

COSTING SUMMARY

COMPARITIVE COSTINGS FOR OPTION COMBINATIONS				COMBINATION 1		COMBINATION 2		COMBINATION 3		COMBINATION 4		
COST CENTRE	ITEM		\$ (Excl GST)	\$ (Excl GST)	Cost per Lot 377 serviced	\$ (Excl GST)	Cost per Lot 377 serviced	\$ (Excl GST)	Cost per Lot 377 serviced	\$ (Excl GST)	Cost per Lot 377 serviced	
1: PROJECT MANAGEMENT	1.1	<i>Project Management</i>	\$6,240,000	\$ 6,240,000	\$ 16,552	\$ 6,240,000	\$ 16,552	\$ 6,240,000	\$ 16,552	\$ 6,240,000	\$ 16,552	
2: DESIGN AND CONSTRUCTION MANAGEMENT	2.1	<i>Project Construction: Preliminaries and Site Establishment</i>	\$12,137,034	\$ 12,137,034	\$ 32,194	\$ 12,137,034	\$ 32,194	\$ 12,137,034	\$ 32,194	\$ 12,137,034	\$ 32,194	
3: DESIGN AND CONSTRUCTION	3.1	Sewer Collection System Options										
		A.2 Pressure Sewer System (377 LOTS)	\$ 28,504,189	\$ 28,504,189	\$ 75,608							
		A.4 Hybrid System	\$ 31,265,520			\$ 31,265,520	\$ 82,932	\$ 31,265,520	\$ 82,932	\$ 31,265,520	\$ 82,932	
	3.2	Sewage Treatment Disposal										
		B.9 On Island Treatment System	\$ 30,153,240								\$ 30,153,240	\$ 79,982
		B.11 Discharge to Sydney Water	\$ 7,361,263	\$ 7,361,263	\$ 19,526	\$ 7,361,263	\$ 19,526	\$ 7,361,263	\$ 19,526			
	3.3	Water Supply										
		C.4 Low Flow from Sydney Water	\$ 16,029,637			\$ 16,029,637	\$ 42,519					
		C.6 Full Retic from Sydney Water	\$ 16,730,267	\$ 16,730,267	\$ 44,377			\$ 16,730,267	\$ 44,377	\$ 16,730,267	\$ 44,377	
TOTAL				\$70,972,753	\$ 188,257	\$73,033,455	\$ 193,723	\$73,734,084	\$195,581	\$96,526,061	\$256,037	

PROJECT PLANNING, COORDINATION AND CONSULTATION PRELIMINARIES					
Item	Description of Work	Qty	Unit	Rate \$	Totals \$
1	Project Planning, Coordination and Consultation				
1.1	Environmental Impact Statement and Assessment including cultural and heritage assesement, TPZ and Aborists report,	1	Item	\$ 500,000	\$ 500,000
1.2	Engineering Survey includes individual properties, roads, public areas, HDD bore path across Pittwater	1	Item	\$ 600,000	\$ 600,000
1.3	Geotechnical Investigations across the entire Island.	1	Item	\$ 150,000	\$ 150,000
1.5	Community & Public Consultation	1	Item	\$ 250,000	\$ 250,000
1.7	Project Coordinator/Manager (Public Works)	1	Item	\$ 2,500,000	\$ 2,500,000
	Subtotal Planning, Coordination and Consultation				\$ 4,000,000
	Plus Profit and Overheads 20%				\$ 800,000
	Total for Project Planning Preliminaries				\$ 4,800,000
	Plus 30% Contingency				\$ 1,440,000
	Total Project Planning, Coordination and Consultation with contingency				\$ 6,240,000

PROJECT CONSTRUCTION PRELIMINARIES

Item	Description of Work	Qty	Unit	Rate \$	Totals \$
1	PRELIMINARY'S AND SITE ESTABLISHMENT				
1.1	Mobilisation / Demobilisation including site amenities. Includes the following: 2 x portable site offices, 1 x Unisex Toilet block with showers and waste tank, 1 x Lunchroom, Poly rain water tank, connection of power to the existing Community Hall, wireless NBN, installation and freight costs	1	Item	\$ 267,500	\$ 267,500
1.11	Barge hire (55ton 17m barge) and materials management including crane hire, loader hire and ancillary equipment to load and unload equipment at Church Point and the Island.	470	Days	\$ 5,750	\$ 2,702,500
1.2	Inductions for contractor, sub-contractors, visitors (Estimated 100 visitors/staff to site)	1	Item	\$ 80,000	\$ 80,000
1.3	Prepare and Manage Construction Program (2hrs per week x \$120 per hour x 90 week construction period)	1	Item	\$ 21,600	\$ 21,600
1.4	Prepare & maintain Construction, Traffic & Environmental Management Plans. (40hrs initially to prepare plans plus 8 hrs per week to manage @ \$120 per hour)	1	Item	\$ 91,200	\$ 91,200
1.5	Prepare & maintain Environmental Controls and Waste Management Controls (8hrs per week x 2 guys plus materials)	1	Item	\$ 170,000	\$ 170,000
1.6	Prepare & maintain, Quality Assurance, Occupational Health & Safety Plans, including ITP's. (8hrs per week x \$120 per hour x 90 week construction period)	1	Item	\$ 86,400	\$ 86,400
1.7	Preparation of all permits, plans, community consultation and approvals required from statutory authorities and pay all required fees and charges. (Provisional Sum)	1	Item	\$ 100,000	\$ 100,000
1.8	'Dial Before You Dig' services locating including liaison with all relevant authorities for water/sewerage, power, communications etc	1	Item	\$ 9,600	\$ 9,600
1.9	Site setout and survey as per design documentation	1	Item	\$ 157,000	\$ 157,000
1.10	Prepare photographic record and Dilapidation Reports of existing site conditions prior to construction. (Includes Individual property photo's and street main alignments)	1	Item	\$ 52,000	\$ 52,000
1.11	Traffic control including personnel, barriers, control signals etc. 80 wk program - 63 wks of TM	63	Week	\$ 7,500	\$ 472,500
1.12	Prepare and submit operations and maintenance manuals. (Provisional Sum)	1	Item	\$ 20,000	\$ 20,000
1.13	Work as Executed Documentation	377	Item	\$ 450	\$ 169,650
1.14	Construction Management/Engineering/Administration, Site Supervision, Community Consultation per week - includes, 1 x Senior Project Manager/Engineer, 2 x Mid Level Site Engineers, 2 x Site Supervisors, 1 x Community Liaison Officer 2 x admin support staff.	90	Item	\$ 24,780	\$ 2,230,200
1.15	Design, supply and install Scheme operations and maintenance depot/shed - includes power, water connection, lunch room, workshop, internet, air conditioning, storage, all weather access, security, fencing, architecture design, DA approval.	1	Item	\$ 350,000	\$ 350,000
1.16	Tree Removal, Arborist Report and Management, Removal off Island of wood and mulch as required.	1	Item	\$ 300,000	\$ 300,000
1.17	Existing storm water system upgrades/augmentation to prevent soil erosion from the construction activities.	20	Item	\$ 25,000	\$ 500,000
	Subtotal for Construction Preliminaries and Site Establishment				\$ 7,780,150
	Plus Head Contractor Profit and Overheads 20%				\$ 1,556,030
	Construction Preliminaries Total				\$ 9,336,180
	Plus 30% Contingency				\$ 2,800,854
	Construction Preliminaries Total with Contingency				\$ 12,137,034

COLLECTION SYSTEM OPTION A2: PRESSURE SEWER					
Item	Description of Work	Qty	Unit	Rate \$	Totals \$
1	PRELIMINARY'S AND DESIGN				
1.1	Civil Design	1		\$ 540,000	\$ 540,000
1.2	On Property Design including plumbing, drainage and electrical assessments	377	Item	\$ 1,200	\$ 452,400
Subtotal for Preliminaries and design.					\$ 992,400
Item	Description of Work	Qty	Unit	Rate \$	Totals \$
2	PIPE SUPPLY AND INSTALLATION BY OPEN CUT OR HDD				
	Excavation by open cut &/or by horizontal directional boring, supply and installation of pipe (excluding wastage), fittings, detection tape (or wire where HDD), marker blocks and posts bedding, backfill, compaction, spoil disposal, shoring (as necessary) dewatering, restoration etc. All pressure sewerage system works required to co-ordinate, avoid and maintain soundness of existing underground services. QA/OH&S requirements, Principal's requirements & Australian Standards Pipe quantities are indicative only				
2.1	50 mm pipe (Polyethylene PE100 PN16 as specified)	1386	M	\$ 240.00	\$ 332,640
2.2	63 mm pipe (Polyethylene PE100 PN16 as specified)	1068	M	\$ 280.00	\$ 299,040
2.3	75 mm pipe (Polyethylene PE100 PN16 as specified)	1578	M	\$ 320.00	\$ 504,960
2.4	90 mm pipe (Polyethylene PE100 PN16 as specified)	1128	M	\$ 360.00	\$ 406,080
2.5	110mm pipe (Polyethylene PE100 PN16 as specified)	774	M	\$ 420.00	\$ 325,080
2.6	140mm pipe (Polyethylene PE100 PN16 as specified)	168	M	\$ 520.00	\$ 87,360
2.6	50mm rider mains	1000	M	\$ 240.00	\$ 240,000
2.7	Additional for excavation in rock (Provisional Sum average metre rate divided in half)	7102	M	\$ 170.00	\$ 1,207,340
Subtotal for Pipe Supply and Installation					\$ 3,402,500
4	TESTING AND COMMISSIONING OF THE PRESSURE SEWERAGE PIPELINE.	7102	M	\$ 8.00	\$ 56,816
Subtotal for Testing and Commissioning of the Pressure Sewer Pipeline					\$ 56,816
5	VALVING				
	Isolation Valves with polyethylene stub connections including electro fusion connection couplers, reducers and other fittings where required, path box, spindle riser, orange spindle cap identifying any Normally Closed valves, back fill, identification plate or post and restoration.				
	OR				
	Isolation valve including 316 stainless steel backing rings, nuts, bolts, washers and extension spindles, orange spindle cap identifying any Normally Closed valves, path box, spindle riser, back fill, identification plate or post and restoration.				
Item	Description of Work	Qty	Unit	Rate \$	Totals \$
5.1	50 mm Isolation Valves	20	No	\$ 2,500	\$ 50,000
5.2	80 mm Isolation Valves	30	No	\$ 3,500	\$ 105,000
5.3	100 mm Isolation Valves	10	No	\$ 4,500	\$ 45,000
Sub Total for Isolation valves					\$ 200,000
6	FLUSHING POINTS				
	Flushing Point supply and installation of end of line or in-line flushing point including connection to the pressure sewer system street main				
6.1	Connection to main 50mm to 100mm (Light duty trafficable Class B)	25	No	\$ 3,500	\$ 87,500
Subtotal for Flushing Points					\$ 87,500
7	AIR VALVES				
	Supply and install air valves connected to the pressure sewer main including materials, labour, testing, commissioning, restoration				
7.1	Inground Air Valve supply and installation connected to the pressure sewer main	10	Item	\$ 30,000	\$ 300,000
Subtotal for Air Valves					\$ 300,000
8	ON PROPERTY WORKS				
8.1	Property Connections (including installation of Boundary Kit & Access Box and supply and installation of required 40mm PE100 PN16 polyethylene pipe and conduit where required, identification plate or post)				
	Connection to Pressure Sewer Main	377	No.	\$ 5,000	\$ 1,885,000
	On Property Works - Pressure Sewer Unit Supply	377	No.	\$ 5,000	\$ 1,885,000
	On Property Works - Pressure Sewer Unit Installation and Commissioning	377	No.	\$ 17,000	\$ 6,409,000
	On Property Works - Plumbing Connection, Upgrade and Septic Decommissioning	377	No.	\$ 7,500	\$ 2,827,500
	Boundary kits (Supply)	377	No.	\$ 600	\$ 226,200
Subtotal for Miscellaneous Items					\$ 13,232,700
Pressure Sewerage Collection System Cost Estimate Summary					
Item	Description of Work Item				Total (Excluding GST)
1	PRELIMINARY'S AND DESIGN				\$ 992,400
2	PIPE SUPPLY AND INSTALLATION BY OPEN CUT OR HDD				\$ 3,402,500

COLLECTION SYSTEM OPTION A2: PRESSURE SEWER					
4	TESTING AND COMMISSIONING OF THE PRESSURE SEWERAGE PIPELINE.				\$ 56,816
5	VALVING				\$ 200,000
6	FLUSHING POINTS				\$ 87,500
7	AIR VALVES				\$ 300,000
8	ON PROPERTY WORKS				\$ 13,232,700
				TOTAL	\$ 18,271,916
	PLUS LEAD CONTRACTOR OVERHEADS AND PROFIT 20%				\$ 3,654,383
TOTAL COST ESTIMATE					
A	COLLECTION SYSTEM COST ESTIMATE				\$ 21,926,299
C	CONTINGENCY			30%	\$ 6,577,890
				TOTAL	\$ 28,504,189

COLLECTION SYSTEM OPTION A4: HYBRID GRAVITY AND PRESSURE

Item	Description of Work	Qty	Unit	Rate \$	Totals \$
1	PRELIMINARIES AND DESIGN				
1.1	Civil Design	1		\$ 1,050,000	\$ 1,050,000
1.2	Extra Over Geotech Report for Land Stabilisation Report	1		\$ 150,000	\$ 150,000
1.3	Extra Over Tree Removal, Arborist Report and management	1		\$ 300,000	\$ 300,000
1.4	On Property Design including plumbing, drainage and electrical assessments	275	Item	\$ 1,200	\$ 330,000
1.5	On Property Design including nominating the gravity connection point and depth	102	Item	\$ 250	\$ 25,500
Subtotal for Preliminaries and Design					\$ 1,830,000
Item	Description of Work	Qty	Unit	Rate \$	Totals \$
2	PIPE SUPPLY AND INSTALLATION BY OPEN CUT OR HDD				
	Excavation by open cut &/or by horizontal directional boring, supply and installation of pipe (excluding wastage), fittings, detection tape (or wire where HDD), marker blocks and posts bedding, trench stops, backfill, compaction, spoil disposal, shoring (as necessary) dewatering, restoration etc. All pressure sewerage system works required to co-ordinate, avoid and maintain soundness of existing underground services. QA/OH&S requirements, Principal's requirements & Australian Standards Pipe quantities are indicative only				
2.1	50 mm pipe (Polyethylene PE100 PN16 as specified)	750	M	\$ 240.00	\$ 180,000
2.2	63 mm pipe (Polyethylene PE100 PN16 as specified)	400	M	\$ 280.00	\$ 112,000
2.3	110 mm pipe (Polyethylene PE100 PN16 as specified)	1250	M	\$ 420.00	\$ 525,000
2.4	125 mm pipe (Polyethylene PE100 PN16 as specified)	800	M	\$ 490.00	\$ 392,000
2.5	180 mm pipe (Polyethylene PE100 PN16 as specified)	400	M	\$ 600.00	\$ 240,000
2.6	150mm PVC DWV SN8	3300	M	\$ 900.00	\$ 2,970,000
2.7	Additional for excavation in rock (Provisional Sum)	6900	M	\$ 203.00	\$ 1,400,700
Subtotal for Pipe Supply and Installation					\$ 5,819,700
4	TESTING AND COMMISSIONING OF THE PRESSURE SEWERAGE AND GRAVITY PIPELINES.	6900	M	\$ 12.00	\$ 82,800
Subtotal for testing and commissioning					\$ 82,800
5	VALVING				
	Isolation Valves				
	Isolation Valves with polyethylene stub connections including electro fusion connection couplers, reducers and other fittings where required, path box, spindle riser, orange spindle cap identifying any Normally Closed valves, back fill, identification plate or post and restoration.				
	OR				
	Isolation valve including 316 stainless steel backing rings, nuts, bolts, washers and extension spindles, orange spindle cap identifying any Normally Closed valves, path box, spindle riser, back fill, identification plate or post and restoration.				
Item	Description of Work	Qty	Unit	Rate \$	Totals \$
5.1	50 mm Isolation Valves	6	No	\$ 2,500	\$ 15,000
5.2	100 mm Isolation Valves	20	No	\$ 4,500	\$ 90,000
5.3	150 mm Isolation Valves	5	No	\$ 6,000	\$ 30,000
Sub Total for Isolation valves					\$ 135,000
6	FLUSHING POINTS				
	Flushing Point supply and installation of end of line or in-line flushing point including connection to the pressure sewer system street main				
6.1	Connection to main 50mm to 100mm (Light duty trafficable Class B)	15	No	\$ 3,500	\$ 52,500
Subtotal for Flushing Points					\$ 52,500
7	AIR VALVES				
	Supply and install air valves connected to the pressure sewer main including materials, labour, testing, commissioning, restoration				
7.1	Inground Air Valve supply and installation connected to the pressure sewer main	6	Item	\$ 30,000	\$ 180,000
Subtotal for Air Valves					\$ 180,000
8	PROPERTY CONNECTIONS				
8.1	Property Connections				
	100mm Gravity Connection Point - Same Side of Road as main line	51	No.	\$ 5,500	\$ 280,500
	100mm Gravity Connection - Other Side of Road	51	No.	\$ 9,000	\$ 459,000
	Pressure Sewer Connection to Main	275	No.	\$ 5,000	\$ 1,375,000
	On Property Works - Pressure Sewer Unit Supply	275	No.	\$ 6,000	\$ 1,650,000
	On Property Works - Pressure Sewer Unit Installation and Commissioning	275	No.	\$ 17,000	\$ 4,675,000
	On Property Works - Plumbing Connection, Upgrade and Septic Decommissioning for Pressure Sewer Properties	275	No.	\$ 7,500	\$ 2,062,500

COLLECTION SYSTEM OPTION A4: HYBRID GRAVITY AND PRESSURE

	On Property Works - Plumbing Connection, Upgrade and Septic Decommissioning for Gravity Sewer Properties	102	No.	\$ 12,500	\$ 1,275,000
	Boundary kits (Supply)	275	No.	\$ 600	\$ 165,000
Subtotal for Miscellaneous Items					\$ 11,942,000
9 GRAVITY SEWER WORKS					
9.1	Supply and install concrete Manholes/Access Chambers/Maintenance Shafts	65	No	\$13,000	\$845,000
8.2	Satellite SPS including telemetry controls and overflow storage. Includes hard stand areas for maintenance, servicing, retaining walls, fencing, safety rails, lighting and earthworks if required.	4	Item	\$ 500,000	\$ 2,000,000
Subtotal for Gravity Sewer					\$ 2,845,000
Pressure Sewerage Collection System Cost Estimate Summary					
Item	Description of Work Item				Total (Excluding GST)
1	PRELIMINARIES AND DESIGN				\$ 1,830,000
2	PIPE SUPPLY AND INSTALLATION BY OPEN CUT OR HDD				\$ 5,819,700
4	TESTING AND COMMISSIONING OF THE PRESSURE SEWERAGE AND GRAVITY PIPELINES.				\$ 82,800
5	VALVING				\$ 135,000
6	FLUSHING POINTS				\$ 52,500
7	AIR VALVES				\$ 180,000
8	PROPERTY CONNECTIONS				\$ 11,942,000
9	GRAVITY SEWER WORKS				\$ -
				TOTAL	\$ 20,042,000
PLUS LEAD CONTRACTOR PROFIT AND OVERHEAD				20%	\$ 4,008,400
TOTAL COST ESTIMATE					
A	COLLECTION SYSTEM COST ESTIMATE				\$ 24,050,400
C	CONTINGENCY			30%	\$ 7,215,120
				TOTAL	\$ 31,265,520

**WASTE DISPOSAL SYSTEM OPTION B9: ON ISLAND TREATMENT DISPOSAL TO
PITTWATER**

Treatment Plant On Island

Permeate Partners			
		Capacity	150 kL/day
Insatilled capacity (kL/day)			
Area /			\$k
Preliminaries			
Inlet works			\$ 705
Odour treatment			\$ 262
Bioreactor			\$ 2,730
Membrane filtration			\$ 630
UV Disinfection			\$ 165
Treated water storage and distribution			\$ 202
Sludge handling			\$ 315
Chemical systems/storage			\$ 412
Plant sump			\$ 156
Buildings			\$ 1500
Roadways, earthworks, siteworks, landscaping and fencing			\$ 1600
Electrical, control, and instrumentation			\$ 1042
Commissioning, validation and training			\$ 300
Services			\$ 130
		SUB-TOTAL CAPEX	\$ 10,149

Treatment Plant On Island Cost			\$ 10,149,000
Extra Over Environmental Impact Statement			\$ 500,000
Specific Site Engineer for Treatment Plant Construction			\$ 180,000
Land Acquisition			\$ 1,500,000
Access Roads			\$ 1,000,000
Waste Water Outfall To Pittwater			\$ 6,000,000
Sub Total			\$ 19,329,000
Plus Head Contractor Profit and Overheads 20%			\$ 3,865,800
Sub Total for On Island Treatment Plant			\$ 23,194,800
Plus 30% Contingency			\$ 6,958,440
Total for Island Treatment Plant			\$ 30,153,240

WASTE DISPOSAL SYSTEM OPTION B11: PUMP TO SYDNEY WATER

Item	Description of Work	Qty	Unit	Rate \$	Totals \$
9	HDD Bay Crossing and SPS				
9.1	SPS including telemetry controls and overflow storage	1	Item	\$ 2,000,000	\$ 2,000,000
9.2	Chemical dosing facility	1	Item	\$ 150,000	\$ 150,000
9.3	Connection to Church Point Sewer	1	Item	\$ 250,000	\$ 250,000
9.4	Supply and installation of DN 100 ABB WaterMaster Flowmeter in pre-cast 900x1200 pit connected with with remote mounted display unit inside SPS panel	1	Item	\$ 15,000	\$ 15,000
9.6	Design	1	item	\$ 200,000	\$ 200,000
	Sub Total SPS				\$ 2,615,000
9.7	HDD Bay Crossing				
	PE100 PN20, 280mm conduit with 140mm product pipe	680	M	\$850	\$578,000
	Equipment set-up	1	Item	\$250,000	\$250,000
	140mm Pipe Supply	680	M	\$60	\$40,800
	280mm PE Conduit Supply	680	M	\$120	\$81,600
	Pipe Jointing	115	No	\$400	\$46,000
	Leak detection system	1	No	\$150,000	\$150,000
	Subtotal				\$1,146,400
	Design, Geotech & Survey	15%			\$171,960
	Contingency	20%			\$263,672
	Prelims, supervision, overheads and profit	37%			\$521,727
	SubTotal HDD Bay Crossing				\$2,103,759
	SUBTOTAL HDD BAY CROSSING AND SPS				\$ 4,718,759

Sewer Pump Station and Rising Main across Pittwater Cost Estimate Summary

Item	Description of Work Item	Total (Excluding GST)
9	HDD Bay Crossing and SPS	\$ 4,718,759
	Plus Head Contractor Profit and Overheads 20%	\$ 943,752

TOTAL COST ESTIMATE

A	DISCHARGE SYSTEM	\$ 5,662,510
C	CONTINGENCY	30% \$ 1,698,753
	TOTAL	\$ 7,361,263

WATER C4 LOW FLOW SYSTEM FROM SYDNEY WATER

Item	Description of Work	Qty	Unit	Rate \$	Totals \$
1	PRELIMINARY'S AND DESIGN				
1.14	Civil Design	1	Item	\$ 300,000	\$ 300,000
1.16	Wate Booster Pumping Station Design	1	Item	\$ 120,000	\$ 120,000
1.3	On Property Design - water assessment to verify RWT connection and potable supply to kitchen.	377	Item	\$ 450	\$ 169,650
Subtotal for Preliminaries and Design					\$ 420,000

Item	Description of Work	Qty	Unit	Rate \$	Totals \$
2	PIPE SUPPLY AND INSTALLATION BY OPEN CUT OR HDD Excavation by open cut &/or by horizontal directional boring, supply and installation of pipe (excluding wastage), fittings, detection tape (or wire where HDD), marker blocks and posts bedding, backfill, compaction, spoil disposal, shoring (as necessary) dewatering, restoration etc. All pipework required to co-ordinate, avoid and maintain soundness of existing underground services. QA/OH&S requirements, Principal's requirements & Australian Standards				
2.1	110 mm pipe (Polyethylene PE100 PN16 as specified)	5000	M	\$ 420.00	\$ 2,100,000
2.6	140mm pipe (Polyethylene PE100 PN16 as specified)	400	M	\$ 520.00	\$ 208,000
2.7	Additional for excavation in rock	5400	M	\$ 470.00	\$ 2,538,000
Subtotal for Pipe Supply and Installation					\$ 4,846,000

4	TESTING AND COMMISSIONING	5400	M	\$ 15.00	\$ 81,000
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5	VALVING Isolation Valves with polyethylene stub connections including electro fusion connection couplers, reducers and other fittings where required, OR Isolation valve including 316 stainless steel backing rings, nuts, bolts, washers and extension spindles, orange spindle cap identifying any Normally Closed valves, path box, spindle riser, back fill, identification plate or post and restoration.				
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Item	Description of Work	Qty	Unit	Rate \$	Totals \$
5.1	100 mm Isolation Valves	35	No	\$ 4,500	\$ 157,500
Sub Total for Isolation valves					\$ 157,500

6	Hydrant POINTS Supply and Install Hydrants as per Sydney Water specification				
6.1	Hydrants	55	No	\$ 3,500	\$ 192,500
Subtotal for hydrant Points					\$ 192,500

7	AIR VALVES Supply and install air valves connected to the water main including materials, labour, testing, commissioning, restoration				
7.1	In ground Air Valve supply and installation	6	Item	\$ 7,500	\$ 45,000
Subtotal for Air Valves					\$ 45,000

8	PROPERTY CONNECTIONS				
8.1	Property Connections (including installation of Water Meter and supply and installation of required 25mm PE100 PN16 polyethylene pipe and conduit where required, identification plate or post)				
	Connection of Property to Water Main	377	No.	\$ 5,000	\$ 1,885,000
	Water Meters including copper upstand and isolation valve (Supply and install)	377	No.	\$ 450	\$ 169,650
Subtotal for Property Connections					\$ 2,054,650

9	MISCELLANEOUS ITEMS				
9.1	Supply and install WPS including telemetry controls	1	Item	\$ 250,000	\$ 250,000
9.3	Connection to Church Point Water Main	1	Item	\$ 100,000	\$ 100,000
9.4	Supply and installation of DN 100 flow meter at the WPS	1	Item	\$ 25,000	\$ 25,000
Subtotal for Miscellaneous Items					\$ 375,000

10	HDD Bay Crossing				
10.1	HDD Bay Crossing				
	PE100 PN20, 280mm conduit with 140mm product pipe	680	M	\$850	\$578,000
	Equipment set-up	1	Item	\$250,000	\$250,000
	140mm PE Pipe Supply	680	M	\$60	\$40,800
	280mm PE Conduit Supply	680	M	\$120	\$81,600
	Pipe Jointing	115	No	\$400	\$46,000
	Leak detection system	1	No	\$150,000	\$150,000
	Subtotal				\$1,146,400
	Design, Geotech & Survey	15%			\$171,960

WATER C4 LOW FLOW SYSTEM FROM SYDNEY WATER

Contingency	20%			\$263,672
Prelims, supervision, overheads and profit	37%			\$521,727
SubTotal HDD Bay Crossing				\$2,103,759

Sub Total Low Flow Water Reticulation Cost Estimate Summary

Item	Description of Work Item				Total (Excluding GST)
1	PRELIMINARY'S AND DESIGN				\$ 420,000
2	PIPE SUPPLY AND INSTALLATION BY OPEN CUT OR HDD				\$ 4,846,000
4	TESTING AND COMMISSIONING				\$ 81,000
5	VALVING				\$ 157,500
6	HYDRANT POINTS				\$ 192,500
7	AIR VALVES				\$ 45,000
8	PROPERTY CONNECTIONS				\$ 2,054,650
9	MISCELLANEOUS				\$ 375,000
10	HDD Bay Crossing				\$ 2,103,759
Sub Total Low Flow Water Reticulation Cost Estimate Summary					\$ 10,275,409
	Plus Head Contractor Profit and Overheads 20%				\$ 2,055,082
					\$ 12,330,490
	Plus Contingency 30%				\$ 3,699,147
	Total Low Flow Water Reticulation Cost Estimate Summary				\$ 16,029,637

ON PROPERTY WORKS FOR WATER CONNECTION TO A LOW FLOW SYSTEM

	Connect a 25mm PE water supply pipe from the water meter to the properties existing RWT with float valve and flow restrictor.	377	No.	\$ 3,500	\$ 1,319,500
	Connect a 25mm PE water supply pipeline from the water meter connection to the kitchen area of the house providing a potable water supply for drinking/cooking etc	377	No.	\$ 2,500	\$ 942,500
TOTAL CONNECTION COST FOR COMMUNITY TO CONNECT TO THE LOW FLOW WATER SYSTEM					\$ 2,262,000
Cost per lot		377			\$ 6,000

WATER C6 FULL RETICULATION FROM SYDNEY WATER

Item	Description of Work	Qty	Unit	Rate \$	Totals \$
1	PRELIMINARY'S AND DESIGN				
1.1	Civil Design	1	Item	\$ 300,000	\$ 300,000
1.2	WPS Design	1	Item	\$ 120,000	\$ 120,000
Subtotal for Preliminaries and Design					\$ 420,000

Item	Description of Work	Qty	Unit	Rate \$	Totals \$
2	PIPE SUPPLY AND INSTALLATION BY OPEN CUT OR HDD Excavation by open cut &/or by horizontal directional boring, supply and installation of pipe (excluding wastage), fittings, detection tape (or wire where HDD), marker blocks and posts bedding, backfill, compaction, spoil disposal, shoring (as necessary) dewatering, restoration etc. All pipework required to co-ordinate, avoid and maintain soundness of existing underground services. QA/OH&S requirements, Principal's requirements & Australian Standards				
2.1	125 mm pipe (Polyethylene PE100 PN16 as specified)	2700	M	\$ 490.00	\$ 1,323,000
2.2	180 mm pipe (Polyethylene PE100 PN16 as specified)	2700	M	\$ 600.00	\$ 1,620,000
2.7	Additional for excavation in rock	5400	M	\$ 272.00	\$ 1,468,800
Subtotal for Pipe Supply and Installation					\$ 4,411,800

4	TESTING AND COMMISSIONING OF THE WATER MAIN	5400	M	\$ 15.00	\$ 81,000
5	VALVING Isolation Valves with polyethylene stub connections including electro fusion connection couplers, reducers and other fittings where required, path box, spindle riser, orange spindle cap identifying any Normally Closed valves, back fill, identification plate or post and restoration. OR Isolation valve including 316 stainless steel backing rings, nuts, bolts, washers and extension spindles, orange spindle cap identifying any Normally Closed valves, path box, spindle riser, back fill, identification plate or post and restoration.				

Item	Description of Work	Qty	Unit	Rate \$	Totals \$
5.1	100 mm Isolation Valves	15	No	\$ 4,500	\$ 67,500
5.2	150 mm Isolation Valves	20	No	\$ 6,000	\$ 120,000
Sub Total for Isolation valves					\$ 187,500

6	Hydrant POINTS Supply and Install Hydrants as per Sydney Water specification				
6.1	Hydrants	55	No	\$ 3,500	\$ 192,500
Subtotal for hydrant Points					\$ 192,500

7	AIR VALVES Supply and install air valves connected to the water main including materials, labour, testing, commissioning, restoration				
7.1	In ground Air Valve supply and installation.	6	Item	\$ 7,500	\$ 45,000
Subtotal for Air Valves					\$ 45,000

8	PROPERTY CONNECTIONS				
8.1	Property Connections (including installation of Water Meter and supply and installation of required 25mm PE100 PN16 polyethylene pipe and conduit where required, identification plate or post)				
	Connection of Property to Water Main	377	No.	\$ 5,000	\$ 1,885,000
	Water Meters including copper upstand and isolation	377	No.	\$ 450	\$ 169,650
Subtotal for Property Connections					\$ 2,054,650

9	MISCELLANEOUS ITEMS				
9.1	Supply and install WPS including telemetry controls	1	Item	\$ 250,000	\$ 250,000
9.3	Connection to Church Point Water Main	1	Item	\$ 100,000	\$ 100,000
9.4	Supply and installation of DN 100 flow meter at the WPS	1	Item	\$ 25,000	\$ 25,000
Subtotal for Miscellaneous Items					\$ 375,000

10	HDD Bay Crossing				
	PE100 PN16, 450mm conduit with 280mm product pipe	680	M	\$1,300	\$884,000
	Equipment set-up	1	Item	\$250,000	\$250,000
	250mm PE Pipe Supply	680	M	\$80	\$54,400
	450mm PE Conduit Supply	680	M	\$300	\$204,000
	Pipe Jointing	115	No	\$600	\$69,000
	Leak detection system	1	No	\$150,000	\$150,000
	Subtotal				\$1,611,400
	Design, Geotech & Survey	15%			\$241,710
	Contingency	20%			\$370,622
	Prelims, supervision, overheads and profit	37%			\$733,348
SubTotal HDD Bay Crossing					\$2,957,080

Sub Total Full Flow Water Reticulation Cost Estimate Summary		
Item	Description of Work Item	Total (Excluding GST)

WATER C6 FULL RETICULATION FROM SYDNEY WATER

1	PRELIMINARY'S AND DESIGN				\$ 420,000
2	PIPE SUPPLY AND INSTALLATION BY OPEN CUT OR HDD				\$ 4,411,800
4	TESTING AND COMMISSIONING OF THE WATER MAIN				\$ 81,000
5	VALVING				\$ 187,500
6	HYDRANT POINTS				\$ 192,500
7	AIR VALVES				\$ 45,000
8	PROPERTY CONNECTIONS				\$ 2,054,650
9	MISCELLANEOUS ITEMS				\$ 375,000
9	HDD Bay Crossing				\$ 2,957,080
					\$ 10,724,530
	Plus Head Contractor Profit and Overheads 20%				\$ 2,144,906
	Sub Total Full Flow Water Reticulation Cost Estimate Summary				\$ 12,869,436
	Plus 30% Contingency				\$ 3,860,831
	Total Full Flow Water Reticulation Cost Estimate Summary			Total	\$ 16,730,267

ON PROPERTY WORKS FOR WATER CONNECTION TO A FULL FLOW SYSTEM					
	Connect a 25mm PE water supply pipe from the water meter to the properties existing water pipe infrastructure, where required upgrade piping to ensure compliance with AS3500.	377	No.	\$ 5,000	\$ 1,885,000
TOTAL CONNECTION COST FOR COMMUNITY TO CONNECT TO THE FULL FLOW WATER SYSTEM					\$ 1,885,000
Cost per lot		377			\$ 5,000