

December 14, 2011

Stormwater Plan  
City of Unley  
Reply Paid 1  
Unley BC SA 5061



**Conservation  
Council SA**

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**Re: Brownhill Keswick Creek Draft Stormwater Management Plan:**

As the peak conservation body for South Australia, the Conservation Council of South Australia (Conservation Council SA) welcomes the opportunity to comment on the Brownhill Keswick Creek Draft Stormwater Management Plan.

Conservation Council SA is an independent, non-profit and strictly non-party political organization representing over 50 of South Australia's environment and conservation organizations and their supporters. Conservation SA has developed a comprehensive view of environment policy in "South Australia in a Changing Climate: A Blueprint for a Sustainable Future"<sup>1</sup> This document sets out, at a strategic level, policy positions in six key environmental areas, including water, biodiversity, and planning and development issues.

Conservation Council SA opposes the recommended stormwater strategy for this plan. This strategy involves the construction of a 12 metre dam at Site One in Upper Brown Hill Creek, together with supplementary works to prevent channel overtopping. These supplementary works include:

- A high-flow bypass culvert from Malcolm St in Millswood to the Glenelg tramway in Forestville; and
- Upgrading of the Brown Hill Creek channel between Leah St and Anzac Highway, Forestville.

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<sup>1</sup> <http://www.conservationsa.org.au/blueprint.html>

Conservation Council SA holds the position that the exposure to flooding risk is a result of poor planning and development approvals which continue, with greater density of development and encroachment to waterways in areas that will always pose a risk of flooding.

The Capital cost of the engineering based approach at \$133 Million is in the same order as the cost of a 1/100 year flood and is likely to escalate to equal or exceed this cost.

The engineering approach to design a control dam and bypass culvert systems to mitigate a 1/100 year rain event is characterised by design assumptions that may falsely appear to manage risks associated with flooding in a changing climate where with more energy in the climate system, a 1/500 or 1/1000 year event may be increasing in probability to happen in the foreseeable future.

Natural systems are best left as natural as possible. For example, healthy watercourse ecosystems will keep water quality at a high level. In this way, stormwater pollution to coastal waters is minimised.

On the other hand, concrete channels cannot undertake this function. They also lack aesthetic and cultural value. Culverts and hared engineered hydraulic structures can also increase the risks to people who may encounter waterways during flood events providing little opportunity for a low velocity edge and hand holds.

Conservation Council SA can see that there are alternatives to the stormwater strategy recommended by the Plan. These include the following, which would be best in combination.

- Revegetation of the upper catchment. Forested areas increase infiltration and take up of rainfall, thereby preventing runoff and the risk of flooding.
- Construction of a series of stormwater detention ponds that increase natural habitat within the urban environment in the form of vegetated wetlands. These would purify the stormwater as well as store it temporarily, and would have the added advantage of aesthetic and educational value.
- Aquifer storage of purified stormwater, and recovery of water in drier times.
- Protection of homes vulnerable to flooding with levee banks outside the Brown Hill Creek Recreation Park.
- Tightening of planning laws to stop building, densification and further encroachment to waterways in flood prone areas.

Conservation Council SA states strongly that channel clearing is not recommended where would destroy native vegetation, significant trees and the natural ecosystems of the watercourse which purify the creek water. Large scale channel clearing would also encourage erosion and mobilise sediments, leading to turbidity of the creek water and also of the receiving coastal waters. Any channel clearing

activities should be confined to specific point obstructions where there is clear evidence that the removal of the obstruction will increase flow during flooding.

In conclusion, Conservation Council SA opposes the building of a dam in Brown Hill Creek Recreation Park, and any associated culverts or channel "upgrading".

*I would also be happy to meet with you or your representatives to discuss these matters in more detail.*

Please contact me on Ph. 08 82235155 or email at [tim.kelly@conservationsa.org.au](mailto:tim.kelly@conservationsa.org.au) if you have any questions or follow-up in relation to this letter.

Yours sincerely

A handwritten signature in black ink that reads "Tim Kelly". The signature is written in a cursive, slightly slanted style.

Tim Kelly

Chief Executive