

Mangawhai Wastewater Plant

17/09/2020

Andrew Springer

Rev 1

Item	Description	Unit	Quantity	Rate	Total
1	Preliminary and General				\$ 275,156.83
1.1	P&G	Ls	20%	\$ 1,350,784.13	\$ 270,156.83
1.2	Quality plan	Ls	1	\$ 5,000.00	\$ 5,000.00
2	Earthworks and Clearing				\$ 82,470.00
2.1	Cut to waste for balance tank including both access platform and return pump	m3	260	\$ 45.00	\$ 11,700.00
2.2	Cut to waste for elevated screen and flow split base slab	m3	64	\$ 45.00	\$ 2,880.00
2.3	Cut to waste for odour control base slab	m3	10	\$ 45.00	\$ 450.00
2.4	Import and fill with river sand For all concrete slab bedding (0.5m)	m3	167	\$ 250.00	\$ 41,750.00
2.5	supply and lay 500mm thick crusher rock	m2	167	\$ 70.00	\$ 11,690.00
2.6	Cut to waste - slope cut back	m2	200	\$ 70.00	\$ 14,000.00
3	Drainage				\$ 16,550.00
3.1	Supply and install closed top concrete drain (400mm)	m	48	\$ 20.00	\$ 960.00
3.2	Cut to waste for concrete drain (0.5m deep)	m3	12	\$ 45.00	\$ 540.00
3.3	Supply and lay 50mm clear river sand for concrete pipe bedding	m3	2	\$ 250.00	\$ 500.00
3.4	Supply and install (675x 450) catchpit	No.	1	\$ 3,300.00	\$ 3,300.00
3.5	Supply and install 1050 MH	No.	1	\$ 11,250.00	\$ 11,250.00
4	Structures				\$ 912,076.00
4.1	Concrete Slabs				\$ 69,150.00
4.1.1	Concrete base slab for new balance tank (200mm thick) 25MPa	m3	51	\$ 875.00	\$ 44,625.00
4.1.2	Concrete base slab for return pump (200mm thick) 20MPa	m3	2	\$ 850.00	\$ 1,700.00
4.1.3	Concrete base slab for access platform (200mm thick) 20MPa	m3	3	\$ 850.00	\$ 2,550.00
4.1.4	Concrete base slab for elevated screen and flow split (200mm thick) 25MPa	m3	3	\$ 875.00	\$ 2,625.00
4.1.5	Concrete base slab for odour control (200mm thick) 20MPa	m3	1	\$ 850.00	\$ 850.00
4.1.6	Total rebar in concrete slabs 10% of concrete	kg	6000	\$ 2.80	\$ 16,800.00
4.2	Balance Tank				\$ 185,280.00
4.2.1	Supply and install cast insitu concrete walls 350mm thick at 5.65m high (25MPa)	m2	155	\$ 900.00	\$ 139,500.00
4.2.2	Supply and install cast insitu concrete walls 150mm thick at 5.65m high	m2	35	\$ 900.00	\$ 31,500.00
4.2.3	Total rebar in balance tank 10% of concrete - already in precast panesl	kg	5100	\$ 2.80	\$ 14,280.00
4.3	Access platform				\$ 30,000.00
4.3.1	stair case with two (2 x 2m) platforms (total rise of 5.65m)	LS	1	\$ 23,000.00	\$ 23,000.00
4.3.2	Supply and install handrail on both sides running full length of stairs	m	14	\$ 500.00	\$ 7,000.00
4.4	Return pump				\$ 1,020.00
4.4.1	supply and install concrete plinth for pumps with access hatch (2 x 3 x 1.5 @ 150mm thick) 20 Mpa inc rebar and formwork	m3	1	\$ 1,020.00	\$ 1,020.00
4.5	Elevated screen and flow split				\$ 611,606.00
4.5.1	Supply and install 6 x concrete footings @ 1m3 each	m3	6	\$ 850.00	\$ 5,100.00
4.5.2	Supply and install base I columns (4m high) bolted to footings (fittings inc) 380 PFC (380 x 150)	m	24	\$ 4,704.00	\$ 112,896.00
4.5.3	Supply and install cross members (5m long) (fittings inc) (75 x 75 x 8mm)	m	30	\$ 945.00	\$ 28,350.00
4.5.4	Supply and install I beams (fitting inc) 380 PFC (380 x 150)	m	30	\$ 6,076.00	\$ 182,280.00
4.5.5	Supply and install I column extension (1.5m high) (fittings inc) 380 PFC (380 x 150)	m	12	\$ 3,528.00	\$ 42,336.00
4.5.6	Supply and install cross members (2m long) (fittings inc)	m	24	\$ 756.00	\$ 18,144.00
4.5.7	Supply and install I beams for top platform 380 PFC (380 x 150)	m	20	\$ 9,800.00	\$ 196,000.00
4.5.8	Supply and install mesh plating at to of platform (expanded mesh)	m2	25	\$ 540.00	\$ 13,500.00
4.5.9	Supply and install handrail (fittings inc)	m	26	\$ 500.00	\$ 13,000.00
4.6	Odour control - carbon filter				\$ 15,020.00
4.6.1	supply and install concrete surround for filters (2 x 3 x 1.5 @ 150mm thick) 20 Mpa inc rebar and formwork	m3	1	\$ 1,020.00	\$ 1,020.00
4.6.2	Odour Filter	ls	1	\$14,000	\$ 14,000.00
5	Landscaping & Entrances				\$ 15,750.00
5.1	supply and install safety fence	m	50	\$ 265.00	\$ 13,250.00
5.2	supply and install safety fence human gateway	m	1	\$ 2,500.00	\$ 2,500.00
6	Piping, Pumps and Filtration				\$ 144,338.13
6.1	Supply and install 316 SS 300mm pipework inc fittings, brackets, flanges, 90 deg angles and tees	kg	3700	\$ 9.75	\$ 36,075.00
6.2	Supply and install 316 SS 600mm pipework inc fittings, brackets and flanges and 90deg angle	kg	0	\$ 9.75	\$ -
6.3	Supply and install 316 SS 600mm to 500mm reducers	No.	2	\$ 1,300.00	\$ 2,600.00
6.4	Supply and install 316 SS 500mm pipework inc fittings, brackets and flanges	kg	297.5	\$ 9.75	\$ 2,900.63
6.5	Supply and install 5kw pumps	No.	2	\$ 25,000.00	\$ 50,000.00
6.6	Supply and install Fittings	No.	1	\$ 20,325.00	\$ 20,325.00
6.7	Valves, fittings bends 100mm	LS	1	\$ 30,000.00	\$ 30,000.00
6.8	Pipework 100mm	kg	250	\$ 9.75	\$ 2,437.50

7	Extraordinary Construction Costs				\$ 25,600.00
7.1	Supply and install lighting, connections and fittings inc	No.	10	\$ 1,000.00	\$ 10,000.00
7.2	emergency switch for pump	No.	3	\$ 200.00	\$ 600.00
7.3	Flow meter and control valve (300mm)	No.	1	\$ 5,000.00	\$ 5,000.00
7.4	Supply and install isolation valves (100mm)	No.	4	\$ 1,000.00	\$ 4,000.00
7.5	Supply and install isolation valve - gate SS (300mm)	No.	2	\$ 3,000.00	\$ 6,000.00
8	Electrical				\$ 154,000.00
8.1	Cables	No.	10	\$ 1,000.00	\$ 10,000.00
8.2	MCC	No.	1	\$ 20,000.00	\$ 20,000.00
8.3	Instruments	No.	2	\$ 15,000.00	\$ 30,000.00
8.4	Telemetry	No.	1	\$ 5,000.00	\$ 5,000.00
8.5	SCADA	No.	4	\$ 12,000.00	\$ 48,000.00
8.6	Radiolink	No.	1	\$ 15,000.00	\$ 15,000.00
8.7	Software	No.	1	\$ 20,000.00	\$ 20,000.00
8.8	Install	No.	2	\$ 3,000.00	\$ 6,000.00
9	Fees				\$ 195,075.28
9.1	Design Fees 6%	%	0.06	\$ 1,625,940.95	\$ 97,556.46
9.2	Commissioning		1	\$50,000	\$ 50,000.00
9.3	AS Builts		1	\$15,000	\$ 15,000.00
9.4	MSQA		0.02	\$ 1,625,940.95	\$ 32,518.82
				Total	\$ 1,821,016.23
				15 % contingency	\$ 273,152.43
				Final value	\$ 2,094,168.66