

Anstead Bushland Reserve Creek Catchments Program – Five Year Site Plan

Report: Year One (December 2021-November 2022)



Year One, Project 1 Goals and Achievements

Project 1: Enhancing Anstead Bushland Reserve ecosystems through natural bush regeneration

Project 1 in the Anstead Bushland Reserve (ABR) Site Plan involves a staged implementation of the Bradley Method of Bush Regeneration. It is being implemented in nine pegged sites within Zone 1 of the area within ABR that Brisbane City Council (BCC) has allocated to Pullen Pullen Catchments Group (PPCG) for bushcare activities. (See *Anstead Bushland Reserve, Creek Catchments Program – Five Year Site Plan* for details of Project 1 and a Site Map indicating the location of Zone 1 and the pegged sites, labelled A-I.¹)

In Year One, initial activities listed in the Site Plan include the education of PPCG's Friends of Anstead Bushland (FOAB) volunteers in the Bradley Method and building their skills in recognising local weeds and the native species often regenerating alongside them. This process has been led by Jim Williams and has progressed extremely well with significant (and ongoing) gains in knowledge by all involved.

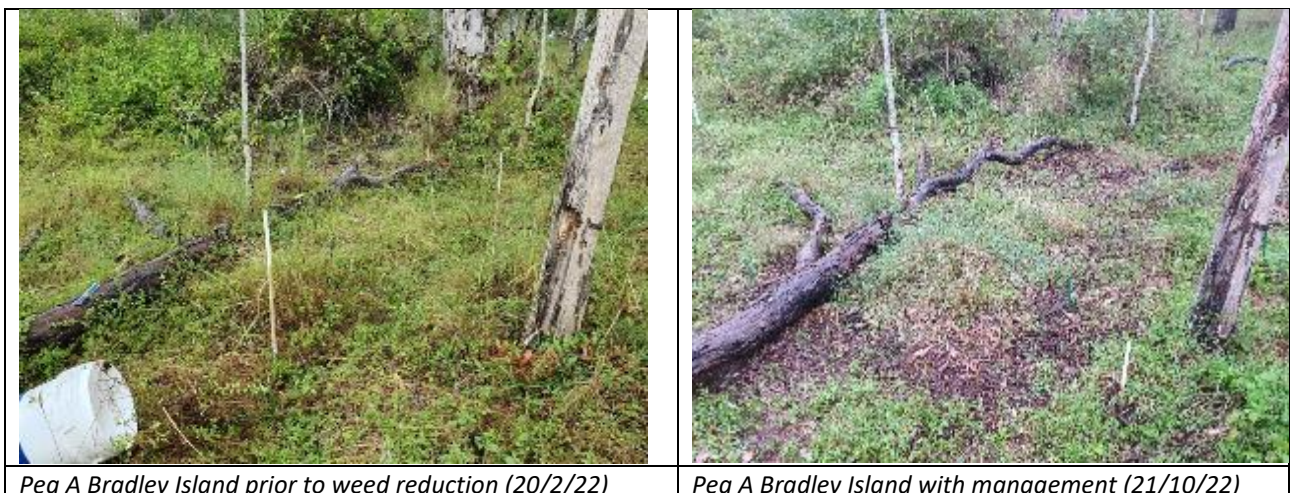
At the end of Year One, six of the nine pegged sites (those labelled A-F) had been allocated to volunteers for regeneration work (with two volunteers per site) and a new 'demonstration area' created. This is an advancement on the Site Plan, in which only four sites (A-D) were flagged for work in Year One.

In line with the Work Plan and Maintenance section of the Site Plan, activities in the pegged sites that commenced during summer 2021-2022 and continued throughout 2022 included:

- 1) retarding weed growth by removing weed seeds, cutting vertical stems of invasive weed vines and partially ringbarking weed trees;
- 2) application of the Bradley Method in selected 'islands' containing a suitable number and diversity of native species, sensitively removing weeds with boning knives and lightly mulching these areas.

During this process, volunteers learned a great deal about local flora and the importance of minimal disturbance to the environment, particularly the risks of over-clearing. The process has been one of arresting the advancement of weeds while protecting regenerating native species. New strategies were developed along the way, including the use of bamboo stakes to indicate areas of vulnerable regeneration that should not be walked over. Also 'barriers' of weeded vegetation were built up alongside walking trails to indicate 'work in progress' and discourage walkers from wandering through the sites.

The following snapshots illustrate the progression of weed management in a selection of the pegged sites and the regeneration occurring within Bradley islands over the course of Year One.



¹ The Site Plan can be accessed from the Anstead Bushland Reserve section of the Pullen Pullen Catchments Group website (<https://www.pullenpullencatchments.org.au/bushcare-groups/>).



Peg B before weed reduction (15/11/21)



Peg B with Bradley management (21/10/22)



Peg C before weed reduction (15/11/21)



Peg C with Bradley management (21/10/22)



Peg E before weed reduction (15/11/21)



Peg E with Bradley management (20/10/22)

	
<p>Bradley Island close up view (5/03/22)</p>	<p>Bradley Island close up view showing <i>Swainsona queenslandica</i> regeneration (21/10/22)</p>
	
<p>Bradley Island close up view showing <i>plectranthus</i> and native bedstraw regeneration 21/10/22</p>	<p>Bradley Island close up view showing native grass regeneration 21/10/22</p>

Only small hand tools have been used for Project 1; neither chemicals nor heavy machinery have been utilised. Observation and documentation of native flora within Bradley islands and fauna that have been attracted to the working areas have been integral aspects of the process. The installation and rotation of a wildlife camera in Zone 1 following permission from BCC (as listed in the Work Plan and Maintenance section of the Site Plan for Year One) has greatly enhanced the capacity to record developments.

Notable achievements since commencement in December 2021 are listed below.

- A significant increase has been noted in the variety of native species regenerating within Bradley islands, along with increases in the absolute number of individual native plants. For example, the number of *Swainsona queenslandica* plants, so far noted at only one other location within ABR (the Powerlink easement), is estimated to have trebled at Peg A within the past 10 months.
- The activity of native fauna has been observed to increase within the working areas as weed removal has progressed and provided improved access to preferred native food plants and foraging areas. In particular, the conservation significant Echidna has been observed.
- The number of active working areas has increased from four to seven (including the demonstration area), with the number of regular participants increasing from 8 to 12. New participants have become involved through a desire to gain skills and knowledge that they can also apply at home.

While the regeneration of flora has been assisted by above average rainfall in 2022, progress during Year One has been extremely promising, suggesting that the working areas are likely to be substantially transformed by the end of the Five Year Site Plan. FOAB members would welcome the opportunity to demonstrate progress with this project to the community and BCC officers during the coming year.

Other activities listed in the Site Plan for Zone 1 in Year One included the planning and installation of additional nesting boxes in Zone 1. This had not been finalised by the end of Year One and will be carried over to Year Two.

Year One, Project 2 Goals and Achievements

Project 2: Maintaining and enhancing the condition of previously replanted high-visibility areas

Project 2 in the ABR Site Plan seeks to extend and maintain previous planting efforts in the high-visibility areas where PPCG members, with the support of BCC, have invested considerable effort over many years in removing weeds and planting native trees and shrubs. These areas include what is now known as the Fig Tree Garden, the Native Lime area (which includes a site augmented by students from QUT's Student Catchment Immersion Program in 2021) and areas around and opposite the Water Tank. They are located within Zone 2 (see *Anstead Bushland Reserve, Creek Catchments Program – Five Year Site Plan* for details of Project 2 and a Site Map indicating the location of Zone 2).

The main activity for Project 2 during Year One was a major extension of the canopy and ground cover plants in the Fig Tree Garden and surrounding areas near the Quarry Lookout. This was undertaken at a tree planting day organised to coincide with National Tree Day on 31 July 2022. In line with the Work Plan and Maintenance section of the Site Plan, early preparation included the development of detailed planting plans, organisation of complementary activities and promotion of the event. During the week prior to National Tree Day, PPCG volunteers pre-weeded the area and monitored the digging of holes and spreading of mulch by BCC approved contractors. A team of PPCG volunteers assisted attendees with planting on the day. Plants were sourced from PPCG's collection at Moggill State School nursery, which included over 200 donated by local propagator Chris de Jong. These were supplemented with trees received through the Winter Plants for Wildlife project run by Healthy Land & Water and some plants (including locally endemic grasses) purchased from Paten Park Native nursery.

The event attracted over 70 community members and more than 500 plants (native trees, shrubs and grasses) were planted. In addition to planting, the event included a wildlife presentation, a nesting box presentation and display of Dr Farvardin Daliri's giant Australian animal statues. Participants received free refreshments and free native plants for their home gardens. PPCG is grateful for support received from Brisbane City Council's Lord Mayor's Community Fund to assist with these activities.



Cr Adermann planting a hoop pine, assisted by Brendan McIntyre, BCC



Dr Farvardin Daliri's giant animal statues on display at the tree planting day

FOAB is carefully monitoring the plantings, with a watering and weeding schedule mapped out to July 2023. In addition, participants at the tree planting day were offered a scheme to allow them to track the progress of a tree they had planted. This was designed to provide community members with a heightened sense of contribution to caring for their local nature reserve. Those who signed up receive regular updates with photographs of their tree, showing its identification number and GPS location.

Another activity listed in the Site Plan for Year One in Zone 2 was to investigate the possibility of again engaging tertiary-level environmental studies students in planting and weeding projects over the next four years. Planning for this activity commenced towards the end of Year One with the aim of implementing a project in the autumn of Year Two.

Year One, Project 3 Goals and Achievements

Project 3: Improving habitat for the vulnerable Collared Delma (*Delma torquata*)

Project 3 in the ABR Site Plan aims to improve habitat for the vulnerable Collared Delma (*Delma torquata*), a small legless lizard that has previously been recorded in ABR. While the Site Plan identifies both Zones 1 and 2 as areas where activities in relation to Project 3 would be undertaken, no specific actions were listed in the Work Plan and Maintenance section of the Site Plan for Year One. Nevertheless, some developments have occurred following the sighting of Collared Delma in ABR on several occasions during Year One and the implementation of a new collaborative project on improving Collared Delma habitat during this time.

The new collaborative project, *Improving Collar Delma Trajectories in Brisbane's Western Suburbs*, is funded by the Australian Government and runs from April 2022 to March 2023. It is being undertaken jointly by PPCG and the neighbouring Kholo Creek Catchment Group. A key outcome has been a detailed assessment tool for identifying suitable habitat for Collared Delma. This has been applied in assessing the properties of local landholders who have signed onto the project – a process followed in selected cases by fauna surveys and weeding of invasive species such as creeping lantana (*Lantana Montevidensis*) that is thought to have significantly reduced habitat for the Collared Delma over recent decades.

FOAB's increased understanding of suitable habitat for *Delma torquata* gained through this federally-funded project has underlined the complementarity for Project 3 of the weeding work being undertaken in Year One for Project 1, given potential delma habitat within several of the Bradley islands in Zone 1. Sightings of Collared Delma in ABR during the year (in combination with the past record of sightings) also led to approval from BCC to extend Zone 1 to include an area adjacent to recent sightings and thus allow its inclusion in the federally-funded joint project. (See *Anstead Bushland Reserve, Creek Catchments Program – Five Year Site Plan* for further information on Project 3 and a Site Map indicating the location of Zone 1 and its extension for Collared Delma habitat enhancement.)

BCC approval for this extension of Zone 1 allows Project 3 to be expanded beyond the initial vision in the Site Plan. Activities will include dedicated and minimally disruptive weeding by contractors in late 2022 and early 2023 under the federally-funded project, with FOAB monitoring weed control in subsequent years. Years Two to Five of the Site Plan have been amended to accommodate these activities. In addition to these amendments, complementary activities (e.g. removal of creeping lantana) in Projects 1 and 2 will remain linked with Project 3 in the Site Plan.

Year One, Other Activities

In addition to the three projects listed in the Site Plan, butterfly surveys in association with Brisbane Catchments Network and Brisbane's Big Butterfly Count (BBBC) are being conducted on a regular basis in ABR. Following an initial survey prior to the commencement of the Site Plan (held on Saturday 20 November 2021), surveys were conducted on Saturday 5 March and Friday 30 September 2022. Another will be held on Saturday 10 December 2022, thus falling within the scope of Year Two in the Site Plan.

These surveys have attracted considerable interest within the local community and beyond. Participants of all ages have gained knowledge about local butterfly species and the presence of their host plants within Anstead Bushland Reserve with the guidance of local expert Cliff Meyer and BBBC's Jutta Godwin.

Some noteworthy observations, pointing to the unique environment in ABR, include the presence of the Long-tailed Pea-blue (*Lampides boeticus*), which feeds on plants with pea flowers like *Crotolaria* and *Swainsona*, and the Black-spotted Grass-blue (*Famegana alsulus*). These species have either not been recorded, or recorded only rarely, at BBBC surveys in other locations.



Cliff Meyer explaining the importance of butterflies as bio indicators of ecosystem health



*Long-tailed Pea-blue (*Lampides boeticus*),*

Year Two Priorities: December 2022-November 2023

Project 1 (Zone 1) will continue as set out in the Site Plan for Year Two, with extension to new pegs as existing areas are completed apart from maintenance. The goal will be to have all nine pegged sites (A-I) under development by the end of Year Two. Progress will be contingent on the number of volunteers who attend bushcare mornings on a regular basis and the degree and type of weed infestation (which varies across the sites).

Project 2 (Zone 2) will continue with maintenance of new plantings through regular watering and weeding of the area until winter 2023, when the maintenance schedule will be reviewed. The engagement of tertiary student groups in further planting and weeding of Zone 2 areas such as the Native Lime or Water Tank sites will be undertaken in autumn with assistance from BCC.

Project 3 activities will be focused on the extension of Zone 1: contractors will be engaged to hand-weed high priority areas with the support of Australian Government funding through the Collared Delma project noted above, with FOAB undertaking subsequent maintenance. Complementary work will include the ongoing removal of creeping lantana as part of Projects 1 and 2.

A Year Two event - Birds in the Reserve – is scheduled in the Site Plan for Saturday 2 September, 2023. Preparation for this will commence early in 2023 to secure an expert to lead a bird walk and promote the event ahead of time. Other events planned for 2023 in ABR (not listed in the Site plan) include a community workshop on enhancing habitat for the Collared Delma in February and further butterfly surveys, the first of which is scheduled for Saturday 4 March. Further ideas for events, such as a demonstration of progress with Project 1 and walks to identify native flora and fauna, will be discussed over the course of the year.