


Action Plan from Value Management Study
for the BSC Marshalls Creek Flood Plain Management Plan conducted by
VALUE MANAGEMENT PTY LTD Project Strategists June 20, 1995

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Value Management Study
for
Byron Shire Council
Marshalls Creek Flood Plain
Management Plan

20th June, 1995

7.0 PLANNING STAGE

7.1 Action Plan

A series of items were raised during the value management study, that required actions to be carried out after the value management study. These are detailed below.

Table 7 - Action Plan

Item	Action	Resp	Due Date	Resources
Further Models	Model 3 flood outlets together: Wooyung outlet at zero AHD & 75m wide NOS and Holiday Village at 2.3m eroding to 1.9m & 75m wide to be run with Bund and with Canal fully open	SW	31/7/95	
	Run Wooyung outlet on its own with and without the Bund to identify adverse impact of outlet being closed	SW	31/7/95	
Amendment to Report - P.11 History dated 75-80	Consider disputed area: evidence etc. and possibly reword the report	SW	29/6/95	
New Option: Re-level north wall	Model hydraulics, consider sand shifting, wall security, and crest height	SW	31/7/95	
Community Awareness	Develop strategy and include in plan	GC	15/9/95	
Dredging for Option 43/27	Renew existing material and identify gaps	RO'L	31/7/95	
	Investigate planning and policy implications	RO'L	31/7/95	
Option 16	Identify planning/engineering requirements	AJ/RO'L	31/7/95	

SEE RESULTS
 DRAMATIC REDUCTIONS
 NEVER DONE

- 07/08/95
- 1 Wooyung Closure (Existing Conditions)
 - 2 Three Outlets Together (Existing Bund)
 - 3 Three Outlets Together (Partial Bund)
 - 4 Three Outlets Together (Fully Open - No Bund)

	1	2	3	4
87				
EndCrabbs H m	2.878	-189	-188	-185
WooyungRd H m	3.007	-488	-474	-474
ShireBound H m	3.04	-542	-489	-494
U/sKalBund H m	3.04	-597	-494	-489
CapCanal H m	2.595	-5	-35	-42
Billinudge H m	4.013	0	0	0
BalemoDriv H m	2.847	-1	-5	-7
GolfCourse H m	2.502	-9	-34	-42
NewBrighto H m	2.42	-17	-44	-53
OranaBr H m	2.057	-8	-24	-29
Reddings H m	1.749	-1	-8	-9
Flow@HOL Q m3/s	0	10	13	12
Flow@NOS Q m3/s	0	49	55	55
Flow@WOODY Q m3/s	0	100	102	103

100y

EndCrabbs H m	6.1	-219	-210	-209
WooyungRd H m	3.237	-504	-482	-480
ShireBound H m	3.239	-765	-674	-665
U/sKalBund H m	3.239	-758	-674	-665
CapCanal H m	2.719	-53	-132	-144
Billinudge H m	3.923	0	-1	-2
BalemoDriv H m	2.838	1	-29	-39
GolfCourse H m	2.692	-73	-165	-162
NewBrighto H m	2.647	-100	-163	-178
OranaBr H m	2.405	-65	-89	-95
Reddings H m	2.524	1	1	1
Flow@HOL Q m3/s	0	55	47	45
Flow@NOS Q m3/s	0	47	57	58
Flow@WOODY Q m3/s	0	116	123	124

10y

EndCrabbs H m	2.582	-99	-99	-99
WooyungRd H m	2.728	-397	-395	-395
ShireBound H m	2.731	-492	-499	-509
U/sKalBund H m	2.731	-428	-496	-506
CapCanal H m	2.187	-1	26	32
Billinudge H m	3.265	0	0	0
BalemoDriv H m	2.381	0	-7	-13
GolfCourse H m	2.018	0	7	7
NewBrighto H m	1.921	0	-7	-13
OranaBr H m	1.782	0	-3	-6
Reddings H m	1.716	0	-1	-1
Flow@HOL Q m3/s	0	0	0	0
Flow@NOS Q m3/s	0	0	0	0
Flow@WOODY Q m3/s	0	78	69	67

NOTES ON FLOOD OUTLETS AND ENTRANCE TRAINING WALL - 07 August 1995

Flood Outlets(refer to attached tabulation)

The table compares existing conditions with conditions for three different scenarios at Kallaroo Circuit for three floods. The conditions at Kallaroo Circuit are:

- existing bund, with two 900mm diameter pipes,
- partial bund, as it existed from the early 80's up until the recent construction of the new bund,
- fully open, with the waterway area at Kallaroo Circuit being the same width and depth as the rest of the canal.

The assumed condition at Wooyung is an ocean entrance with the connection to the ocean being at 0m AHD (approximately mean sea level) and 75m wide. This means that the ocean can flow inland with an elevated or "storm" tide as can be seen in the previously supplied hydrographs for the 1 in 100 flood. At the other two outlets we have assumed an eroding weir commencing at 2.3m AHD and eroding to 1.9m AHD.

The results show that levels are increasingly drawn down at New Brighton as the Kallaroo Circuit opening is increased. This is because the larger opening allows water to be drawn to the north to the two outlets (NOS and Wooyung). Similarly, the reductions at Wooyung are less for larger Kallaroo Circuit openings because water is being drawn through the Kallaroo Circuit bund from the south.

Lowering of Entrance Training Wall

Our results are only preliminary at this stage, but it does appear that even with very expensive and difficult modifications to the training walls there will only be a benefit of 20 to 50mm at New Brighton. In the preliminary analysis we have assumed that 150m of the northern wall would be lowered to 0m AHD (this is about half the length of the wall). We have assumed that 30% to 40% of the flow would pass through this opening resulting in a reduction in level in the main river of the order of 200mm. We have modified the Marshalls Creek training walls to assist in transmitting the reduction in level into Reddings Bay, and then allowed some dredging in the Bay. Still most of the benefit is lost before reaching Orana Bridge.

We are still testing options and improving model stability, but the likely outcome is that even substantial and expensive modifications to all the training walls will not lead to a significant improvement in flood levels at New Brighton.