

“Green Hills Dam, Gilbert River AMTD 338.6 km – Concept Design”

Estimated Purpose: Concept Design

Target Audience: Department of Environment and Resource Management (DERM)

Estimated Type and Accuracy: Conceptual (+/- 50 %)

Cost Data Currency Date: July 2010

Option – FSL at EL 253.20 mAHD, 300,000 ML Storage Capacity

Description	Unit	Quantity	Rate	Amount	Contingency	
					%	Amount
DIRECT COSTS						
Preliminary				\$ 1,936,536	-	\$ 580,961
Plant mobilisation excl RCC and batch plant	item	1	\$ 750,000	\$ 750,000	30%	\$ 225,000
Plant demobilisation excl RCC and batch plants	item	1	\$ 750,000	\$ 750,000	30%	\$ 225,000
Erosion and sediment control works	item	1	\$ 236,536	\$ 236,536	30%	\$ 70,961
Environmental protection and monitoring	item	1	\$ 200,000	\$ 200,000	30%	\$ 60,000
Clear Site and Inundated Area				\$ 6,641,715		\$ 1,328,343
Clear site and 50% of inundated area	ha	1,500	\$ 978	\$ 1,466,715	20%	\$ 293,343
Mulching (25% of cleared area)	ha	750	\$ 2,000	\$ 1,500,000	20%	\$ 300,000
Pit burning (75% of cleared area)	ha	2,250	\$ 1,500	\$ 3,375,000	20%	\$ 675,000
Fauna/Flora Spotters (including relocation)	ha	3,000	\$ 100	\$ 300,000	20%	\$ 60,000
Site Access Road Construction and Maintenance				\$ 5,516,667		\$ 1,384,167
Upgrade and maintenance of construction site access road	km	25	\$ 216,667	\$ 5,416,667	25%	\$ 1,354,167
Rehabilitate main access road to damsite at end of construction	item	1	\$ 50,000	\$ 50,000	30%	\$ 15,000
Rehabilitation of local authority roads at end of construction	item	1	\$ 50,000	\$ 50,000	30%	\$ 15,000
Road Relocations / Raisings in Reservoir Aea				\$ 20,000,000		\$10,000,000

Access Road	item	1	\$ 20,000,000	\$ 20,000,000	50%	\$ 10,000,000
Supply of Concrete Aggregates						
Assume on-site quarry				\$ 1,050,000		\$ 315,000
Removal of overburden	item	1	\$ 150,000	\$ 150,000	30%	\$ 45,000
Quarry development	item	1	\$ 450,000	\$ 450,000	30%	\$ 135,000
Diesel Power Supply to crusher	item	1	\$ 450,000	\$ 450,000	30%	\$ 135,000
Construction and Maintenance of Site Haul Roads				\$ 6,380,000		\$ 1,914,000
Quarry - Sand and Gravel Quarry Access Road	km	10	\$ 200,000	\$ 2,000,000	30%	\$ 600,000
Construction of diversion channel temporary bridges	item	2	\$ 1,080,000	\$ 2,160,000	30%	\$ 648,000
Construction of site haul roads	km	5	\$ 350,000	\$ 1,750,000	30%	\$ 525,000
Maintenance of haul roads	item	1	\$ 470,000	\$ 470,000	30%	\$ 141,000
Concrete Plant Operations				\$ 1,565,020		\$ 395,506
Mobilise/Demobilise water treatment plant	item	1	\$ 100,000	\$ 100,000	30%	\$ 30,000
Mobilise/Demobilise sand screening plant	item	1	\$ 100,000	\$ 100,000	30%	\$ 30,000
Mobilise/Demobilise crushing plant	item	1	\$ 250,000	\$ 250,000	30%	\$ 75,000
Mobilise/Demobilise concrete plant	item	1	\$ 150,000	\$ 150,000	30%	\$ 45,000
Mobilise/Demobilise testing lab	item	1	\$ 20,000	\$ 20,000	30%	\$ 6,000
Chilling plant	item	1	\$ 60,000	\$ 60,000	30%	\$ 18,000
Aggregate Stockpile cooling	m ³	230,000	\$ 0	\$ 69,000	30%	\$ 20,700
Aggregate Wash Plant	m ³	230,000	\$ 0	\$ 34,500	30%	\$ 10,350
Diesel Power Supply to Batch Plant	item	1	\$ 740,000	\$ 740,000	20%	\$ 148,000
Clean up and rehab plant sites	item	1	\$ 41,520	\$ 41,520	30%	\$ 12,456
Diversion and Care of River				\$ 2,894,272		\$ 723,568
Construction of temporary cofferdam for right bank access	m ³	5,500	\$ 15	\$ 82,500	25%	\$ 20,625
Excavation and disposal of OTR from diversion channel	m ³	108,000	\$ 5	\$ 556,200	25%	\$ 139,050
Excavation and stockpile of rock from diversion channel	m ³	27,000	\$ 15	\$ 395,550	25%	\$ 98,888
Coffer Dam Foundation Excavation	m ³	17,250	\$ 15	\$ 258,750	25%	\$ 64,688
Construction of cofferdams (misc fill)	m ³	25,100	\$ 15	\$ 376,500	25%	\$ 94,125
Construction of cofferdams (clay core)	m ³	7,610	\$ 50	\$ 380,500	25%	\$ 95,125
Construction of	m ³	2,000	\$ 50	\$ 100,000	25%	\$ 25,000

cofferdams (filter zone)						
Removal of cofferdams	m ³	31,400	\$ 15	\$ 462,522	25%	\$ 115,631
Allowance for maintenance of coffer dams	item	1	\$ 50,000	\$ 50,000	25%	\$ 12,500
Creek diversion	m ³	45,000	\$ 5	\$ 231,750	25%	\$ 57,938
Foundation Excavation and Preparation				\$ 6,820,722		\$ 1,705,181
Excavate and dispose material to dam foundation (OTR)	m ³	151,250	\$ 7	\$ 1,123,788	25%	\$ 280,947
Excavate and dispose material to dam foundation (rock)	m ³	37,810	\$ 25	\$ 956,215	25%	\$ 239,054
Detailed excavation	m ³	20,000	\$ 145	\$ 2,900,000	25%	\$ 725,000
Clean foundation supporting concrete structures	m ²	12,750	\$ 83	\$ 1,060,928	25%	\$ 265,232
Seam treatment / dental concrete	m ³	500	\$ 360	\$ 179,810	25%	\$ 44,953
Inlet and outlet channel excavation (OTR)	m ³	29,620	\$ 5	\$ 133,290	25%	\$ 33,323
Inlet and outlet channel excavation (Rock)	m ³	19,750	\$ 24	\$ 466,693	25%	\$ 116,673
Foundation Grouting				\$ 1,092,167		\$ 327,650
Supply, form and place concrete for grout cap	m ³	1,315	\$ 322	\$ 423,338	30%	\$ 127,001
Reinforcement for grout cap	tonne	20	\$ 4,611	\$ 90,955	30%	\$ 27,286
Drill and wash grout holes	m	3,400	\$ 28	\$ 93,874	30%	\$ 28,162
Supply and install standpipes	no	182	\$ 143	\$ 26,001	30%	\$ 7,800
Hook ups and water pressure tests	no	310	\$ 300	\$ 93,000	30%	\$ 27,900
Hook ups for grouting	no	310	\$ 300	\$ 93,000	30%	\$ 27,900
Pressure grouting	bags	13,600	\$ 20	\$ 272,000	30%	\$ 81,600
RCC Dam				\$ 42,984,064		\$ 12,895,219
Mobilise/Demobilise RCC Luffing Conveyor	item	1	\$ 2,200,000	\$ 2,200,000	30%	\$ 660,000
Set up and remove RCC Conveyor	no.	1	\$ 100,000	\$ 100,000	30%	\$ 30,000
Trial Mixes	item	1	\$ 320,000	\$ 320,000	30%	\$ 96,000
Mobilisation of all RCC Construction Equipment to site	item	1	\$ 165,000	\$ 165,000	30%	\$ 49,500
Demobilisation of all RCC Construction Equipment from the site	item	1	\$ 200,000	\$ 200,000	30%	\$ 60,000
RCC in dam wall (incl allowance for backfill of diversion channel)	m ³	225,000	\$ 167	\$ 37,635,750	30%	\$ 11,290,725
RCC allowance for filling diversion channel	m ³	700	\$ 190	\$ 133,000	30%	\$ 39,900
Gallery - Cast Insitu Floor Slab & precast units	m	547	\$ 2,050	\$ 1,121,350	30%	\$ 336,405
Gallery - Formwork	m ²	915	\$ 266	\$ 243,555	30%	\$ 73,066
Drill foundation & ceiling gallery drain holes	m	5,125	\$ 81	\$ 413,998	30%	\$ 124,199
Waterstops (incl	m	3,595	\$ 37	\$ 132,152	30%	\$ 39,646

abutments, spillway and apron slab)						
Backfill to RCC structure on left and right abutments	m ³	13,541	\$ 17	\$ 234,259	30%	\$ 70,278
Miscellaneous Metalwork, handrails etc	Item	1	\$ 20,000	\$ 20,000	30%	\$ 6,000
Instrumentation (VWP, thermocouples, survey points, joint meters, V-notch weirs)	Item	1	\$ 65,000	\$ 65,000	30%	\$ 19,500
Conventional Concrete (CVC) to Spillway and sidewalls				\$ 5,524,817		\$ 1,381,204
Stilling Basin Floor - Supply and place CVC	m ³	4,415	\$ 287	\$ 1,268,783	25%	\$ 317,196
Stilling Basin Floor - Reinforcement	tonne	181	\$ 3,375	\$ 610,944	25%	\$ 152,736
Stilling Basin Floor - Drill and wash anchor bar holes in rock	m	6,280	\$ 49	\$ 306,590	25%	\$ 76,647
Stilling Basin Floor - Supply, install and grout anchor bars in rock	tonne	62	\$ 5,542	\$ 343,573	25%	\$ 85,893
Spillway Crest - Supply and place CVC	m ³	2,185	\$ 590	\$ 1,288,669	25%	\$ 322,167
Spillway Crest - Reinforcement	tonne	44	\$ 6,281	\$ 274,488	25%	\$ 68,622
Spillway Training Walls - Supply and place CVC (crest to apron slab)	m ³	565	\$ 762	\$ 430,683	25%	\$ 107,671
Spillway Training Walls - Reinforcement	tonne	27	\$ 3,814	\$ 103,447	25%	\$ 25,862
Spillway Training Walls - Supply, install and grout anchor bars into abutment monos	tonne	6	\$ 5,542	\$ 33,249	25%	\$ 8,312
Stilling Basin Gravity Walls - Supply and place CVC	m ³	1,230	\$ 626	\$ 770,558	25%	\$ 192,640
Stilling Basin Gravity Walls - Reinforcement	tonne	25	\$ 3,814	\$ 93,834	25%	\$ 23,459
Outlet Works U/S & D/S - Concrete Structures				\$ 10,880,923		\$ 2,720,231
Intake Tower - Supply and place CVC	m ³	5,075	\$ 645	\$ 3,272,614	25%	\$ 818,153
Intake Tower - Reinforcement	tonne	766	\$ 3,375	\$ 2,586,424	25%	\$ 646,606
Outlet Conduits - Concrete Encasement	m ³	612	\$ 221	\$ 135,001	25%	\$ 33,750
Outlet Conduits - Reinforcement	tonne	28	\$ 3,375	\$ 92,950	25%	\$ 23,238
D/S Outlet - Supply and place CVC to floor and walls	m ³	3,906	\$ 691	\$ 2,698,460	25%	\$ 674,615
D/S Outlet - Reinforcement to floor and walls	tonne	590	\$ 3,375	\$ 1,990,654	25%	\$ 497,664
D/S Outlet - Drill and Wash (D&W) anchor bar holes for floor area	m	867	\$ 49	\$ 42,327	25%	\$ 10,582
D/S Outlet - Supply, install and grout anchor bars for floor area	tonne	7	\$ 6,073	\$ 42,512	25%	\$ 10,628
D/S Outlet - D&W	m	260	\$ 49	\$ 12,693	25%	\$ 3,173

anchor bar holes for fish entrance channel retaining wall						
D/S Outlet - Supply, install and grout anchor bars for fish entrance retaining wall	tonne	1	\$ 6,073	\$ 7,288	25%	\$ 1,822
Outlet Works U/S & D/S - Metalwork				\$ 2,002,310		\$ 600,693
Intake Tower - Supply, and align screen, baulk and gate guides and seals	tonne	20	\$ 13,765	\$ 275,300	30%	\$ 82,590
Intake Tower - Bulkhead Gate	tonne	2	\$ 10,802	\$ 21,605	30%	\$ 6,481
Intake Tower - Supply and install selective withdrawal baulks (18 closed, 2 open, 2 collapsable)	tonne	26	\$ 11,286	\$ 287,781	30%	\$ 86,334
Intake Tower - Supply and install Fish Screens - (20)	tonne	19	\$ 12,481	\$ 237,135	30%	\$ 71,140
Intake Tower - Supply and install Trash Screens (18)	tonne	10	\$ 12,481	\$ 124,808	30%	\$ 37,442
Intake Tower - Supply and install Travelling overhead crane	item	1.0	\$ 600,000	\$ 600,000	30%	\$ 180,000
Outlet Conduits - Supply and install Dn 1400 MSCL Pipe - 16 mm wall	tonne	47	\$ 4,647	\$ 218,408	30%	\$ 65,522
Outlet Conduits - Supply and install Dn 800 MSCL Pipe - 10 mm wall (fishway pipe)	tonne	12	\$ 7,660	\$ 91,914	30%	\$ 27,574
D/S Outlet - Supply and install valve house pipe specials	tonne	2	\$ 12,680	\$ 25,360	30%	\$ 7,608
Supply and install covers, ladders, platforms and handrails	tonne	12	\$ 10,000	\$ 120,000	30%	\$ 36,000
Outlet Works D/S - Mechanical and Electrical				\$ 2,938,000		\$ 881,400
SDC Valve - Dn 1250/1000 - c/w actuator - Supply and install	each	2	\$ 600,000	\$ 1,200,000	30%	\$ 360,000
Butterfly Valve - Dn 1400 - c/w hydraulic ram, c/weight & actuator - Supply and install	each	2	\$ 220,000	\$ 440,000	30%	\$ 132,000
Fish Lift - Butterfly Valve - Dn 600 - c/w actuator - Supply and install	each	1	\$ 95,000	\$ 95,000	30%	\$ 28,500
Fish Lift - Regulating Valve - Dn 600 - Supply and install	each	1	\$ 80,000	\$ 80,000	30%	\$ 24,000
Fish Lift - Gate Valve - Dn 300 - Supply and install	each	1	\$ 55,000	\$ 55,000	30%	\$ 16,500
Fish Lift - Regulating Valve - Dn 300 - Supply and install	each	1	\$ 48,000	\$ 48,000	30%	\$ 14,400
Fish Lock - Gate Valve - Dn 800 - Supply and install	each	1	\$ 110,000	\$ 110,000	30%	\$ 33,000
Fish Lock - Gate Valve - Dn 400 - Supply and	each	2	\$ 60,000	\$ 120,000	30%	\$ 36,000

install						
Fish Lock - Regulating Valve - Dn 400 - Supply and install	each	2	\$ 60,000	\$ 120,000	30%	\$ 36,000
Fish Lock - Gate Valve - Dn 350 - Supply and install	each	2	\$ 50,000	\$ 100,000	30%	\$ 30,000
Fish Lock - Regulating Valve - Dn 350 - Supply and install	each	2	\$ 50,000	\$ 100,000	30%	\$ 30,000
Supply and install various small valves and pipework	item	1	\$ 50,000	\$ 50,000	30%	\$ 15,000
Supply and install valve house hydraulics and electrical items	item	1	\$ 200,000	\$ 200,000	30%	\$ 60,000
Outlet works commissioning	item	1	\$ 220,000	\$ 220,000	30%	\$ 66,000
Fish Lift				\$ 7,182,294		\$ 2,086,227
Concrete to intake channels, hopper chamber and valve pit	m ³	1,357	\$ 313	\$ 424,361	25%	\$ 106,090
Reinforcement to intake channels, hopper chamber and valve pit	tonne	205	\$ 4,611	\$ 944,857	25%	\$ 236,214
Fishway attraction flow diffusers	item	1	\$ 500,000	\$ 500,000	30%	\$ 150,000
Fish traps	item	1	\$ 1,500,000	\$ 1,500,000	30%	\$ 450,000
Fish lift hopper (4.5 t tare weight, 7,000 L capacity)	item	1	\$ 800,000	\$ 800,000	30%	\$ 240,000
Overhead crane at dam crest (15 t capacity, 45 KW) - Hopper hoist	item	1	\$ 2,000,000	\$ 2,000,000	30%	\$ 600,000
Hopper tracks	item	1	\$ 500,000	\$ 500,000	30%	\$ 150,000
Attraction pipework	item	1	\$ 50,000	\$ 50,000	30%	\$ 15,000
Fish tag detection equipment	item	1	\$ 100,000	\$ 100,000	30%	\$ 30,000
Control system (including fish lock)	item	1	\$ 350,000	\$ 350,000	30%	\$ 105,000
Commissioning (including fish lock)	item	1	\$ 13,076	\$ 13,076	30%	\$ 3,923
Fish Lock				\$ 675,360		\$ 202,608
Entrance weir gates and hydraulic actuators	item	1	\$ 600,000	\$ 600,000	30%	\$ 180,000
Supply and install MSCL specials	tonne	2	\$ 12,680	\$ 25,360	30%	\$ 7,608
Miscellaneous assoc. pipework	item	1	\$ 50,000	\$ 50,000	30%	\$ 15,000
Permanent Site Services				\$ 6,505,000		\$5,601,500
Provision for on-site permanent buildings	item	1	\$ 750,000	\$ 750,000	50%	\$ 375,000
Permanent Electric power supply	item	1	\$ 5,000,000	\$ 5,000,000	100%	\$ 5,000,000
Telephone and data transmission facilities	item	1	\$ 75,000	\$ 75,000	30%	\$ 22,500
Potable water supply	item	1	\$ 30,000	\$ 30,000	30%	\$ 9,000
Sewage treatment facility	item	1	\$ 50,000	\$ 50,000	30%	\$ 15,000
Security - provision of fencing, guard rails and	item	1	\$ 150,000	\$ 150,000	30%	\$ 45,000

security gates						
Roads - Access road to opposite bank - incl drainage and bank protection	item	1	\$ 300,000	\$ 300,000	30%	\$ 90,000
Roads - Access road to Outlet Works - incl drainage and bank protection	item	1	\$ 150,000	\$ 150,000	30%	\$ 45,000
Upstream Impacts				\$ 500,000		\$ 250,000
SWER Powerline Relocation to outside ponded area	item	1	\$ 500,000	\$ 500,000	50%	\$ 250,000
DIRECT COSTS - Sub-Total				\$ 133,089,866		\$45,293,457
INDIRECT COSTS						
Site Overheads			\$ 0	\$ 24,486,728		\$7,293,518
Establishment of On Site Laboratory	item	1	\$ 54,901	\$ 54,901	30%	\$ 16,470
Project Control Testing	item	1	\$ 550,820	\$ 550,820	30%	\$ 165,246
Site Management	item	1	\$ 13,801,560	\$ 13,801,560	30%	\$ 4,140,468
Travel costs excluding site labour FIFO	item	1	\$ 2,238,045	\$ 2,238,045	30%	\$ 671,414
Attendant Labour - Site Office & Security	item	1	\$ 1,279,731	\$ 1,279,731	30%	\$ 383,919
Survey	item	1	\$ 2,229,804	\$ 2,229,804	30%	\$ 668,941
Recruitment and advertising	item	1	\$ 80,000	\$ 80,000	30%	\$ 24,000
Site Office/workshop mob/demob	item	1	\$ 1,107,345	\$ 1,107,345	30%	\$ 332,204
Site Office - access roads, office set-up area, fencing and security	item	1	\$ 1,000,000	\$ 1,000,000	30%	\$ 300,000
Site Office - clear office set up area	item	1	\$ 150,000	\$ 150,000	30%	\$ 45,000
Site Office - Diesel generator power supply	item	1	\$ 525,000	\$ 525,000	20%	\$ 105,000
Office changes	item	1	\$ 558,522	\$ 558,522	30%	\$ 167,557
Communications mob/demob	item	1	\$ 100,000	\$ 100,000	30%	\$ 30,000
Comms costs	item	1	\$ 811,000	\$ 811,000	30%	\$ 243,300
Environmental				\$ 5,838,300		\$ 1,801,490
Development of environmental controls and mitigation measures resulting from EIS	item	1	\$ 250,000	\$ 250,000	50%	\$ 125,000
WHS costs	item	1	\$ 1,234,900	\$ 1,234,900	30%	\$ 370,470
Insurances	item	1	\$ 2,700,000	\$ 2,700,000	30%	\$ 810,000
Wet weather allowance	item	1	\$ 1,653,400	\$ 1,653,400	30%	\$ 496,020
Construction Camp				\$ 15,280,796		\$4,584,239
Mobilisation and Establishment	item	1	\$ 3,158,000	\$ 3,158,000	30%	\$ 947,400
Camp charges (including meals)	item	1	\$ 6,180,670	\$ 6,180,670	30%	\$ 1,854,201

Water, sewage plant mob/demob	item	1	\$ 800,000	\$ 800,000	30%	\$ 240,000
Water sewage running costs	item	1	\$ 94,126	\$ 94,126	30%	\$ 28,238
Camp disestablishment and demobilisation	item	1	\$ 790,000	\$ 790,000	30%	\$ 237,000
Diesel generator power supply	item	1	\$ 4,258,000	\$ 4,258,000	30%	\$ 1,277,400
Sub-Total				\$ 45,605,824		\$13,679,247
ECI Contractor Offsite O/head & profit						
Profit and offsite overheads	%	10%		\$ 17,869,569	30%	\$ 5,360,871
Total Construction Cost (including Direct, Indirect and ECI charge)				\$ 196,565,259		\$64,333,575
OWNER COSTS						
Design						
Concept/Preliminary Design (inc flood hydrology, num hyd modeling, risk/value eng)	item	1	\$ 2,000,000	\$ 2,000,000	15%	\$ 300,000
Yield hydrology concept and preliminary IQQM modelling	item	1	\$ 350,000	\$ 350,000	10%	\$ 35,000
Preliminary geotechnical and materials investigation	item	1	\$ 3,000,000	\$ 3,000,000	10%	\$ 300,000
Additional geotechnical investigation from Prelim Design to ECI	item	1	\$ 2,000,000	\$ 2,000,000	20%	\$ 400,000
Final Detailed Design - RCC Mix designs, Thermal Analysis, Lab testing	%	3.0%		\$ 5,896,958	30%	\$ 1,769,087
Hydraulic model study	item	1	\$ 800,000	\$ 800,000	30%	\$ 240,000
	item	1	\$ 500,000	\$ 500,000	30%	\$ 150,000
ECI Costs						
Documentation to award	item	1	\$ 300,000	\$ 300,000	30%	\$ 90,000
Participation in ECI process (2 teams contractors @ \$500,000 plus client costs)	item	1	\$ 1,300,000	\$ 1,300,000	30%	\$ 390,000
Engagement of Facilitator	item	1	\$ 50,000	\$ 50,000	30%	\$ 15,000
Industry briefings	item	1	\$ 20,000	\$ 20,000	30%	\$ 6,000
Relationship Contracting Drivers						
KRA Pool (seed amount)	item	1	\$ 1,500,000	\$ 1,500,000	30%	\$ 450,000
Risk Pool (to be	item	1	\$ 5,000,000	\$ 5,000,000	30%	\$ 1,500,000

determined as outcome of risk w/shop)						
Environmental Impact Statement and Approval						
Environmental baseline assessments	item	1	\$ 200,000	\$ 200,000	5%	\$ 10,000
EIS approval process	item	1	\$ 3,000,000	\$ 3,000,000	15%	\$ 450,000
Allowance for Establishment/Protection of Vegetation Offset Areas	item	1	\$ 2,500,000	\$ 2,500,000	50%	\$ 1,250,000
Gaining of State and Local Govt Approvals following EIS approval	item	1	\$ 350,000	\$ 350,000	50%	\$ 175,000
Indigenous Affairs Management (should include all assoc costs)						
CHMP development	item	1	\$ 1,400,000	\$ 1,400,000	15%	\$ 210,000
CHMP Agreed Recommendation mitigation	item	1	\$ 2,000,000	\$ 2,000,000	30%	\$ 600,000
CH Monitoring/Induction during dam construction	item	1	\$ 150,000	\$ 150,000	50%	\$ 75,000
Native Title ILUA development	item	1	\$ 700,000	\$ 700,000	10%	\$ 70,000
Native Title compensation	item	1	\$ 1,500,000	\$ 1,500,000	50%	\$ 750,000
Land Acquisition						
Property purchase, demolition cost, survey, legal fee, etc	item	1	\$ 20,000,000	\$ 20,000,000	50%	\$ 10,000,000
Water Entitlement Acquisition/Compensation						
Negotiation and Valuation of affected d/s water entitlements	item	1	\$ 150,000	\$ 150,000	30%	\$ 45,000
Compensation Estimate (to be negotiated with affected d/s water harvesters)	item	1	\$ 2,000,000	\$ 2,000,000	30%	\$ 600,000
Purchase of unallocated water	item	1	\$ 1,000,000	\$ 1,000,000	30%	\$ 300,000
Telecommunications Relocation						
Repeater Stations	item	1	\$ 1,000,000	\$ 1,000,000	30%	\$ 300,000
Owners costs associated with Telstra mobiles solution	item	1	\$ 500,000	\$ 500,000	30%	\$ 150,000
Community Consultation						
Community Consultation	item	1	\$ 400,000	\$ 400,000	10%	\$ 40,000
OTHER OWNER COSTS						
Water Resource Plan compliance	item	1	\$ 300,000	\$ 300,000	50%	\$ 150,000
Principals Insurance	%	0.75%		\$ 1,474,239	30%	\$ 442,272

Portable long service levee and WHS fee	%	0.35%		\$ 687,978	30%	\$ 206,394
Commissioning and Handover Costs	%	0.50%		\$ 982,826	30%	\$ 294,848
Owners Costs (excl contingency)				\$ 63,012,002		\$21,763,601
Total Construction and Owners Costs (excl contingency)				\$ 259,577,261		
Escalation to construction (Direct+Indirect Costs)			0%	\$ -		
Total Construction, Owners Costs and Escalation Costs				\$ 259,577,261		
Contingency			33%	\$ 86,097,176		
Total Project Cost				\$ 345,674,436		