



## COST BENEFIT ANALYSIS

In the SOUTHBANK case study, seven different “pathways” were examined in an attempt to find the best value for money.

And, because of the high economic value of the area, just about all of the “adaptation pathways” looked at were found to be cost-effective.

Only two pathways looked at (pathways 3 and 6) scored less than 1 in a benefit cost ratio (BCR) analysis. A score of 1 or above is considered to be “economic”.

The five other options scored better than 1 under this test, with the two options suggesting “accommodation” now with “moderate protection” in the future (pathway 4 - suggesting moderate works start in 2040; and pathway 5 - suggesting moderate works start in 2070) topping the CBR scores.

The BCR analysis is important here because, on the other major economic measure of net present value (NPV), pathway 2 (which suggests moderate protection now) tops the chart.

Pathway 2 results in a predicted whopping \$91 million NPV being achieved if moderate work was undertaken now. However, on closer examination, the study shows that it would cost \$50 million worth of works of achieve this. Consequently, the BCR score for this option is 2.82 - considerably less than the 3.63 score of pathway 5 and the 3.41 score of pathway 4.

The report’s authors also downplay the importance of using net present value measures because they were based on “high level estimates of costs”.

The report concludes: “The results show that accommodating inundation may assist in reducing damages to some degree but there would still be very large impacts to the area.”

“The high economic return from the moderate protection pathway suggests that a cost-effective solution

will be to both reduce inundation from the Yarra River and reduce the level of impact from flood events.”

“This may be more cost-effective than larger scale solutions.”

**OUTCOMES OF COST BENEFIT ANALYSIS ON IDENTIFIED ADAPTATION OPTIONS FOR THE SOUTHBANK CASE STUDY**

Adaptation Pathways until 2100	Present Value of Benefits (\$)	Present Value of Costs (\$)	Net Present Value (\$)	Benefit Cost Ratio
1. Accommodate in 2011	9,238,000	3,547,000	5,692,000	2.60
2. Moderate Protection in 2011	141,414,000	50,186,000	91,228,000	2.82
3. Major Protection in 2011	167,304,000	212,373,000	-45,069,000	0.79
4. Accommodate until 2040, then Moderate Protection	81,725,000	23,958,000	57,767,000	3.41
5. Accommodate until 2070 then Moderate Protection	42,623,000	11,744,000	30,878,000	3.63
6. Accommodate until 2040, then Moderate Protection until 2070, then Major Protection	67,770,000	102,032,000	-34,262,000	0.66
7. Accommodate until 2040, then Major Protection	109,366,000	78,614,000	30,752,000	1.39

For further information, contact the Municipal Association of Victoria on 03 9667 5555 email enquiries@mav.asn.au or see www.mav.asn.au/adaptationproject

PROJECT MANAGERS



FUNDED BY



PARTICIPATING PARTNERS



PARTNERS