

# Flood Mitigation Without a Dam



*QUICK GUIDE*

*No Dam in Brownhill Creek  
Community Action Group*

# The Proposed Dam is a Community Issue

## Support for a No Dam Solution:

- Conservation Council SA
- The Kurna Nation Cultural Heritage Association
- Community Alliance SA
- The Friends of Brownhill Creek
- Mitcham Historical Society
- National Trust of South Australia
- Nature Foundation SA
- Catchment Councils' Agreement
- Numerous smaller community groups
- No Dam Petition with over 8,000 signatures

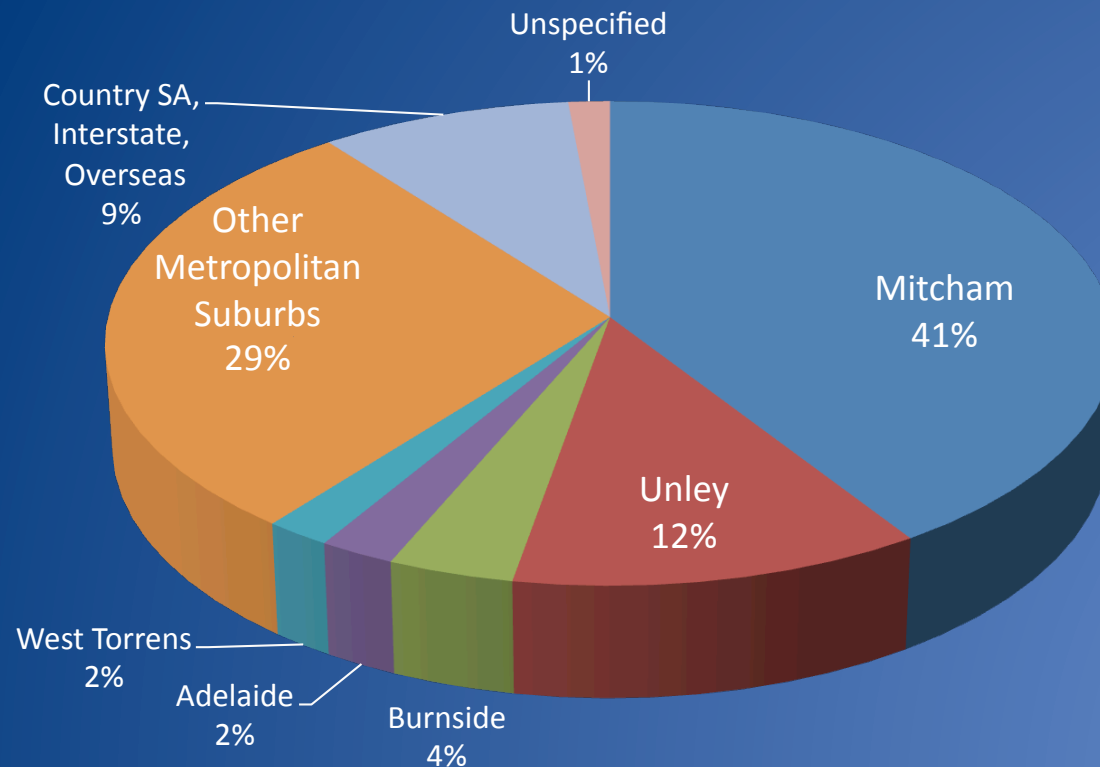


## No Dam in Brownhill Creek Petition 2011/2012 Data Analysis

Total values of signatories to the *No Dam in Brownhill Creek* Petition divided by residential grouping:

### Petition Signatories by Council Region

City of Mitcham	City of Unley	City of Burnside	Adelaide City Council	City of West Torrens	Other suburbs	Country SA; interstate; overseas	Unspecified address	TOTAL Signatures to the petition
3322	970	297	179	155	2361	728	120	8132



# Catchment Council Agreement

- Due to community opposition to the dam the five councils (Adelaide, Burnside, Mitcham, Unley and West Torrens) have agreed to a new plan.
- The \$150 million, 2012 Brown Hill Keswick Creek Stormwater Management Plan, is in two parts.
- Part A contains the bulk of the works (80% of the value of works-\$120m) in the Keswick Creek and Lower Brownhill Creek catchment. These works can proceed.
- Part B contains the Upper Brownhill Creek catchment works above the Glenelg Tramway, including a proposed dam in Brownhill Creek Valley or the No Dam Option 3A works.
- Part B works will be assessed over 12 months and the councils have *“committed to a preference to pursue a feasible and whole of catchment, community supported, No Dam solution”*.

# Recommended Stormwater Management Strategies

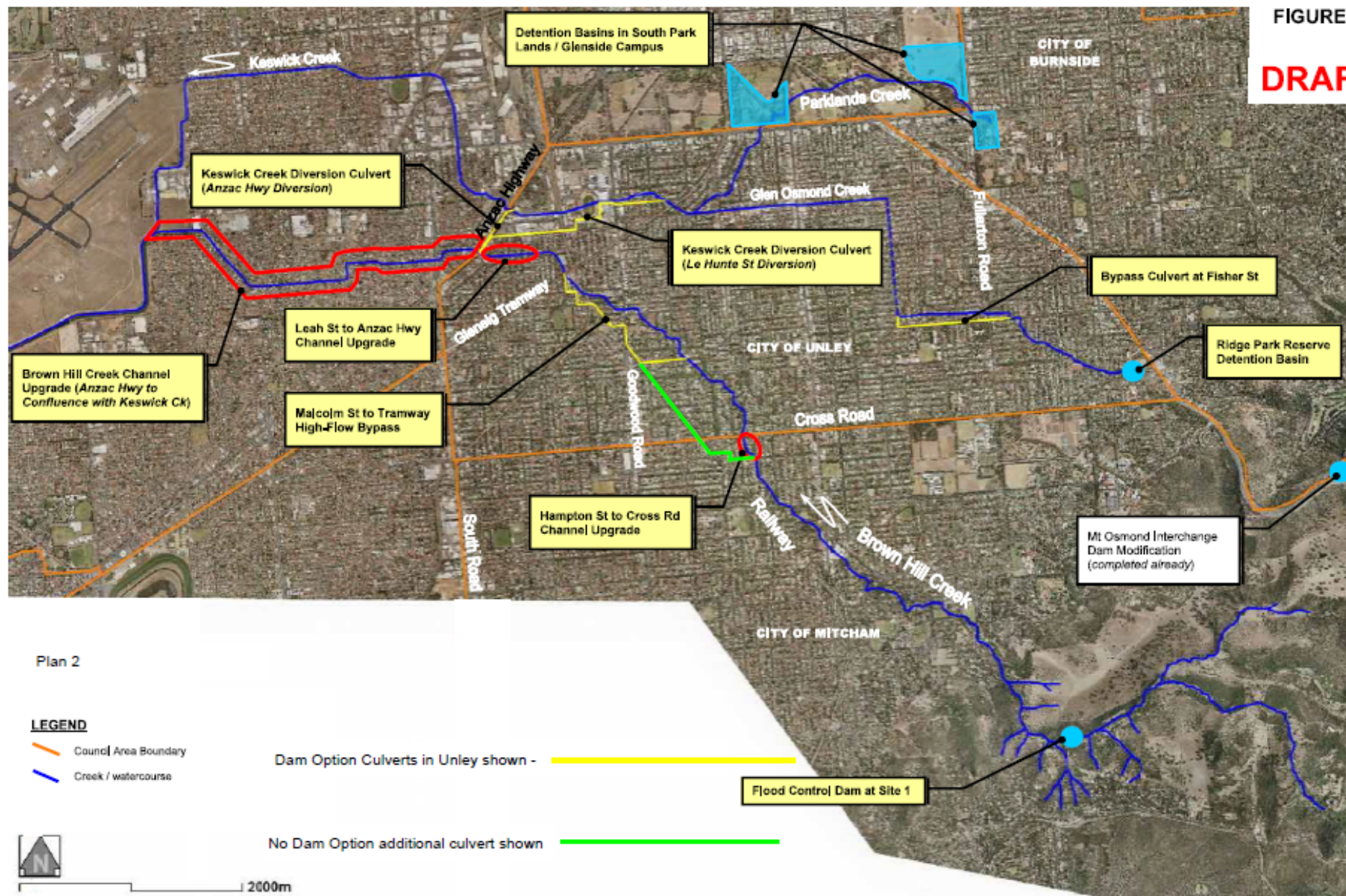
Note: The No Dam Option 3A is now one of the Recommended Stormwater Management Strategies (see page vii, 2012 Brown Hill Keswick Creek Stormwater Management Plan).

## Flood Mitigation Works

COMPONENT	CAPITAL COST (2012 \$ M)		
	2011 DRAFT SMP	OPTION 3 BYPASS CULVERT	OPTION 3A BYPASS CULVERT
<b>Part A Works</b>			
Detention basins in the South Park Lands / Glenside Campus	\$17.6		
Modify Mt Osmond Interchange Dam outlet.	Completed in 2008		
Inline flood detention system in Ridge Park Reserve and stream rehabilitation	\$1.1		
Bypass Culvert at Fisher Street	\$4.5		
Keswick Creek to Brown Hill Creek Diversions at Le Hunte Street and Anzac Highway	\$31.9		
Brown Hill Creek Channel Upgrades between Forestville Reserve and Anzac Highway	\$14.9		
Brown Hill Creek Channel Upgrade from Anzac Highway to the Confluence with Keswick Creek	\$49.1		
<b>Sub-Total Cost</b>	<b>\$119.1</b>	<b>\$119.1</b>	<b>\$119.1</b>
<b>Part B Works</b>			
Flood Control Dam at Brown Hill Creek Recreation Reserve	\$10.8	-	-
Minor Channel Works in Mitcham	\$0.8	\$2.1	\$2.1
Channel upgrade between Hampton Street & Cross Road	\$2.8	\$2.8	\$2.8
Bypass Culvert between Malcolm Street and Forestville Reserve	\$14.1	\$19.0	\$18.1
Bypass Culvert between Hampton Street and Malcolm Street	-	\$11.0	\$8.5
<b>Sub-Total Cost</b>	<b>\$28.5</b>	<b>\$34.9</b>	<b>\$31.5</b>
<b>TOTAL CAPITAL COST</b>	<b>\$147.6</b>	<b>\$154.0</b>	<b>\$150.6</b>

FIGURE 25

DRAFT



# A Dam is Not Required

## No Dam Option 3A

- \$2.1million channel works in the Mitcham area.
- One additional diversion culvert, 1,480m in length, from Hampton Street in Hawthorn to Malcolm Street in Millswood.
- Note that with a dam, there will be 5,270m of diversion culverts in Unley.
- 860m of the No Dam culvert length will be in Unley, but using the rail corridor, not the streets of Unley.
- Worley Parsons state that it is feasible and will have minimal impact on trees.
- Cost estimated to be \$3million more, but should be cost neutral when the dam is properly costed. Study underway.
- With downstream works expanded, a dam is not required. The system will accommodate the flow from both short and long duration rain events.

# Key Points

- A dam in Brownhill Creek will not prevent flooding from short, intense rainfall over the urban catchment.
- In order to do this, downstream channel works, including diversion culverts, must be undertaken.
- Expanding these downstream works eliminates the need for a dam and provides a better Stormwater Management solution.



# Dam Provides No Protection for Short Duration Rain Events (page 76, 2012 SMP)

**TABLE 9 FLOW REDUCTION AFFORDED BY SMALLER DAM AT SITE 1**

LOCATION	PEAK FLOW (m <sup>3</sup> /s)			
	BASE CASE (no dams)		DAM AT SITE 1 (12 m height to spillway)	
	36 Hour Storm	90 Minute Storm	36 Hour Storm	90 Minute Storm
Scotch College	26.1	3.7	19.5	3.7
Belair Road	30.2	18.7	21.7	18.7
Cross Road	35.4	27.8	27.7	27.8
Goodwood Road	37.1	29.4	28.2	29.4
Anzac Highway	38.9	33.9	29.7	33.9

# A Dam Has Not Yet Been Ruled Out

## What Type of Dam?

- Not a small earth dam blending into the environment.
- Extreme Hazard dam involving concrete.  
ANCOLD Guidelines
- The scale, cost and impacts of the proposed dam would be much greater than stated.
- The exact design; environmental impact study; cultural heritage surveys; geo-technical survey (earthquake risk?) only to be carried out if and when the dam is approved!



# Heritage and Environment at Risk of Destruction

- Brownhill Creek Recreation Park
- One of our State's oldest Parks
- Kurna and Colonial Heritage site
- Yurrebilla Trail
- Natural Monument (IUCN)
- Threatened species
- Significant Trees
- On the National Trust *At Risk Register*
- Last state protected section of Creek
- A community resource



## Protect Wirraparinga

The entire Brownhill Creek Valley, including adjoining valleys, provide a gateway and wildlife corridor to The Greater Mount Lofty Parklands. This area is rich with cultural heritage.

# What Can You Do?

- We are the custodians
- Inform and mobilize the community
- Join our group
- Sign and distribute the No Dam Petition
- Support our events
- Contact your local council and MP
- Together we can save the heritage and environment of Brownhill Creek Valley/ Wirraparinga and have **Flood Mitigation Without a Dam**
- We have benefited from past legacies

What legacy do you want to leave for future generations?

[www.brownhillcreek.org](http://www.brownhillcreek.org)

