

The Editor
Hills and Valley Messenger
Adelaide
Dear Sir/Madam,

It's for safety not just for luck

In his letter of 21st December Mayor Trainer attacks Barbara Hardy, the 'No Dams Group' and Mitcham Council. Unfortunately his attacks are misleading and based on an incorrect understanding of the impact of a dam on Brown Hill Creek.

He is correct when he says that it would be a detention dam but very wrong indeed when he calls it "*a grass covered mound*". He needs to understand that it is well nigh impossible to landscape such a structure:

- Trees cannot be planted on a earthen dam embankment, because they could damage the structure
- The spillway would probably be built of concrete, and would be about 50% of the width of the dam
- The upstream face, as recommended in the Report, would be completely covered in riprap (small rock boulders arranged randomly)

He complains about Mitcham delaying the project when he knows full well, if he has read the latest Draft Report, that the 2006 proposals for two large dams, which he espoused, would have left large areas of Unley and West Torrens at risk. To quote "*...no amount of upstream detention would eliminate the overland flow through parts of Unley and across the Highway into West Torrens.*" Of the 7000 properties at risk of flooding in 1 in 100 year floods, 3400 properties would have been left at risk if the 2006 Master Plan had gone ahead. Better design in the 2011 Draft Plan has reduced this to 500. Mayor Trainer may complain but it is certain that many of those who he represents are grateful that they were not saddled with the cost of a project that wouldn't have done the job.

He has failed to understand that the 12m refers to the height at the spillway. Either side of the spillway will be higher embankments, which have to be sufficiently high that they are not overtopped when the spillway is passing the Probable Maximum Flow – about 20 times the flow rate of a 1 in 100 year flood. If the embankments were overtopped, and the dam breached, catastrophic failure would occur and 20,000 people would be at real risk. The required height of the embankments depends on the spillway design. However, GHD who carried out preliminary investigations on the 2006 dams determined that a freeboard of 3m was required. The 3m freeboard above the spillway is for the safety of all those downstream not just '*for luck*' as suggested by Mayor Trainer.

Finally, he should know that a dam is not an essential part of a mitigation scheme. Indeed WorleyParsons considered one in the Draft Plan, and several better alternatives are now under consideration. They have about the same cost and flood protection as the dam option, albeit with some short term impact in the neighbourhoods where culverts would be built.

Like it or not, Mayor Trainer needs to accept that a dam would have a very significant long term adverse impact on the environment of Brown Hill Creek. It is right that a cost effective alternative is sought to complement the other components of the scheme.

Yours faithfully,
Peter Collins.