

Appendix B Cost Estimate

WAGGA WAGGA LEVEE - Cost Estimate
Date: Dec-11

Item	Description	Quantity	Units	Rate	Cost	Sub-total
1	Site					\$150,000
1.1	Establishment	Item		Lump Sum	\$100,000	
1.2	Disestablishment	Item		Lump Sum	\$50,000	
2	Pre-Construction Activities					\$40,000
2.1	CEMP	Item		Lump Sum	\$10,000	
2.2	OHS&R Plan	Item		Lump Sum	\$5,000	
2.3	QA & ITP	Item		Lump Sum	\$5,000	
2.4	Water Management Plan incl. Erosion and Sediment Control Plan	Item		Lump Sum	\$10,000	
2.5	Traffic Management Plan	Item		Lump Sum	\$10,000	
3	Earthworks					
3.1	Borrow Pits					\$20,000
(i)	Clear areas	Item		Lump Sum	\$5,000	
(ii)	Strip topsoil and stockpile	Item		Lump Sum	\$15,000	
3.2	Main Levee					\$2,979,350
(i)	Strip topsoil from levee (100mm) and stockpile	5,800	m ³	\$12.00	\$69,600	
(ii)	Excavation of existing Levee Bank and foundations	23,200	m ³	\$15.00	\$348,000	
(iii)	Prepare foundations	82,000	m ²	\$1.50	\$123,000	
(iv)	Place and compact levee embankment.	71,000	m ³	\$30.00	\$2,130,000	
(v)	Place and trim random fill and topsoil to levee	7,820	m ³	\$15.00	\$117,300	
(vi)	Batter re-vegetation and maintenance	54,700	m ²	\$3.50	\$191,450	
3.3	North Wagga Wagga Levee					\$1,550,760
(i)	Strip topsoil from levee (100mm) and stockpile	4,100	m ³	\$12.00	\$49,200	
(ii)	Excavation of existing Levee Bank and foundations	16,400	m ³	\$15.00	\$246,000	
(iii)	Prepare foundations	42,000	m ²	\$1.50	\$63,000	
(iv)	Place and compact levee embankment.	35,000	m ³	\$30.00	\$1,050,000	
(v)	Place and trim random fill and topsoil to levee	2,700	m ³	\$15.00	\$40,500	
(vi)	Batter re-vegetation and maintenance	29,160	m ²	\$3.50	\$102,060	
3.4	Bank Two Levee					\$582,940
(i)	Strip topsoil from levee (100mm) and stockpile	1,440	m ³	\$12.00	\$17,280	
(ii)	Excavation of existing Levee Bank and foundations	5,760	m ³	\$15.00	\$86,400	
(iii)	Prepare foundations	15,500	m ²	\$1.50	\$23,250	
(iv)	Place and compact levee embankment.	13,200	m ³	\$30.00	\$396,000	
(v)	Place and trim random fill and topsoil to levee	1,350	m ³	\$15.00	\$20,250	
(vi)	Batter re-vegetation and maintenance	11,360	m ²	\$3.50	\$39,760	
3.5	Gravel (DGB 20) on Levee Crest and Ramps	3,380	m ³	\$80	\$270,400	\$270,400
3.6	Roadworks (General)					\$100,000
(i)	Bitumen seal	1,000	m ²	\$20	\$20,000	
(ii)	Gravel Pavement (DGB 20) at raised road crossings	500	m ³	\$100	\$50,000	
(iii)	Road markings and signage	Item		Lump Sum	\$15,000	
(iv)	Fill for Road Raising	2,500	m ³	\$50	\$15,000	
4	Flood Gates					
4.1	Main Levee - Johnston Street					\$175,805
(i)	Flood Gate (Supply and commission)	46.70	m ²	\$3,000	\$140,100	
(ii)	Concrete footing (incl fittings)	21.0	m ³	\$700	\$14,700	
(iii)	End walls (incl fittings)	11.7	m ³	\$1,500	\$17,505	
(iv)	Re-instate road pavement	15	m ³	\$100	\$1,500	
(v)	Bitumen seal	100	m ²	\$20	\$2,000	
4.2	Main Levee - Hammond Avenue					\$199,090
(i)	Flood Gate (Supply and commission)	48.00	m ²	\$3,000	\$144,000	
(ii)	Concrete footing (incl fittings)	16.8	m ³	\$700	\$11,760	
(iii)	End walls (incl fittings)	27.0	m ³	\$1,500	\$40,530	
(iv)	Re-instate road pavement	12	m ³	\$100	\$1,200	
(v)	Bitumen seal	80	m ²	\$20	\$1,600	
4.3	Main Levee - Copland Street					\$269,460
(i)	Flood Gate (Supply and commission)	65.40	m ²	\$3,000	\$196,200	
(ii)	Concrete footing (incl fittings)	25.2	m ³	\$700	\$17,640	
(iii)	End walls (incl fittings)	34.3	m ³	\$1,500	\$51,420	
(iv)	Re-instate road pavement	18	m ³	\$100	\$1,800	
(v)	Bitumen seal	120	m ²	\$20	\$2,400	
4.4	North Levee - Hampden Avenue					\$125,430
(i)	Flood Gate (Supply and commission)	27.00	m ²	\$3,000	\$81,000	
(ii)	Concrete footing (incl fittings)	12.6	m ³	\$700	\$8,820	
(iii)	End walls (incl fittings)	22.3	m ³	\$1,500	\$33,510	
(iv)	Re-instate road pavement	9	m ³	\$100	\$900	
(v)	Bitumen seal	60	m ²	\$20	\$1,200	
4.5	North Levee - Mill Street					\$80,940
(i)	Flood Gate (Supply and commission)	17.60	m ²	\$3,000	\$52,800	

Item	Description	Quantity	Units	Rate	Cost	Sub-total
(ii)	Concrete footing (incl fittings)	12.6	m ³	\$700	\$8,820	
(iii)	End walls (incl fittings)	11.5	m ³	\$1,500	\$17,220	
(iv)	Re-instate road pavement	9	m ³	\$100	\$900	
(v)	Bitumen seal	60	m ²	\$20	\$1,200	
4.6	Bank Two Levee - East Street					\$108,385
(i)	Flood Gate (Supply and commission)	22.50	m ²	\$3,000	\$67,500	
(ii)	Concrete footing (incl fittings)	13.0	m ³	\$700	\$9,100	
(iii)	End walls (incl fittings)	19.8	m ³	\$1,500	\$29,685	
(iv)	Re-instate road pavement	9	m ³	\$100	\$900	
(v)	Bitumen seal	60	m ²	\$20	\$1,200	
5	Spillways					
5.1	Main Levee					\$334,725
(i)	Excavate and trim levee	1,700	m ³	\$18.00	\$30,600	
(ii)	Geotextile	2,750	m ²	\$1.50	\$4,125	
(iii)	Rockfill mattresses (300mm)	2,500	m ²	\$120	\$300,000	
5.2	North Wagga Wagga Levee					\$171,428
(i)	Excavate and trim levee	400	m ³	\$18.00	\$7,200	
(ii)	Geotextile	1,485	m ²	\$1.50	\$2,228	
(iii)	Rockfill mattresses (300mm)	1,350	m ²	\$120	\$162,000	
6	Miscellaneous Levee Works					\$3,563,290
6.1	Sheet pile walls (AZ12-770) - supply & install	11,900	m ²	\$250	\$2,975,000	
6.2	Concrete box culvert (3000 x 900) - supply & install	60	m	\$4,500	\$270,000	
6.3	Rockfill Gabions (Bank Two and Main Levee)	120	m ³	\$200	\$24,000	
6.4	Guard Railing	28.6	m	\$150	\$4,290	
6.5	Extend concrete levee walls	120	m ³	\$2,000	\$240,000	
6.6	Storage shed for floodgate components	Item		Lump Sum	\$50,000	
7	Stormwater Utilities					\$30,000
7.1	Existing Culvert Extensions	Item		Lump Sum	\$20,000	
7.2	Precast Concrete Culvert Headwalls	Item		Lump Sum	\$10,000	
8	Miscellaneous					\$65,000
8.1	Road repairs	Item		Lump Sum	\$25,000	
8.2	Miscellaneous landscaping	Item		Lump Sum	\$20,000	
8.3	Local drainage works	Item		Lump Sum	\$20,000	
9	Site Restoration					\$150,000
9.1	Site Restoration	Item		Lump Sum	\$150,000	
10	Survey and Documentation					\$80,000
10.1	Operations and Maintenance Manual	Item		Lump Sum	\$30,000	
10.2	Work-As-Executed Drawings	Item		Lump Sum	\$50,000	
	Sub-Total					\$11,047,003
	Contingency	30%				\$3,314,101
	TOTAL CONSTRUCTION COST					\$14,361,103
	PROJECT COSTS					
	Investigation and Design	10%				\$1,436,110
	Construction Management	12%				\$1,723,332
	Project Management	9%				\$1,292,499
	TOTAL COST					\$17,520,546