APPENDIX

FLOOD MODIFICATION COST ESTIMATES





Cost Estimate

Opt: FM1 - Upper Dolphin

ITEM NO.	DESCRIPTION OF WORK	QUANTITY	UNIT	RATE	COST
1.0	GENERAL AND PRELIMINARIES				
1.1	Site establishment, security fencing, facilities & disestablishment	1	item		
1.2	Provision of sediment & erosion control	1	item		
1.3	Construction setout & survey	1	item		
1.4	Work as executed survey & documentation	1	item		
1.5	Geotechnical supervision, testing & certification	1	item		
	SUBTOTAL (Assumed as 30% of works cost, excluding property purchase)	1		•	37,300
2.0	DEMOLITION, CLEARING AND GRUBBING				
2.1	Clearing & grubbing of vegatated areas (nominal allowance)	600	sq. m	10	6,000
2.2	Strip topsoil & stockpile for re-use (assuming 150mm depth)	90	cu. m	10	900
2.3	Dispose of excess topsoil (nominal 10% allowance)	9	cu. m	60	540
2.4	Tree removal for backyards	1	item	10000	10,000
	SUBTOTAL				17,440
3.0	DRAINAGE				
3.1	Excavate, remove, and dispose of existing pipe section	6	item	5000	30,000
3.2	Supply, bed, lay, joint, and backfill chamber	6	item	6000	36,000
3.3	Supply and connect 2m x 2m grated inlet pit	8	item	2000	16,000
3.4	Supply and connect 1.05m x 1.05m grated inlet pit	2	item	1500	3,000
	SUBTOTAL				85,000
4.0	MINOR LANDSCAPING				
4.1	Repair disturbed areas in accordance with landscape architects requirements (nominal allowance)	600	sq. m	20	12,000
4.2	Replanting of trees in backyards	1	item	10000	10,000
	SUBTOTAL				22,000
	CONSTRUCTION SUB-TOTAL	•			161,740
5.0	CONTINGENCIES				
5.1	50% construction cost				80,870
	CONSTRUCTION TOTAL, excluding GST	г			242,610
	GST	•			24,261
	CONSTRUCTION TOTAL, including GST				266,871

DISCLAIMER

1. This estimate of cost is provided in good faith using information available at this stage. This estimate of cost is not guaranteed.

Cardno (NSW) will not accept liability in the event that actual costs exceed the estimate.

- 1. Estimate does not include Consultant's fees, including design or project management
- 2. Estimate / rates in 2015 dollars and does not allow for inflation



Cost Estimate

Opt: FM6 - Abbott Street

1.1 1.2 1.3 1.4 1.5	GENERAL AND PRELIMINARIES Site establishment, security fencing, facilities & disestablishment Provision of sediment & erosion control	1 1			
1.2 1.3 1.4 1.5	•	1			
1.3 1.4 1.5	Provision of sediment & erosion control		item		
1.4		1	item		
1.5	Construction setout & survey	1	item		
	Work as executed survey & documentation	1	item		
	Geotechnical supervision, testing & certification	1	item		
	SUBTOTAL (Assumed as 15% of works cost, excluding property purchase)				4,8
2.0	DEMOLITION, CLEARING AND GRUBBING				
2.1	Clearing & grubbing of vegatated areas (nominal allowance)	200	sq. m	10	2,0
2.2	Strip topsoil & stockpile for re-use (assuming 150mm depth)	30	cu. m	10	3
2.3	Dispose of excess topsoil (nominal 10% allowance)	3	cu. m	60	
	SUBTOTAL				2,4
3.0	DRAINAGE				
3.1	Excavate, remove, and dispose of existing pipe section	2	item	5000	10,0
3.2	Supply, bed, lay, joint, and backfill chamber	2	item	6000	12,0
3.3	Supply and connect 2m x 2m grated inlet pit	1	item	2000	2,0
3.4	Supply and connect 1.05m x 1.05m grated inlet pit	1	item	1500	1,5
	SUBTOTAL				25,
4.0	MINOR LANDSCAPING				
	Repair disturbed areas in accordance with landscape architects requirements (nominal allowance)	200	sq. m	20	4,0
	SUBTOTAL				4,0
	CONSTRUCTION SUB-TOTAL	<u> </u>			36,7
				<u>'</u>	
5.0	CONTINGENCIES				
5.1	50% construction cost				18,
	CONSTRUCTION TOTAL, excluding GST	г			55,
	GS	Г			5,
	CONSTRUCTION TOTAL, including GS	<u> </u>			60,

DISCLAIMER

1. This estimate of cost is provided in good faith using information available at this stage. This estimate of cost is not guaranteed.

Cardno (NSW) will not accept liability in the event that actual costs exceed the estimate.

- 1. Estimate does not include Consultant's fees, including design or project management
- 2. Estimate / rates in 2015 dollars and does not allow for inflation



Cost Estimate

Opt: FM7 - Bardon Park

EM NO.	DESCRIPTION OF WORK	QUANTITY	UNIT	RATE	COST
1.0	GENERAL AND PRELIMINARIES				
1.1	Site establishment, security fencing, facilities & disestablishment	1	item		
1.2	Provision of sediment & erosion control	1	item		
1.3	Construction setout & survey	1	item		
1.4	Work as executed survey & documentation	1	item		
1.5	Geotechnical supervision, testing & certification	1	item		
	SUBTOTAL (Assumed as 15% of works cost, excluding property purchase)	•			64,3
2.0	DEMOLITION, CLEARING AND GRUBBING				
2.1	Clearing & grubbing of vegatated areas (nominal allowance)	6,500	sq. m	10	65,0
2.2	Strip topsoil & stockpile for re-use (assuming 150mm depth)	975	cu. m	10	9,7
2.3	Dispose of excess topsoil (nominal 10% allowance)	97.5	cu. m	60	5,8
	SUBTOTAL	•			80,6
3.0	EARTHWORKS				
3.1	Excavate basin - cut / fill & regrade to suit new design levels, including disposal / provision of cut / fill	5200	cu. m	40	208,0
	SUBTOTAL			•	208,0
4.0	BASIN DRAINAGE				
4.1	Fill, shape, reinforce, and vegetate overflow bund	1	item	10000	10,0
	SUBTOTAL				10,0
5.0	MINOR LANDSCAPING				
5.1	Repair disturbed areas in accordance with landscape architects requirements (nominal allowance)	6,500	sq. m	20	130,0
	SUBTOTAL				130,0
	CONSTRUCTION SUB-TOTAL				492,9
					,-
6.0	CONTINGENCIES				
6.1	50% construction cost				246,4
	CONSTRUCTION TOTAL, excluding GST				739,3
	GST				73,9
	CONSTRUCTION TOTAL, including GST				813,2

DISCLAIMER:

1. This estimate of cost is provided in good faith using information available at this stage. This estimate of cost is not guaranteed.

Cardno (NSW) will not accept liability in the event that actual costs exceed the estimate.

- 1. Estimate does not include Consultant's fees, including design or project management
- 2. Estimate / rates in 2015 dollars and does not allow for inflation



Cost Estimate

M NO.	DESCRIPTION OF WORK	QUANTITY	UNIT	RATE	cos
1.0	GENERAL AND PRELIMINARIES				
1.1	Site establishment, security fencing, facilities & disestablishment	1	item		_
1.2	Provision of sediment & erosion control	1	item		
1.3	Construction setout & survey	1	item		
1.4	Work as executed survey & documentation	1	item		
1.5	Geotechnical supervision, testing & certification	1	item		
_	SUBTOTAL (Assumed as 15% of works cost, excluding property purchase)				287
2.0	DEMOLITION, CLEARING AND GRUBBING				
2.1	Clearing & grubbing of vegatated areas (nominal allowance)	2,250	sq. m	10	22
2.2	Strip topsoil & stockpile for re-use (assuming 150mm depth)	337.5	cu. m	10	3
2.3	Dispose of excess topsoil (nominal 10% allowance)	33.75	cu. m	60	2
2.4	Pull up and dispose existing road surface	1500	sq.m	35	52
2.5	Disturb promenade walkway and section of Coogee Beach	750	sq.m	50	37
	SUBTOTAL				117
3.0	DRAINAGE	_	_	_	-
3.1	Supply and connect 1.05m x 1.05m grated inlet pit	3	item	1500	4
3.2	Supply, excavate, bed, lay, joint, backfill and provide connections for 1.05m dia. Pipe	75	lin.m	800	60
3.3	Supply, excavate, bed, lay, joint, backfill and provide connections for 1.5m dia. Pipe	160	lin.m	1500	240
3.4	Supply, excavate, bed, lay, joint, backfill and provide connections for 3.3m x 2.1m culvert	150	lin.m	3500	525
3.5	Dewatering of earthworks during laying	1	item	100000	100
	SUBTOTAL				929
4.0	PAVEMENTS				
4.1	Reinstate disturbed road pavement, including demolition and disposal of additional material to provide good jointing	1500	sq. m	200	300
4.2	Reinstate disturbed promenade walkway including sandstone wall	750	sq. m	300	225
	SUBTOTAL				52
5.0	TRAFFIC CONTROL				
5.1	Control of traffic during works / staging	1	item	300000	300
	SUBTOTAL				30
6.0	MINOR LANDSCAPING				
6.1	Repair disturbed areas in accordance with landscape architects requirements (nominal allowance)	2,250	sq. m	20	45
	SUBTOTAL				4
	CONSTRUCTION SUB-TOTAL				2,20
7.0	CONTINGENCIES				
7.1	50% construction cost				1,10
	CONSTRUCTION TOTAL, excluding GST				3,30
	GST				330
CONSTRUCTION TOTAL, including GST					3,63
	CONTROL TO TAE, Including GOT				5,000

This estimate of cost is provided in good faith using information available at this stage. This estimate of cost is not guaranteed.
 Cardno (NSW) will not accept liability in the event that actual costs exceed the estimate.

- 1. Estimate does not include Consultant's fees, including design or project management
- 2. Estimate / rates in 2015 dollars and does not allow for inflation