 15 at the FCWF presented the ideal target species for the 'log hollows'.

3.1 Works completed to date

The timber was salvaged on 23 May 2023 after which time the 'log hollows' were carved using a combination of chainsaws and the 'Hollowhog' tool and were customised to the preferred dimensions of the target species based on their expert knowledge and relevant scientific literature. A total of 8 'log hollows' were created, 7 for Squirrel Gliders and 1 for microbats.

These 'log hollows' were installed in the woodland vegetation surrounding Track 15 at FCWF on 23 August 2023 with photos and gps coordinates recorded for each installation.

3.2 Remaining works to be completed

This population enhancement action has now been completed. Monitoring of the installed 'log hollows' was completed in November 2024 to identify if any of the target species, or any other fauna, are using the newly created habitat and is detailed below.

3.3 Issues, opportunities and adaptive management

The recording of Squirrel Gliders on site allowed for this aspect of the works to contribute directly to the enhancement of habitat for this threatened species resulting in multiple benefits from this enhancement action.



Figure 2: Carved log hollows for Squirrel Gliders installed on site at FCWF

This aspect of the project has been further enhanced by Iberdrola Australia who have worked with Habitat Innovation and Management to conduct Squirrel Glider habitat works in the area where the log hollows were installed. In November 2024 Iberdrola and Habitat Innovation staff worked together to plant 1,200 plants consistent with local Box-gum Woodland species with a focus on Acacia species as feed trees for Squirrel Gliders. Additionally, two glider poles were installed to allow Squirrel Gliders to safely cross an access track, and 25 Habitat modular nest boxes customised for Squirrel Gliders were installed in the adjacent woodland.

Monitoring of the installed log hollows showed glider leaf nests in two of the log hollows and a White-throated Treecreeper on eggs in another hollow. Monitoring following this event has shown the installed Habitat modular nest boxes to already have use by Squirrel Gliders with both gliders and leaf nests recorded in multiple nest boxes and gliders using the rope crossing attached to the glider poles.



Figure 3: Left -White-throated Treecreeper nest in carved log hollow; Right – glider leaf nest in carved log hollow

Population Enhancement Action 4: Community Planting Event at Lake Canobolas

To increase the population size and extent of Silver-Leaf Candlebark, FCWF will work cooperatively with Central West Councils Environment & Waterways Alliance (The Alliance) and their member council, Orange City Council, to host a community tree planting event at Lake Canobolas. By engaging the community through a community planting day event to plant Silver-Leaf Candlebark, and the installation of educational signage, broad educational and awareness outcomes will be addressed in addition to increasing the population of *E. canobolensis*.

Lake Canobolas is located at the base of Mount Canobolas and was constructed in 1918 to provide water to the township of Orange. The lake is fed by Molong Creek and has become a popular recreation area for locals and visitors alike. This site was selected due to its suitability for increasing the population and extent of Silver-Leaf Candlebark within its known range, in a location with a high level of visitation from residents and visitors to the region.

Work conducted at Lake Canobolas will align with relevant recovery strategies and actions around establishing additional populations of Silver-Leaf Candlebark, and community education and awareness.

4.1 Works completed to date

The Friends of Orange Botanic Gardens and Arboretum have been engaged, as a licenced seed harvester and grower, to collect, propagate and grow Silver-Leaf Candlebark seed to tubestock stage ready for planting. The seed was collected from Lake Canobolas and sown on 28 August 2023. A total of 200 plants have been ordered of mixed species that are appropriate with the local vegetation community, with *E. canobolensis* to make up approximately one quarter of the plants for the community day planting event.

Unfortunately, due to issues with the Friends of Orange Botanic Gardens Arboretum nursery, the tube stock all died over the summer of 2023-24. This required fresh seed collection and propagation to occur which significantly delayed this aspect of the project.

Following lengthy delays required to get the new plants to a suitable stage for planting, the community planting event was organised for 17 April 2025. This was very much a collaborative effort with Habitat Innovation and Management coordinating the organisation of the day in conjunction with Central West Councils Environment & Waterways Alliance, Orange City Council, Iberdrola Australia and Habitat Connect.

The location for the event was changed to the Pinnacle Reserve off Pinnacle Road on the slopes of Mount Canobolas. It was considered that this higher altitude location would be better suited to the requirements of the trees while still providing a suitable location in terms of visitor access. The event attracted 16 volunteers from the Orange Youth Council with 100 *Eucalyptus canobolensis* trees and a combination of another 100 complimentary species planted with weed mats and tree guards installed. The planting was coordinated by Bill Josh of Habitat Connect who acts as the Community Environmental Engagement Programs Officer for Orange City Council. Representatives from Iberdrola Australia, Orange City Council, Environment & Waterways Alliance and Habitat Innovation and Management also attended and assisted with the revegetation works.



Figure 4: Community planting event at Pinnacle Reserve

4.2 Remaining works to be completed

The community planting event has now been completed and two follow up maintenance events will be conducted by Bill Josh of Habitat Connect to water the plants and conduct weed control as required. These maintenance events will be completed across the coming months to ensure the best chance of survival for the trees.

Final signage design and installation is still being completed in coordination with Orange City Council staff and the signage will be installed at Pinnacle Reserve.

4.3 Issues, opportunities and adaptive management

The community planting event aspect of the overall project was delayed due to a range of factors. Initially, clarification from NSW National Parks and Wildlife Service was required regarding the correct contacts and requirements for seed collection and propagation of *E. canobolensis* seed, given that it is a listed threatened species under both the NSW BC Act 2016 and the Federal EPBC Act 1999.

Once these requirements were understood, several streams of enquiry were followed to find a suitable contractor with the appropriate permits to both collect and grow the seed for the project. Having engaged the Friends of Orange Botanic Gardens and Arboretum, there was a further delay in finding suitable seed for collection. However, by engaging this volunteer-based group we are further contributing to positive community outcomes.

This initial delay was exacerbated by the resultant seedlings dying during the summer of 2023-24 due to issues with the nursery. Repeat seed collection and propagation meant that the trees were not ready for planting until early 2025.

The collaboration for this event with Orange City Council assisted in engaging the Orange Youth Council to assist in the planting of the event and was an opportunity to raise awareness of *Eucalyptus canobolensis* with youth leaders within their community.

Bill Josh of Habitat Connect has been engaged to provide two follow-up maintenance events to water the newly planted trees and to conduct weed control as required. This has the potential to involve further community volunteers to be involved in the project through this maintenance stage.

Population Enhancement Action 5: Educational and Awareness Raising Program

To raise awareness of the threatened status of Silver-Leaf Candlebark, as well as the ongoing threats to its persistence, FCWF is working with Central West Councils Environment & Waterways to develop a range of educational and awareness raising resources regarding this threatened species.

A range of resources have or will be produced and distributed including:

- Promotion of the community planting event through The Alliance website, social media channels, and a media release.
- Development of a Silver-Leaf Candlebark educational/awareness raising page on The Alliance website and associated social media posts.
- Development of educational/awareness raising signage to be installed at Lake Canobolas adjacent to the community planting site.

Additionally, the community planting event will be a great opportunity to engage with the community to discuss the threats to the species, the importance of the planting day, and species identification.

5.1 Works completed to date

An educational/awareness raising page has been included on the Alliance website: cwcewa.com.au/current-projects

Additionally, social media posts raising awareness of the species have been posted to the Alliance Facebook and Instagram pages. Volunteers at the community planting event were provided with background information on *Eucalyptus canobolensis*, the threats to this Endangered species, the importance of the work being completed at Pinnacle Reserve, and identification of the species.

5.2 Remaining works to be completed

Design work on the educational signage to be installed at Lake Canobolas has begun and is being finalised in consultation with all of the relevant project stakeholder prior to the signage being manufactured. The sign will be installed at Pinnacle Reserve where the planting has been conducted.

5.3 Issues, opportunities and adaptive management

The delay in the hosting of the community planting event resulted in a change of location and other project delays. However, by working closely with Orange City Council we were able to engage the youth leaders of the Orange community, in the Orange Youth Council, to assist in the planting works and to become educated about Silver-leaf Candlebark.

Population Enhancement Action 6: Annual Reporting and Adaptive Management

This report, and the past and proceeding annual reports, represent the final action from the *Eucalyptus canobolensis* Enhancement Plan. These reports are scheduled to be delivered annually in November through to 2026 when the final report will be submitted.

As has been summarised through the Population Enhancement Action sections above, all works are on track for completion, with some components delayed from the initial timeline included in the *Eucalyptus canobolensis* Enhancement Plan. This timeline is included below at Figure 5.

Given the continued delays with the community planting event, this report was delayed in order to be able to detail the planting event which is considered a key aspect of the overall project. The following annual report will be delivered in November 2025 on schedule.

PROJECT TIMELINE

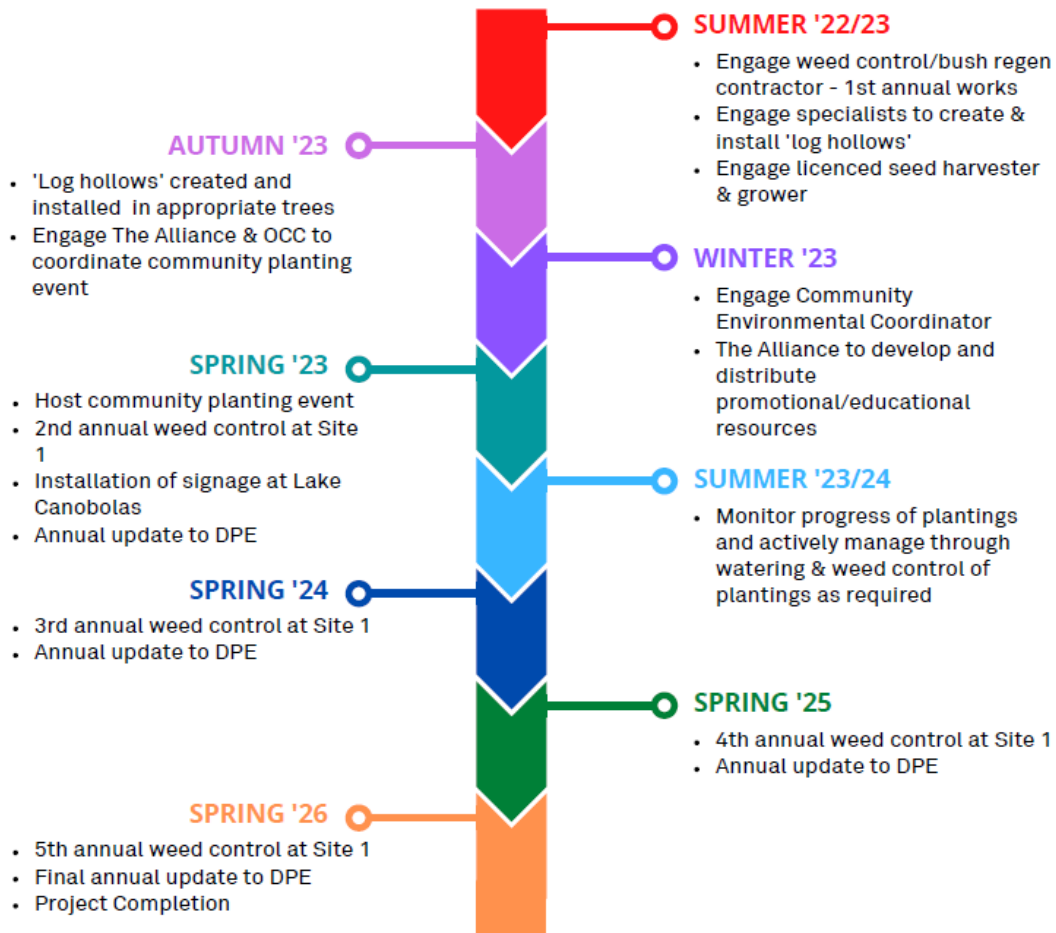


Figure 5: Eucalyptus canobolensis Enhancement Plan project timeline

Conclusion and Recommendations

This project is being delivered in accordance with the governing *Eucalyptus canobolensis* Enhancement Plan to successfully engage with a range of relevant stakeholders, provide practical and effective on-ground actions, and provide appropriate adaptive management solutions where necessity or opportunity has presented.

There have been examples where the project has reached beyond the desired outcomes to provide additional benefits. This has been particularly the case in the use of the created log hollows being targeted towards providing additional habitat for threatened Squirrel Gliders on site, and the engagement of the volunteer group, Friends of Orange Botanic Gardens and Arboretum to collect, propagate and grow the *Eucalyptus canobolensis* seed for the planned community planting day.

The continued works to enhance Squirrel Glider habitat at Flyers Creek Wind Farm in the area adjacent to where the carved log hollows were installed has been a significant addition to this project. It has allowed for monitoring works on the log hollows to be conducted which has shown use by both Squirrel Gliders and White-throated Treecreepers.

The community planting day was originally scheduled for Spring 2023 but was delayed due to additional time required to complete the seed collection stage of the project. Further delays occurred when the initial seedlings died due to an issue with the nursery. However, this is not seen as having a negative impact on the overall project delivery, and the delivery of this important component of the works has now been successfully completed.

Follow up maintenance by Bill Josh of Habitat Connect will ensure the best chance of survival for these newly planted trees and will provide further opportunity for community volunteers to be involved in the project.

Photo point monitoring and mapping of the extent of the weed infestation around the existing *Eucalyptus canobolensis* tree will be continue to be conducted to provide robust monitoring of the extent of weed infestation and to inform future management actions. This will be particularly important if it is demonstrated that weeds are continuing to establish and spread from the adjacent pine plantation.

The significant and unforeseen delay with the planting event has resulted in the delay of the preparation and delivery of this annual report, originally intended to be delivered in November 2024. However, it was considered that this delay would allow for the completion of the majority of the Population Enhancement Actions to be reported on. It is not foreseen that further delays will be associated with the delivery of the remaining annual reports.

The hosting of the community planting event along with the associated educational and promotional outcomes has been a major milestone in the delivery of this project, representing a positive net gain for the overall population of Silver-leaf Candlebark and an increase in community knowledge and awareness of the species.