

Kadaltilla

Adelaide Park Lands Authority

Glen Osmond Road, Hutt Road and Park 17 Improvements

**Thursday, 22 August 2024
Board Meeting**

Author:

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Public

Purpose

This report seeks to provide further information in relation to the deliberations for diverting stormwater into vegetated sedimentation/detention basins as discussed at the Kadaltilla / Adelaide Park Lands Authority Board Meeting held on 25 July 2024.

Recommendation

That the Kadaltilla / Adelaide Park Lands Authority:

1. Notes the additional information provided as contained in **Attachment A**, to Item 7.1 on the Agenda for the meeting of the Board of Kadaltilla / Adelaide Park Lands Authority held on 22 August 2024, on the option that was assessed as the most appropriate to install the 1,800 mm culvert to rehabilitate the existing open channel along Glen Osmond Road by conveying the stormwater flow through an underground culvert.
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Implications

Adelaide Park Lands Management Strategy 2015-2025	Adelaide Park Lands Management Strategy 2015-2025 Strategy 2.2 Establish shared walking and cycling paths with safe connections and crossing points linking the City and inner suburbs. Strategy 3.1 Develop an identifiable landscape character for each Park Lands edge.
2023-2028 Strategic Plan	Kadaltilla / Adelaide Park Lands Authority 2023-2028 Strategic Plan Strategic Plan Alignment – Environmental Performance Define, protect and enhance landscape values and design qualities.
City of Adelaide Strategies	Integrated Climate Strategy
Policy	Not as a result of this report.
Consultation	Community engagement will be provided through a project website. Kadaltilla will be provided with further updates as design progresses.
Resource	Not as a result of this report.
Risk / Legal / Legislative	Not as a result of this report.
Design	1. Good Design (ODASA) – Park Lands only 2. Durable; Performance; Sustainable 3. National Heritage Management Plan (NHMP) - NIL The design option was presented to the Kadaltilla meeting held on 25 July 2024.
Opportunities	Not as a result of this report.
City of Adelaide Budget Allocation	Council has allocated \$42,000 for detailed design as part of its 2024/25 Business Plan and Budget process.
Capital Infrastructure Projects	This capital infrastructure project aims to address issues associated with stormwater management, stability of the row of high-value sugar gum trees and impacts to public access and safety due to the eroding steep banks of the existing open channel along Glen Osmond Road. In conjunction with the open channel rehabilitation, several planned asset renewal and upgrade works are also added to the project scope to provide an overall improvement to the area.
Life of Project, Service, Initiative or (Expectancy of) Asset	50 to 100 years asset life expectancy, depending on asset type.
Ongoing Costs (eg maintenance cost)	Not as a result of this report.
Other Funding Sources	No other external funded sources identified.

Discussion

1. At its meeting held on 25 July 2024, Kadaltilla / Adelaide Park Lands Authority (Kadaltilla) resolved:
That the Kadaltilla / Adelaide Park Lands Authority:
 - Endorses the recommendation to proceed with the Glen Osmond Road, Hutt Road and Carriageway Park / Tuthangga (Park 17) Improvements concept as contained in Attachment A to Item 6.1 on the Agenda for the meeting of Kadaltilla / Adelaide Park Lands Authority held on 25 July 2024.*
 - Notes that the Administration will provide further design development updates to Kadaltilla as concept design progresses.*
2. This project will also provide long-term preservation of the existing gum trees and address the current access and safety concerns created by the eroding steep banks of the open channel.
3. In response to the discussion during the Kadaltilla meeting, further information is contained within this paper on the option of diverting stormwater into basins as well as other options considered for the rehabilitation of the existing dilapidated open channel. This paper should be considered along with **Attachment A** for additional information.
4. The preferred concept of installing a 1,800mm culvert is a result of undertaking a comprehensive multi-criteria analysis to compare several options against financial implications, environmental benefits, risks and alignment with the relevant City of Adelaide and Kadaltilla strategies.
5. One of the options considered, utilises Water Sensitive Urban Design (WSUD) principles to divert a portion of incoming stormwater flow through to two new basins in the Park Lands. The creation of basins is expected to provide additional environmental benefits, such as improvements to water quality, biodiversity and greening.
6. However, due to the volume of flow that needs to be conveyed, only a small portion can be diverted to the basins (0.5m³/s out of 3m³/s), and a majority of stormwater flow still needs to be managed through an underground culvert, essentially doubling the hydraulic work compared to the recommended option. Furthermore, the size and location of the basins cannot be expanded to accommodate more stormwater flow or provide greater water treatment benefits due to the limited area of Park 17 itself, and the overlay of trees of greater retention value.
7. Furthermore, the construction of the basins and associated infrastructure will require removal of 65 trees of low-retention value, and that a proposed shared-use path along Hutt Road will have to be elevated much higher to ensure any overspill from the basin is contained within the Park Lands, which in turn results in overfilling within the rootzone of established trees.
8. The basins proposal will involve a significantly higher operational and capital expense (more than double) compared to the recommended option (**refer Attachment A**). Furthermore, the basins also require greater and ongoing maintenance effort and cost to ensure the volumetric and treatment capacity remains appropriate through its asset life.
9. An option to undertake like-for-like channel replacement was considered. However, it was deemed to not meet project objectives for the following reasons:
 - 9.1. The presence of an open channel along the Park Lands Edge where public services such as bus-stops and on-street parking are present, poses risk to access and public safety.
 - 9.2. It will involve extensive excavation works to stabilise the channel, which creates greater risk to the significant gum trees currently impacted by the eroded banks during construction and does not allow preservation of the avenue trees.
 - 9.3. The current capacity of the open channel does not meet Council's level of service for stormwater management.
10. In-light of above the preferred solution to rehabilitate the existing open channel is to convert it into an underground culvert system.
11. This proposal is cost effective, will result in minimal disruption to Park Lands trees, minimise visual impact, improve public safety and maintain the Park Lands character. This option also allows the Administration to explore opportunities for planting of new trees within the vicinity to offset the loss of the eight trees proposed to be removed as part of this work.
12. The Administration will explore avenues for external funding opportunities in the future for installation of basins upon completion of this project.
13. Further design development updates will be provided to Kadaltilla as the design of the endorsed recommended option progresses, noting the previous comments from Kadatillia relating to materiality and use of sustainable products.

14. Prior to this meeting, Kadaltilla were invited to a site tour of the Glen Osmond Road, Hutt Road, and Park 17 Improvements prior to the further consideration on this project.
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Attachments

Attachment A – Option analysis of open channel rehabilitation

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