

CSIR WATER NETWORK UPGRADE

BILL OF QUANTITIES		
SUMMARY OF SECTIONS		
	DESCRIPTION	AMOUNT R
	SCHEDULE A: PRELIMINARY AND GENERAL	
	SCHEDULE B: SITE PREPERATION & EARTHWORKS	
	SCHEDULE C: PIPEWORK	
	SCHEDULE D: ROAD CONSTRUCTION	
	PROVISIONAL SUM: EXISTING SERVICES (Including ICT & electrical cables)	R 38 500.00
	PROVISIONAL SUM: DIRECTIONAL DRILLING FOR ROAWAY CROSSINGS	R 80 000.00
	Sub Total (ex VAT)	
	20% Contingency	
	Total (ex VAT)	
	15% VAT	
	TOTAL CARRIED TO TENDER FORM	

CSIR WATER NETWORK UPGRADE**BILL OF QUANTITIES****SCHEDULE A: PRELIMINARY AND GENERAL**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
A	PRELIMINARY AND GENERAL Allow for Preliminary and General including all health and safety requirements as per Occupational Health and Safety Act 85 of 1993				
A1	FIXED-CHARGE AND VALUE- RELATED ITEMS				
A1.1	Establish facilities for the contractor on Site:				
A1.2	a) Offices and storage sheds	Sum	1		
A1.3	b) Ablution and latrine facilities	Sum	1		
A1.4	c) Tools and equipment	Sum	1		
A1.5	d) Water supplies, electric power and communications.	Sum	1		
A1.6	e) Supervision and company overhead costs for duration of contract	Sum	1		
A1.7	PLANT				
	Supply plant, including operator, fuel and other costs.	Sum	1		
A1.8	TESTING				
	Water pressure testing and submission of test schedules				
A1.9	Other fixed charged obligations (Specify)	Sum	1		
Total Carried Forward					

CSIR WATER NETWORK UPGRADE**BILL OF QUANTITIES****SCHEDULE B: SITE PREPARATION & EARTHWORKS**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward					
B1	SITE PREPARATION & EARTHWORKS				
	The Contractor is required to take all necessary precautions, watering where appropriate, to prevent dust blowing from construction material and spoil heaps and/ or ground stripped of vegetation cover, the cost of which must be included in the tendered rates.				
	The Project manager and Contractor are to agree upon a stockpile site for any topsoil that is to be removed and stockpiled. The costs for transporting, preparing the stockpile site and stockpiling shall be deemed to be included in the rates.				
	The Contractor shall be responsible for all lateral support and the safe-guarding of all excavations, and all costs involved with the proper safeguarding of the excavations shall be included in the tendered rates.				
B1.1	Remove topsoil to nominal depth of 150mm and stockpile	m ³	150		
B1.2	Excavate by hand not exceeding 1.2m deep in all material to expose the existing asbestos water pipeline.	m ³	1180		
B1.3	Excavate by hand in all material not exceeding 1m to expose the existing cables, pipelines, etc.	m ³	600		
B1.4	Excavate by hand in all material not exceeding 1.2m deep in preparation for installation of new 110mm PVC pipeline	m ³	1180		
B1.5	20% Extra over for excavating in hard rock material.	m ³	236		
B2	BEDDING AND BLANKET				
	From commercial sources:				
B2.1	a) Supply, lay and level 150mm bedding sand and compact to 100% MOD. AASHTO density	m ³	180		
B2.2	b) Supply, lay and level 300mm blanket sand and compacted in layers of 150mm to 100% MOD. AASHTO	m ³	350		

CSIR WATER NETWORK UPGRADE**BILL OF QUANTITIES****SCHEDULE B,C: EARTHWORKS & PIPEWORK**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
	TRENCH FILLING				
B2.3	Surplus material from excavations and/ or stockpiles on site to be carted off to a dumping site to be located by the contractor				
	Import G7 material from pipeline stockpile, place and compact in not more than 150 mm layers	m³	750		
C1	PIPELINES:				
	<u>Keeping Pipelines Clean</u> All pipes laid must be closed by means of an adequately fixed plastic cap or other approved material, supplied by the Contractor, in order to prevent the ingress of foreign material.				
	<u>Pipes laid in common trench</u> Where two pipes are laid side by side in the same trench, the clear distance between the pipes shall not be less than 300 mm				
C1.1	Supply lay and seal 110mm PVC class 9, pipe according to manufacturer's specification	m	1290		
C1.2	Supply, lay and seal 50mm HDPE pipe according to manufacturer's specification.	m	340		
C2	PIPE FITTINGS Extra-over for the above to supply lay and bed PVC pipe, for supplying, laying, and bedding of 110 mm PVC complete with couplings				
C2.1	a) 110mm 90° Bends	No	10		
	b) 50mm 90° bends Bends	No	6		
	c) 110mm 45° Bends	No	1		
	d) 110mm x 50mm Tees including transition couplings	No	5		
	e) 110mm x 110mm Tees	No	4		
	f) 110mm PVC end cap	No	1		

CSIR WATER/ CSIR WATER NETWORK UPGRADE**BILL OF QUANTITIES****SCHEDULE C& D: PIPEWORK & ROADS**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
C2.2.1	Fire Hydrants Supply and install 80MMX65MM CAS HYDRANT WHS-80 H/W S/LUG	No	8		
C2.2.2	Valves Supply, install and connect 110MM RS AVK GATE VALVE RHC CAP TOP SOC SANS664-2011	No	6		
C2.2.3	Extra over for valve boxes Supply and install 400mmx400mm brickwork manhole including cover.	No	6		
D	ROADWORKS				
D1	Layerworks Selection and breaking down, cutting the existing pavement layers, stockpiling and compacting the gravel in layers				
	Stockpiling of road material				
	a) Existing road layers cut, removed and temporarily placed in windrow	m³	130		
	Treatment of road bed Constructed from material taken from the windrow				
	a) Roadbed preparation and compaction of material to a minimum of 93% MOD AASHTO	m³	60		
	b) 150 mm G7 selected material compacted to 93% MOD AASHTO	m³	40		
	Subbase: Construct the subbase course using material from commercial sources.				
	150 mm G5 subbase material compacted to 95% MOD AASHTO	m³	40		
	Base: Construct base with material from commercial source:				
	150mm G2 Base material Compacted to 96% MOD AASHTO	m³	40		

CSIR WATER/ CSIR WATER NETWORK UPGRADE**BILL OF QUANTITIES****SCHEDULE D: ROAD CONSTRUCTION**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
D2	PRIME COAT				
	a) MC-30 Cutback bitumen prime @ 0.8l/m ²	litre	160		
	b) Extra over for applying the prime coat by handheld equipment	litre			Rate Only
D3	ASPHALT SURFACING				
	Asphalt surfacing 30mm thick using 60/70 penetration- grade bitumen				
	Continuously graded, medium grade 30mm thick	m ²	200		
Total Carried Forward To Summary: Schedule A					0.00