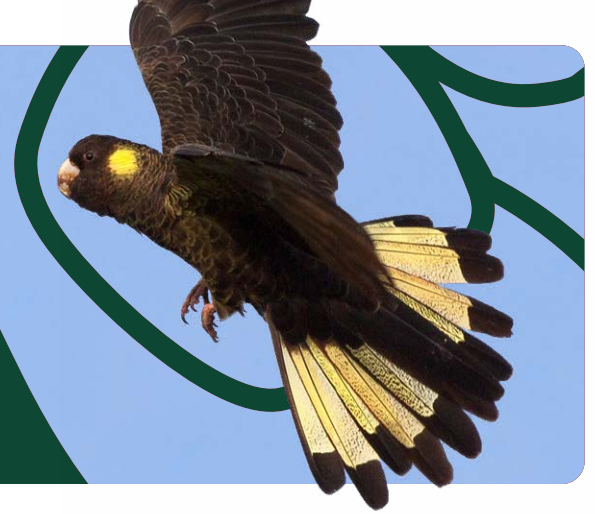


Highbury Aqueduct Reserve

Resident Information Sheet
February 2024



The Highbury Aqueduct Reserve is an important urban biodiversity corridor located amongst the suburbs of Highbury and Athelstone with shared-use trails linking with the adjacent River Torrens Linear Park – a beautiful natural environment in which the community can connect with nature.

Happy New Year from the Public Land Stewardship team who look after Highbury Aqueduct Reserve. We hope you had an enjoyable time over the festive season and were able to get out in the sunshine, go for a few walks or rides and connect with nature.

The 2022-23 year was a big year for project work within Highbury Aqueduct Reserve with progress made towards implementing some of the remaining project objectives set during the development of the Master Plan in 2013, including:

Stormwater management project within the stormwater channel adjacent Freshford Avenue, Highbury

A stormwater management project was undertaken from April –September 2023 to upgrade a degraded section of the stormwater channel adjacent Freshford Avenue, Highbury. The Department for Environment and Water engaged building contractor Camco to deliver the construction elements of the project and Water Technology provided expert technical and engineering consultancy services.

While previous works upstream at this site have stabilised the watercourse between Wicks Road and the historic drain crossing point, further stormwater management works were required downstream of the historic drain to remove an eroded and unstable dam wall and re-align the channel to better manage stormwater flows.

Works included:

- removing approximately 23 *Pinus halepensis* (Aleppo Pine) trees (a declared pest plant species) within the stormwater channel where the channel banks were re-contoured.
- removing the eroded earthen dam wall structure and replacing it with rock chute and armouring to better manage flows and improve structure to the channel.
- contouring the banks upstream to re-instate the aligned channel profile to address sedimentation deposits and erosion heads that have developed.
- installing an additional rock chute structure upstream of the dam wall to slow the flow rate and assist in reducing sediment mobilisation.
- remediating the channel banks with geofabric and

revegetating the channel with appropriate native watercourse species to provide additional erosion control, sediment stabilisation and filtration services and improve habitat for local native fauna.

The area now is more open with sunlight able to reach the native plants, is less weedy and overgrown, is effectively managing high rainfall flow events and we have already seen improvements to water quality. There are still some final touches to add to complete the project such as fencing around the drain and trail linkages and these should be completed by mid 2024. The area will then be opened back up to the public.

We would like to extend our thanks to the Minister for Planning, the Hon Nick Champion and the Department for Trade and Investment for supporting this important stormwater management project, which was additional to the normal program of on-ground works and maintenance supported within the reserve.





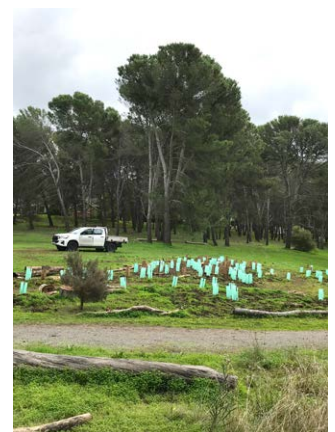
1. Erosion hole at base of dam wall with water seeping through. **2.** Erosion hole at top of dam wall – this was being used as a crossing point by walkers and riders and causing safety concerns. **3.** Downstream by the historic drain outlet which was blocked by sediment build up. **4.** Shows depth of sediment build up that was blocking the drain. **5.** Before: Looking upstream at failed dam wall, pine trees removed. **6.** After: Looking upstream, where the dam wall was removed and replaced with rock chutes, jute matting installed, planting and hydro-mulch completed.

Installation of a Butterfly Garden

The Master Plan also included an objective to provide a range of spaces that accommodate informal active recreation, social activities and peaceful reflection and another objective to provide diverse opportunities for members of the local community to participate in developing, managing and maintaining the Park. Progressing against those objectives, in May 2023 a Butterfly Garden was established within the reserve off Boundy Road, Highbury in collaboration with the Athelstone Primary School’s environment group called Verde. 30 children, teachers and volunteers participated in the planting of the Butterfly Garden. The children heard from guest speaker Gerry Butler, the Chair of Butterfly Conservation SA about butterflies being valuable pollinators of plants and important indicators of a healthy ecosystem. Butterfly populations can be affected by urbanisation and that makes areas like the Highbury Aqueduct Reserve important by protecting existing habitats and replacing habitat in urbanised areas.

The Butterfly Garden has locally indigenous native plants that provide the preferred food source for native butterflies and are suitable caterpillar host plants, including but not limited to, *Acacia melanoxylon* (Blackwood), *Acacia rupicola* (Rock Wattle), *Calytrix tetragona*, (Common Fringe-myrtle), *Chrysocephalum apiculatum* (Common Everlasting), *Daviesia leptophylla* (Narrow-leaf Bitter-pea), *Daviesia ulicifolia* (Gorse Bitter-pea), *Einadia nutans* (Climbing Saltbush), *Hakea rostrata* (Beaked Hakea), *Hardenbergia violacea* (Native Lilac), *Kennedia prostrata* (Running Postman), *Leptospermum myrsinoides* (Heath Tea-tree), *Lomandra multiflora-dura* (Hard Mat-rush), *Lotus australis* (Austral Trefoil) and *Xanthorrhoea quadrangulata* (Mounty Lofty Grass-tree).

A new path through the Butterfly Garden was also installed and log seating will be added in 2024 so that walkers can enjoy a stroll through or sit in the garden.



L-R: Site prep for the installation of the Butterfly Garden (turning of soil and adding gypsum, cutting new path, placement of smooth rocks), staff demonstrating how to plant seedling to school children, seedlings staked and guarded.

Conversion of old aqueduct channel into wetland

The Master Plan included an objective to improve water quality by developing grassed swales, wetlands and planting appropriate sedge and rush species. As a step towards this, sections of the aqueduct channel either side of the channel crossing off Country Lane were treated for kikuyu and replaced wetland species such as *Cyperus gymnocaulos* (Spiny Flat-sedge), *Juncus pallidus* (Pale Rush), *Juncus kraussii* (Sea Rush), *Carex fascicularis* (Tassel Sedge), *Carex appressa* (Tall Sedge) and *Carex tereticaulis* (Rush Sedge). This work is staged and over a few years the kikuyu treatment will continue and be followed with further plantings of wetland species. Bird hides may be added to this area over time as the new plantings establish and seating may be added as a pit stop for avid bird watchers.

Continued targeted weed control in stormwater channels

The stormwater channels within Highbury Aqueduct Reserve flow into the River Torrens. We partnered with Green Adelaide through the Urban River Torrens Recovery Project to remove or treat exotic trees and declared weeds within stormwater channels to reduce their impact on the quality of our waterways and the animals that live there. Leaf drop from exotic trees increases nutrients in the water and lowers dissolved oxygen needed by aquatic animals, resulting in poor health and even death of fish and invertebrates. The roots of some exotic trees and other pest plant species can also contribute to a loss of river bed and bank stability, leading to expensive erosion problems. Where weeds have been removed or treated we have replaced them with locally indigenous plants to improve water quality, bank stability, and the native habitat.

Some of the other important projects for 2022-23 included:

Management of biosecurity risk, invasive insect - Giant Pine Scale

In April 2023, Giant Pine Scale was detected within three government owned reserves at Highbury and Hope Valley - with a population found within a cluster of Aleppo Pine trees within Highbury Aqueduct Reserve off Boundy Road, Highbury. Giant pine scale (*Marchalina hellenica*) is a pest insect that sucks the sap of introduced pine trees, causing the trees condition to deteriorate and drop limbs or fall and this poses a threat to the softwood plantation industry.

The Boundy Road area was put under quarantine, closed off to the public and urgent tree removal was undertaken in August 2023. These measures were aimed at limiting the way the insect can spread, which is by crawling to host plant material and by getting caught on clothing, shoes, bike wheels etc. The removal of the trees was necessary to remove host plant material from the insects and to prevent further spread to other trees within the reserve. This was followed by a quarantine period to monitor the insect's activity. A site clean-up was undertaken in December 2023. The site was assessed by PIRSA and Forestry SA in January 2024 to determine if Giant Pine Scale was still present on site. No Giant Pine Scale activity was detected at this time and PIRSA approved the site to be re-opened to the public. Site remediation will continue to restore trails and natural features in this section of the reserve.



For more information about Giant Pine Scale, please visit:

www.pir.sa.gov.au/biosecurity/plant_health/emergency_and_significant_plant_pests/giant_pine_scale

For information about the site remediation for Highbury Aqueduct Reserve, please email: NPWS-AMLR-PLS@sa.gov.au

New fauna monitoring program

In mid 2022, wildlife monitoring expert James Smith from *fauNature* was engaged to install, monitor and maintain 27 wildlife boxes which have been installed to enhance habitat for hollow dependant wildlife. These boxes are positioned along three sections of the Highbury Aqueduct Reserve, where naturally occurring tree cavities are in short supply. The wildlife boxes were installed at three locations along the Aqueduct to expand on Bushcare work undertaken in those areas. In the last 12 months, the wildlife boxes have been monitored and have already been found to be successful with Kookaburras, Wood Ducks and Lorikeets found to be utilising the boxes. The wildlife boxes were also investigated/utilised by mammal species such as possums.

The survey records usage and allows program success to be monitored. Over time, this work will hopefully encourage more variety in the types of bird, mammal and bat species choosing to reside at Highbury Aqueduct Reserve and provide insights into the different fauna choosing to utilise the boxes.

Other news

New public toilets now in Highbury

You can now spend longer exploring the River Torrens Linear Park thanks to the installation of new public toilets, which were installed by the City of Tea Tree Gully. In response to public demand, accessible unisex toilets were installed at the end of Nursery Way, Highbury.

The public toilet has a baby change table inside, along with an exterior water fountain.



Pioneer Court Community Garden update

The Pioneer Court Community Garden volunteers had another successful year with 41 active plots and 75 members who look after the plots and orchard. The volunteers put in a total 3,789 hours for 2022-23. Congratulations to the Community Garden on their efforts to maintain such a wonderful community asset.

The garden volunteers also hosted a winter fundraiser event on the second of July with approx. 114 guests in total and held garden workshops which were open to the public for pruning and grafting of fruit trees. During the months of daylight savings on Sunday approximately twice a month, the garden volunteers host sunset in the garden evenings, which is a BYO food and drink event to share with other members and friends of the garden.

The garden volunteers also undertook a large scale clean-up of the community garden site, disposing of rubbish and hard waste in 2022-23 to improve the amenity of the garden and surrounds.

If you would like to volunteer at the Pioneer Court Community Garden or attend any of their workshops please phone Marina Birch (President) on 0417 816 782.

Bush for Life update

The Bush for life Bush Action Team continues to undertake critical bush care work at the Bush for Life site within the reserve off Valley View Drive. 200 hours of staff and volunteer hours were spent working on the Bush for Life site in 2022-23.

The Bush Action team undertook targeted weed control of *Sparaxis tricolor* (Harlequin Flower), *Moraea flaccida* (Cape Tulip), *Pentameris pallida* (Pentaschistis) and *Olea*

europaea (Olive), using methods appropriate for working in sensitive remnant vegetation including hand weeding, cut and swab and drill and fill techniques.

The Bush Action team also assisted Trees for Life staff in planting rare native plant species as part of the Rare Plant Species Project – a partnership between Trees For Life, Green Adelaide, Seed Conservation Centre of SA and land holders to deliver a unique rewilding project, which re-establishes 7 rare plant species at 20 sites across 7 of Adelaide's metropolitan council areas (including Highbury Aqueduct Reserve).

Green Adelaide worked with Trees for Life to propagate rare and locally extinct plants and involved many volunteers in the planting. The 7 species planted included *Brachyscome diversifolia* (Tall Daisy), *Swainsona behriana* (Southern Swainson-Pea), *Podolepis jaceoides* (Showy Copper Wire Daisy), *Pycnosorus chrysanthes* (Golden Billy Buttons), *Dianella longifolia grandis* (Arching Flax Lily), *Cullen parvum* (Small Scurf Pea) and *Glycine latrobeana* (Clover Glycine). These species were once widespread across the Adelaide Region but had largely disappeared from around metropolitan Adelaide since European settlement due to land management changes, disturbance and weeds. The re-establishment of these rare plants will boost biodiversity in these locations and support native wildlife.

Bushfire safety - On days of Catastrophic Fire Danger or Extreme Fire Danger it is recommended you do not enter the reserve. You can determine the current fire danger rating by checking the Fire Ban District map on the CFS website.

Reserve access and management information - Come and enjoy this reserve for free. The reserve is open daily, however use of the reserve after dark is not recommended as there are no lights in the reserve or along the trail. There is no unauthorised vehicle access into the reserve and car parking is limited to street parking adjacent the reserve. There is no camping or accommodation available within the reserve.

Visitor information:

Black Hill National Park and Wildlife Service Office
Call (+61 8) 8336 0901 and ask to speak to someone in the Public Land Stewardship Team

Email: NPWS-AMLR-PLS@sa.gov.au

Emergency phone contacts:

Triple Zero (000) Urgent medical, fire and police assistance

131 444 Non urgent police assistance

