

Environmental Leadership

Brown Hill and Keswick Creeks Stormwater Board
Quarter 4 Update 2022/23



CITY OF
ADELAIDE

Key Messages

- The Cities of Adelaide, Burnside, Mitcham, Unley and West Torrens have worked collaboratively over several years to for a Section 43 Committee Under the *Local Government Act 1999 (SA)* to develop a Stormwater Management Plan (SMP) aimed at mitigating flood risk within the catchment.

- The Subsidiary has a shared vision of becoming ‘water sensitive cities’ by
 - minimising flooding
 - harnessing the potential of stormwater to overcome water shortages
 - improve waterway health
 - enhance city landscapes
 - be utilised as a valuable community resource.

- The vision is underpinned by six key objectives for Adelaide stormwater management:
 - Protection from flooding
 - Quality of runoff and effect on receiving waters
 - Beneficial reuse of stormwater runoff
 - Protection of watercourses and riparian ecosystems
 - Effective planning outcomes
 - Management of stormwater infrastructure

BHKC – Quarter 4 2022/23 Project Update

The Brown Hill and Keswick Creeks Stormwater Board Project Update (June 2023) is available at from page 5 of this attachment.

Financial Summary

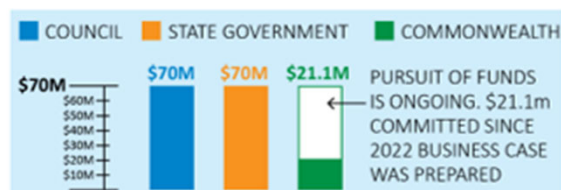
as at 31 May 2023

The project is being delivered on the basis that capital funding will be provided by Local, State and Commonwealth Government at one third each.

A funding commitment of \$70m was made by the SA Government's Stormwater Management Authority with funds to be provided over 20 years.

This is based on matching funding of \$70m being provided by Constituent Councils over the same timeframe.

The project continues to pursue Commonwealth Government funding.



¹ The Commonwealth commitment of \$21.1m includes \$5m pre-election commitment under Urban Rivers and Catchments Program. These funds have not yet received final approval.

² The City of West Torrens have provided funding commitment for the next 5 years, with future funding to be reconsidered at that time

FY23 YTD Operating Summary

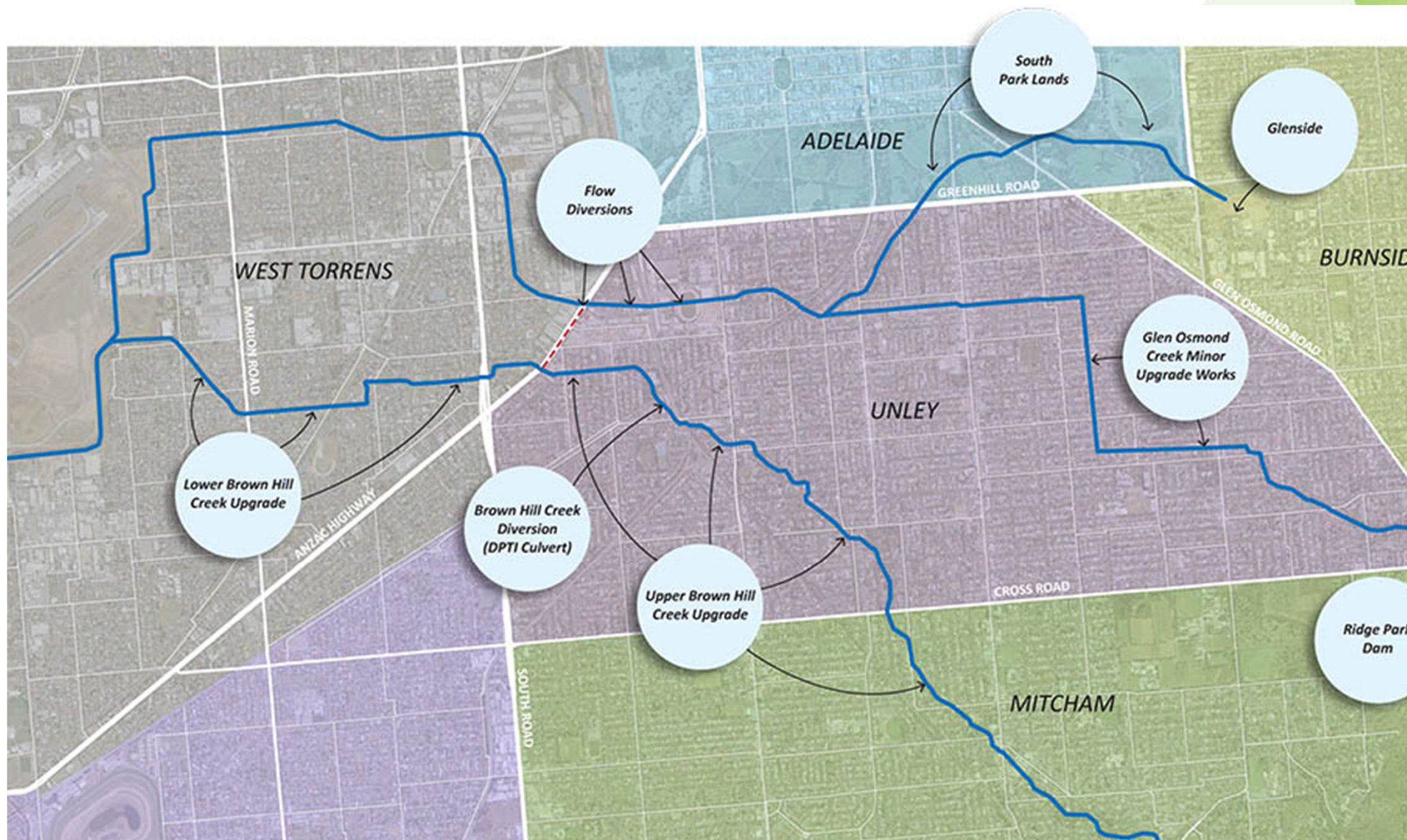
	Actual YTD	Budget YTD	Variance \$
Income	\$978,050	\$695,236	\$282,814
Expenses	(\$560,876)	(\$623,307)	\$62,431
Net Surplus	\$417,174	\$71,929	\$345,245
Depreciation	(\$140,348)	(\$140,349)	\$1

FY23 YTD Capital Income Summary

	Actual YTD	Budget YTD	Variance \$
Constituent Councils	\$2,500,000	\$2,500,000	\$0
SMA Funding	\$0	\$4,500,000	(\$4,500,000)
Federal Funding	\$4,120,105	\$4,091,106	\$28,999

FY23 SMA funding of \$4.5m was approved by the SMA Board on 31 October 2022. This funding requires approval from the Public Works Committee of Parliament and the approval process is underway

BHKC – Quarter 4 2022/23 Catchment Area



Brown Hill and Keswick Creeks Stormwater Board

Project Update

June 2023

This report provides an update to our owner Councils and interested parties on the current financial performance of the Brown Hill and Keswick Creeks Stormwater Board, an overview of capital works projects, and recent activities of interest.

Prepared by Peta Mantzarapis, Project Director

Financial Summary

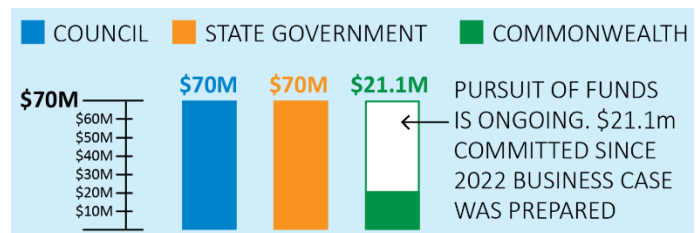
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Project Delivery



Stage 1 works are focussed on flood detention – holding water and slowing the flow to downstream areas – and are now complete. Stages 2 and 4 involve doubling the capacity of Brown Hill Creek from Adelaide Airport at the downstream end through to City of Mitcham at the upstream end. These stages are underway with works completed in Everard Park and currently under construction in Netley and Millswood. Additional Commonwealth grant funding will see commencement of new works in Forestville and Hawthorn in the coming months.

Funding Applications

The Australian Government’s **Disaster Ready Fund** will provide up to \$1 billion in funding over the next 5 years, with up to \$200m in funding available annually. The fund aims to build natural disaster resilience and risk reduction, with a focus on delivery of infrastructure projects and systemic risk reduction projects.

Two applications were submitted for funding under round 1 and both of these applications were successful:

1. \$3.7m in funding awarded to upgrade a 320 metre section of Upper Brown Hill Creek in Forestville. Delivery of this section will mark completion of the Area 1 upgrades of Upper Brown Hill Creek. Total project cost \$7.4m.
2. \$2.387m in funding awarded to upgrade a 230 metre section of Upper Brown Hill Creek in Hawthorn. The channel runs through private properties that were inundated in 2016 and remain vulnerable to flooding. Total project cost \$4.774m.

A pre- election commitment of up to \$5m was made under the Commonwealth Government’s **Urban Rivers and Catchments Program** for delivery of works within key areas of open public space including Forestville Reserve, Orphanage Park and Betty Long Gardens. A formal submission was requested and has been made to secure these funds. Final approval has not yet been received.



Reference Design and Technical Support

This project involves development of concept designs to the preliminary (30%) design stage for all remaining project works. The scope has also expanded to progress design development and engagement where opportunities exist for acceleration.

Recent Activities

- Presentation of reference design plans to the Board.
- Technical Working Group meeting with all 5 Constituent Councils.
- Collaboration with City of Unley, Renewal SA and the developers of the former Le Cornu site in Forestville to prepare a proposal for the State Government to fund the accelerated delivery of the Keswick Creek Flow Diversions, generally in line with the existing Business Case.
- Re-commencement of consultation with the North South Corridor project team as they seek to refine their design and procurement requirements.
- Participation in the Steering Committee and Technical Working Group for the Department for Environment and Water's Flash Flood Forecasting Pilot Project, and coordination of input from the Constituent Councils to the scoping of this pilot project.
- Technical input to Adelaide Airport's flood study.
- The project continues to receive a high volume of enquiries from property owners along Upper Brown Hill Creek regarding the status of the proposed channel upgrades, and the potential impact of the project on their plans to develop or improve their property. The reference design is being used to inform these discussions.

Next Steps

- Collate supporting information for the proposal to the State Government for the Keswick Creek Flow Diversions including letters of support from the Mayors of the Constituent Councils, Adelaide Airport Limited and North South Corridor project. Refine the design to integrate with the design for the former Le Cornu site. Meet with the Adelaide Showground to discuss alignment options and scheduling impacts.
- Participate in the North South Corridor project review process, assist in coordinating the technical input of the Constituent Councils, and facilitate an updated Data Sharing Agreement and protocols that will enable exchange of the floodplain model data at various design milestones. This would provide the Board with the option of establishing a 'whole-of-catchment' floodplain model using the latest data.
- Continue participating in the Steering Committee and Technical Working Group for the Department for Environment and Water's Flash Flood Forecasting Pilot Project.
- Continue attempts to formalise DIT's technical review of the proposed design solutions in Marion Road, Anzac Highway, Goodwood Road and the Leader Street rail corridor.
- WGA to finalise the reference designs for Upper Brown Hill Creek and associated site inspections with staff from Council, the SMA and Green Adelaide.

Glenside

This project involved enlargement of an existing detention basin from a capacity of 18ML to 37ML, to limit downstream flow to the existing capacity of the culvert under the Fullarton and Greenhill Roads intersection. The detention basin, together with other works in the South Park Lands reduce the peak stormwater flows along Park Lands Creek and further downstream.

The Glenside site is being developed by Cedar Woods and a condition of Cedar Woods agreement with Renewal SA was that the development include delivery of the detention basin and associated stormwater infrastructure required under the SMP.

Design Review

In November 2021, the Project Director and Technical Advisor met with staff from City of Burnside, Cedar Woods and WGA to discuss matters relating to the operation and maintenance of the Glenside Detention Basin and discuss the performance of the detention basin during rainfall events.

Following the meeting there were a number of actions on Cedar Woods and WGA to complete with BHKC and Council staff regularly requesting updates since that time.

Council has requested an options assessment be presented for consideration of Council and the Board, with an emphasis on achieving a high amenity outcome that is durable and functions properly, with minimal ongoing maintenance requirements.

Maintenance and Operational

A full clean of all 3 GPTs and the internal screens was undertaken in September 2022, with subsequent cleans undertaken in November 2022 and February 2023 in accordance with the agreed maintenance schedule. A full clean was scheduled for April/May 2023, but wet weather has restricted access. These works will be undertaken when weather allows.



South Park Lands

Prior to delivery of the South Park Lands project, predicted peak stormwater flows through Park Lands Creek were about double the creek capacity downstream of Greenhill Road. The South Park Lands projects specifically relates to:

Victoria Park/ Pakapakanthi (Park 16) wetland

Establishment of a 3.2 hectare wetland to provide 100 million litres of flood storage. The wetland comprises areas of permanent water, areas that become inundated with stormwater during regular flow events and a broader flood basin that will only become inundated during more significant flow events.

Blue Gum Park/ Kurangga (Park 20) creek works

Construction of a low-level bund and the realignment of existing open channels in the southern section of the park. The works divert flows into new open channels and detain water on site, releasing flows downstream in a controlled manner. Areas to the north of the bund will be inundated in significant flow events.

Key Messages

The Park 20 creek works were completed on 30 September 2022. The works are now in the maintenance phase with fortnightly inspections being

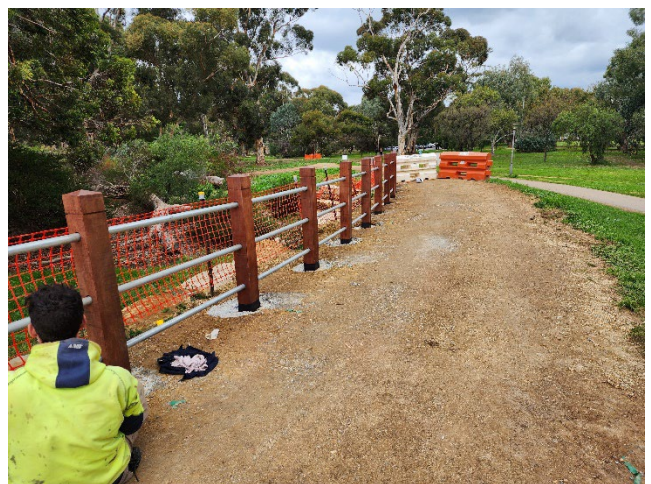
undertaken. An issue was identified with the surface level of the containment berm and this has now been rectified by the contractor.

The wetland is now in its operational phase and there are a number of activities that have commenced in recent weeks to finalise works. These works are due for completion late-June 2023, with the exception of the inlet basin remedial works which will be delivered later in the year in drier weather.

Community sentiment around the wetland project has been overwhelmingly positive with regular emails and phone calls from members of the public asking questions and speaking about the merits of the project.

Asset Handover

The non-stormwater components of this asset are now being handed over to City of Adelaide for ongoing maintenance as part of Council's broader approach to management of the Park Lands.



Upper Brown Hill Creek, Area 1 Everard Park

This project required upgrade of an existing open concrete channel to increase its capacity. The works extend from Anzac Highway, Everard Park to Third Avenue, Forestville and were accelerated due to the adjoining residential development restricting future access. The approved solution included installation of a covered culvert, which allowed for the extension of Wilberforce Walk and establishment of a shared use pathway and landscape improvements at ground level. City of Unley made a financial contribution to achieve the covered culvert outcome. Construction was completed in August 2020 and the site was then handed over to City of Unley for ground-level improvements to be delivered.



Lower Brown Hill Creek, Packages 1-3

Packages 1 to 3 of the Lower Brown Hill Creek Upgrade will involve doubling the flow capacity of a 1.7-kilometre-long section of channel beginning at the south-eastern corner of Adelaide Airport and ending at Birdwood Terrace. The channel is primarily situated within a 12-metre-wide reserve owned by City of West Torrens.

Key Messages

Construction is underway on Package 1A: Channel Upgrade – Keswick Creek to Watson Avenue and Package 1C: Crossing Upgrade – Watson Avenue. Detailed design has been completed for Package 1B: Channel Upgrade – Watson Avenue to Marion Road and Package 1D: Crossing Upgrade – Harvey Avenue, and the pre-construction planning is advanced for those packages. A strategy has been developed for securing access to private property, where required for future construction works, and one-on-one engagement with property owners that are directly affected by the works will commence after a briefing of City of West Torrens' Elected Members.

On 20 June 2023 City of West Torrens approved the future-proofing exercise for the Watson to Harvey Avenue section, to ensure the channel is constructed in a way that enables a covered culvert solution to be achieved in the future.



Recent Works and Focus Areas

March to May activities included:

- Construction activities for Package 1C including installation of the new 6.8 metre wide box culverts.
- Commencement of construction activities for Package 1A. Approximately 150 metres of channel has been excavated and lined with a protective layer of concrete and the first sections of new concrete base slab and walls have been poured.
- Completion of detailed design for Packages 1B and 1D, including pot-holing of existing underground services.
- Pre-construction inspections and planning for Packages 1B and 1D, including identification of private property impacts.

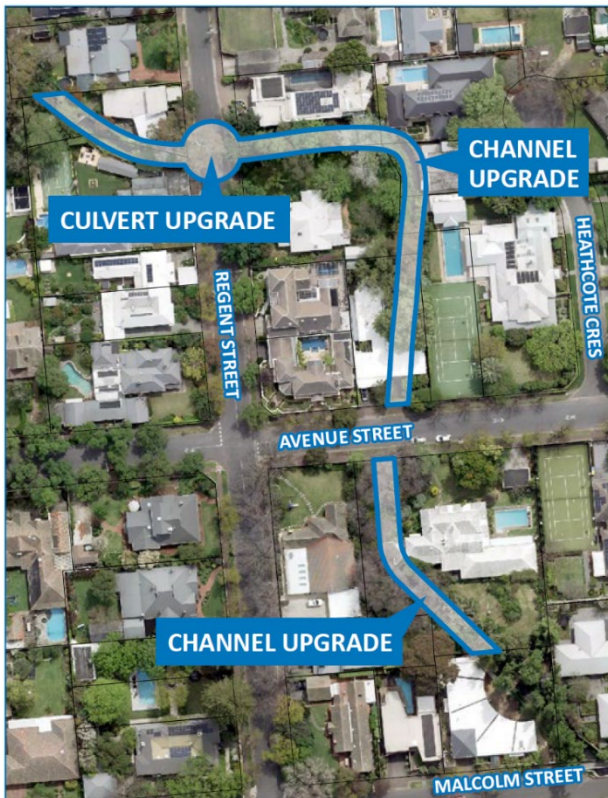
June and July activities will include:

- Continuation of construction for packages 1A & 1C.
- For packages 1B and 1D:
 - One-on-one engagement with property owners that will be directly affected by construction;
 - Liaison with service authorities to determine the scope and cost of relocations required;
 - Preparation of tender documentation and industry briefing.
- Continuation of detailed design of remaining packages.



Upper Brown Hill Creek, Area 3 Millswood

This sub-project involves increasing the size and capacity of the section of Brown Hill Creek from just downstream of Regent Street to just upstream of Avenue Street Millswood, including upgrade of the Regent Street culvert. The creek passes through several privately owned properties and the project team have been engaging closely with owners over the course of the design development.



Key Messages

The channel upgrades are well underway and have progressed well in recent weeks. The precast culverts for the Regent Street crossing are currently being manufactured off-site.

At this stage Camco is proposing to continue the works throughout winter, acknowledging that in the months ahead there will be periods of time when there are flows in the channel and progress will be limited to the overbank areas. The works are being carefully scheduled and protective measures are being deployed to ensure that the works under construction are resilient to flow conditions.

Recent Works and Focus Areas

March to May activities included:

- Execution of Licence Agreements and completion of pre-construction dilapidation inspections with property owners affected by the works.
- Substantial construction progress for channel upgrades.
- Order placed for the precast box culverts required for Regent Street – Culvert Upgrades.
- Regular liaison with the affected property owners regarding construction scheduling and site matters.
- Risk assessment with property owners for alternative fencing options for the upgraded channel.

June and July activities will include:

- Execution of remaining licence agreements.
- Complete the construction of the channel upgrades.
- Planning and notification of road closure for Regent Street culvert upgrades.
- Precast culverts to be manufactured and ready to be delivered to site in early August.
- Continued liaison with the affected property owners regarding construction scheduling and site matters.

Upper Brown Hill Creek, Area 1C Forestville

The Area 1C – Leah Street to Ethel Street reach of Upper Brown Hill Creek is situated in a Council owned drainage corridor (fenced between private properties), except where it passes through 16 and 18 Ethel Street. A proposed development at 18 Ethel Street (currently vacant land) has been approved by Council and will include the construction of 3 townhouses, including one townhouse at the eastern end of the allotment that will span the channel. The height of the existing concrete channel needs to be raised by 0.6 metres, over a length of 175 metres from Leah Street to Ethel Street, to contain the 1% Annual Exceedance Probability (AEP) design flow.

Key Messages

The owner of 18 Ethel Street requested the opportunity to explore alternative design solutions, and this occurred throughout the first half of 2023. As of early June the property owner has re-affirmed their acceptance of the Board's design solution. A revised construction schedule will now be determined with consideration of the broader works to be delivered in Forestville.

Opportunities

The Board passed a resolution approving delivery of these works in September 2021. The works were tendered as a separable portion of the Millswood sub-project but were halted as City of Unley was pursuing an option to establish a covered culvert and shared path in this location. City of Unley has advised this option is not proceeding and the Forestville works therefore formed part of the Millswood detailed tender evaluation.

Commonwealth funding has recently been secured for the remainder of the channel and crossing upgrades through Area 1 – Forestville, which will take place immediately downstream of Area 1C – Leah Street to Ethel Street. There is also a Commonwealth funding submission to upgrade the channel through Forestville Reserve, which would take place immediately upstream of Area 1C. Project scheduling and work packaging is currently being reviewed in this context, and further consultation with Council will be undertaken as part of this review.

