

Response to the Eastern Courier: “Dam Plan Win”

Incorrect information about the proposed dam in Brownhill Creek Recreation Park continues to be presented publicly and this needs to be addressed.

It is vital that informed decisions are made, rather than decisions based on inaccurate information. We need to get this plan right for the sake of ratepayers/taxpayers, effective stormwater management and the environment.

Messenger Article

In Emma Altschwager's article " Dam Plan Win" (Messenger: Eastern Courier, Wednesday March 21, 2012) she states that " a dam in Brownhill Creek Recreation Park has emerged as the most popular option to reduce flood risk along Brownhill and Keswick creeks". It is claimed that this information comes from the Public Consultation Report on the Draft Brownhill Keswick Creek Stormwater Management Plan.

If you read page vi in the Executive Summary of the Public Consultation Report, it is clear that the flood control dam in Brownhill Creek Recreation Park is the **least popular option** out of all the flood mitigation measures for Brownhill and Keswick Creek catchments (see quote).

"Analysis of the feedback forms received showed that the flood control dam at Brownhill Creek Recreation Park was the **least** supported component of the Draft Plan overall"

"This component of the Draft Plan was rated the lowest by respondents with an interest in each of the councils with the exception of West Torrens where it was rated the second lowest (after the detention basin at Ridge Park Reserve). Levels of support across councils ranged from 22% support and 74% opposition in Mitcham, to 82% support and 7% opposition in West Torrens".

The proposed dam is also described as a 12m high retention dam. This is also incorrect.

It is a **12m spillway, detention dam.**

The entire dam cannot be the spillway(100m across the valley), so in order to direct water over the spillway the walls of the dam will have to be at least 2-3m above the spillway height (freeboard). The overall height of the dam will be at least 14-15m high. If you visit the dam site you will see that this extra height has a dramatic effect on the park.

The engineering firm GHD, in their Preliminary Assessment of Detention Basins on Brownhill Creek 2008, state that " a spillway with three metres of freeboard has been assumed to provide the required spillway capacity". **This would make the overall height of the dam 15m, or five storeys high.**

The dam is not designed to permanently hold water and so it is not a retention dam.

It is specifically designed to deal with a 1 in 100 ARI 36 hour, long duration rain event. A 1.5m diameter pipe in its base will let through a flow rate of 20 cubic metres per second, around the flow rate of the 2005 flood or 1 in 50 ARI event. **It is a detention dam holding water back for a few days, full on average once in 100 years.**

The dam will not provide any protection for flooding in the Keswick Creek catchment (50% of the stormwater catchment), provides no protection for intense short duration rain events and does not even protect against all long duration rain events.

The physical catchment for stormwater above the dam site is only 20% of the total catchment.

The dam should never be promoted as the main part of the plan. It represents only 7% of the costed works.

In the article a Mr Farquhar says that the dam "will be an earthen retention dam". This is in line with constant references made to the public that it will be a small earth dam blending into the environment.

This is totally untrue. GHD in their 2008 report concluded that " **the use of earthen structures is impractical for safe and effective flood management**". "The ANCOLD (Australian National Committee on Large Dams) guidelines form the basis of design standards applicable to any structure that impounds water, however temporarily. Application of these relevant ANCOLD guidelines implies that the structure must be able to accommodate a Probable Maximum Flood, or PMF. Due to the local presence of residents and the high level of risk to the population in the event of a failure..., the dam would be classified as Extreme Hazard."

This has design implications that will add to the scale, cost and impact of the dam. Worley Parsons does at least mention some design implications on page 93 of their 2011 Draft Plan.

The dam would need to be a large, highly engineered structure involving concrete and would dominate Brownhill Creek Recreation Park, scarring it forever.

On our website (www.brownhillcreek.org) under Get The Facts, there is detailed information on the environmental impacts of the proposed dam. **The Friends of Brownhill Creek submission and the DENR Brownhill Creek Recreation Park Management Plan are good starting points.**

The Public Consultation Report

The summary page of the consultation report is misleading because it does not explain the details of the mail out, which led to a skewed pro dam bias. 26,539 summary brochures and feedback forms were delivered, mainly to West Torrens (16,861) and Unley (6,157). Mitcham residents only received 1,055. Despite this a weak response of only 1,241 pro dam was received out of 26,539 delivered, or 4.7%.

In the Mitcham area 74% were opposed to the dam. If the submitted No Dam petition of 4,010 valid stakeholders (users of the park) had been included in the total return figures (as it should have been), then the overall result for the consultation would have been **76% against the dam and 21% pro dam. Our petition now has over 6,000 signatories (over 50% outside Mitcham).**

Conclusion

We support 80% of the works beginning now (below Anzac Highway and in the Keswick Creek catchment), but a realistic extension of time needs to be given, to allow for a fair and transparent assessment of options to the dam in the upper Brownhill Creek catchment and for the project team to sort out channel capacity issues.

Given the overwhelming community opposition to the dam and the negative environmental impact of the dam, viable alternatives should be sought and implemented.

Worley Parsons (in their 2011 Draft Plan) state that "The location of the dam in the Recreation Park will be a sensitive issue".. due to.. "the natural value of the area, particularly in terms of recreational, heritage, environmental, visual and aesthetic aspects".

The dam should be dropped from the plan. It is unacceptable and unnecessary.

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