ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
1.1	8.3	FIXED-CHARGE AND VALUE RELATED ITEMS				
1.1.1	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	Establishment of Facilities on the Site				
	8.3.2.1	Facilities for Engineer				
1.1.2	PSAB 3.2	a) Furnished offices (1No.)	Sum	1		
1.1.3		b) Telephone	Sum	1		
1.1.4		c) Nameboards (2 No.)	Sum	1		
	8.3.2.2	Facilities for Contractor				
1.1.5		a) Offices and storage sheds	Sum	1		
1.1.6		b) Workshops	Sum	1		
1.1.7		c) Laboratories	Sum	1		
1.1.8		d) Living accommodation	Sum	1		
1.1.9		e) Ablution and latrine facilities	Sum	1		
1.1.10		f) Tools and equipment	Sum	1		
1.1.11		g) Water supplies, electric power and communications	Sum	1		
1.1.12		h) Dealing with water (see 5.5)	Sum	1		
1.1.13		i) Access (see 5.8)	Sum	1		
1.1.14		j) Plant	Sum	1		
1.1.15	8.3.3	Other Fixed-charge Obligations	Sum	1		
1.1.16	8.3.4	Removal of Site Establishment	Sum	1		
1.1.17	PSA 8.3.5	Provision of a Materials Guarantee	Sum	1		
	PSA 8.4.6	Compliance with the OHS Act (1993, as amended), the Construction Regulations (2014) and the Particular Safety Specification:				
1.1.18	PSHSS 6.1.2; CR 5 (1)(I)	i) Preparation of the Contractor's site specific Health and Safety Plan	Sum	1		
1.1.19	CR 7(1)(b)	ii) Principal Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Sum	1		
	GSR 2; PSHSS 7.7	iii) Provision of EPWP Branded SABS Personal Protective Equipment				
1.1.20		(a) Hard Hats	No	70		
1.1.21		(b) Reflective vests	No	70		
1.1.22		(c) Protective foot wear	No	70		
1.1.23		(d) Corded Earplugs	No	200		
1.1.24		(e) Dust masks FFP2	No	200		
1.1.25		(g) Gloves	No	200		
1.1.26		(h) Goggles	No	200		
CARRIF	) FORWARD	1				

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
	CR 7(1)(g);	iv) Cost of medical certificates and medical surveillance				
1.1.27	PSHSS 7.2	(a) Initial (baseline) medical examinations	No	30		
1.1.28		(b) Exit medical examinations	No	30		
	PSHSS 7.14	v) Fall Protection				
1.1.29		a) Lifeline & anchorage	No	2		
1.1.30		b) Safety Harnesses	No	5		
1.1.31		c) Rescue Kit	No	1		
		vi) Occupational Hygiene Survey				
1.1.32	NIHL 6; PSHSS 7.3	(a) Establishment of noise zones (plant)	Sum	1		
1.1.33		(b) Compliance with Amendment of the Occupational Exposure Control Limit for Silica in Table 1 of the Hazardous Chemical Substances including air sampling and analysis	Sum	1		
1.1.34	PSA 8.4.7	Compliance with EMP and EMPr	Sum	1		
1.2	8.4	TIME-RELATED ITEMS				
1.2.1	8.4.1	Contractual Requirements		1		
	8.4.2	Operation and Maintenance of Facilities on Site, for Duration of Construction, except where otherwise stated				
	8.4.2.1	Facilities for Engineer				
1.2.2		a) Furnished offices (1No.)		1		
1.2.3	PSAB 8.4.1	b) Telephone	Sum	1		
1.2.4		c) Nameboards (2 No.)	Sum	1		
1.2.5		d) Survey assistants and materials	Sum	1		
	8.4.2.2	Facilities for Contractor				
1.2.6		a) Offices and storage sheds	Sum	1		
1.2.7		b) Workshops	Sum	1		
1.2.8		c) Laboratories	Sum	1		
1.2.9		d) Living accommodation	Sum	1		
1.2.10		e) Ablution and latrine facilities	Sum	1		
1.2.11		f) Tools and equipment	Sum	1		
1.2.12		g) Water supplies, electric power and communications	Sum	1		
1.2.13		h) Dealing with water (see 5.5)	Sum	1		
1.2.14		i) Access (see 5.8)	Sum	1		
1.2.15		j) Plant	Sum	1		
	1	Supervision for duration of Construction	Sum			

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
1.2.17	8.4.5	Other Time-related Obligations	Sum	1		
	PSA 8.4.6	Compliance with the OHS Act (1993, as amended), the Construction Regulations (2014) and the Particular Safety Specification:				
1.2.18	CR 5(1)(g)	i) Principal Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	month	12		
1.2.19	CR 8(5); PSHSS 6.1.5	ii) Provision of a full- time SACPCMP registered Construction Health and Safety Officer	month	12		
1.2.20		iii) Provision of a part-time assistant SACPCMP Candidate Construction Health and Safety Officer for Subcontractor Management & Assistance	month	12		
		iv) OH&S Legal Compliance Training - SAQA UNIT STANDARD				
1.2.21	GSR 3(5); PSHSS 7.5	a) First Aid	No	1		
1.2.22	PSHSS 6.1.7	b) H&S Representative	No	1		
1.2.23	PSHSS 7.14	c) Working at height & rescue operations	No	20		
1.2.24	CR 29(h)	d) Basic Fire Fighting	No	1		
1.2.25	PSHSS 6.1.3/4	e) Safety for Supervisors	No	2		
1.2.26	PSHSS 7.13	f) Temporary Works Training	No	20		
1.2.27	SANS 10085; PSHSS 7.13	g) Scaffolding	No	5		
1.2.28	PSHSS 7.10	h) Plant Operators	No	5		
1.2.29	PSHSS 6.1.6	i) Temporary Roadworks Signage	Sum	1		
1.2.30	PSHSS 7.17	j) Excavation Safety - Supervisors	No	12		
1.2.31		k) Other	Sum	1		
1.2.32	GSR 3; PSHSS 7.5	v) Provision of First Aid Boxes to GSR requirements	No	3		
1.2.33	GMR 18; PSHSS 7.13	vi) Lifting Equipment Inspection by AIA	Sum	1		
1.2.34	PSHSS 7.13	vii) Temporary Works Designs, Inspections and Approval	Sum	1		
1.2.35	CR 7(1)(c) (e)	viii) Submission of a Health and Safety File	Sum	1		
1.2.36	PSA 8.4.7	Compliance with EMP and EMPr	Sum	1		
1.2.37	PSA 8.4.8	Supervision of Subcontractor	Sum	1		
CARRIE	   FORWARD					
vi vi L						İ

RATE R		NIT QUANTITY	U
1 84 000.00	1 84 000.00 84 00	rov. 1 um	
	34000	% 84000	
110 000.00	0 110 000.00	rov. 0	
	0	% 0	
230 000.00	0 230 000.00	rov. 0	1
	0	% 0	
115 000.00	0 115 000.00	rov. 0	
	0	% 0	
50 000.00	1 50 000.00 50 00	rov. 1 um	
	50000	% 50000	
50 000.00	1 50 000.00 50 00	rov. 1	
	50000	% 50000	
1 100 000.00	1 100 000.00 100 00	rov. 1 um	1
	00000	% 100000	
50 000.00	1 50 000.00 50 00	rov. 1 um	
	50000	% 50000	
2 150 000.00	2 150 000.00 300 00	rov. 2 um	
	50000	% 150000	
50 000.00	1 50 000.00 50 00	rov. 1	1
	50000	% 50000	
1 10 000.00	1 10 000.00 10 00	rov. 1	
	10000	% 10000	
		um	S

BROUGHT FORWARD   Expanded Public Works Programme (EPWP)					QUANTITY	R	AMOUNT R
(EPWP)   Allowance for training on targeted labour   Prov.   Sum   1   100 000.00			BROUGHT FORWARD				
1.3.24   Overheads, charges and profit on 1.3.23   %   100000     1.3.25   Transportation and accomodation of workers for training where it is not possible to undertake in close proximity     1.3.26   Overheads, charges and profit on 1.3.25   %   10000     1.3.27   Equipment for the Engineer   Prov.   1   150 000.00   150 000.00     1.3.28   Overheads, Charges and Profit on item   1.3.27 above   1.3.29   Allowance for Civil Engineering Student / Trainine   %   96000     1.3.30   Overheads, Charges and Profit on item   1.3.27 above   1.3.31   Transportation (inluding fuel) for the Engineer for the duration of the contract.   Sum   1   420 000.00   600 000.00     1.3.31   Transportation (inluding fuel) for the Engineer for the duration of the contract.   Sum   1   125 000.00     1.3.31   Overheads, Charges and Profit on item   %   420000     1.3.31   Accomodation for the Engineer for the duration of the contract.   Sum   1   125 000.00     1.3.31   Overheads, Charges and Profit on item   %   420000     1.3.31   Accomodation for the Engineer for the duration of the contract.   Sum   1   125 000.00     1.3.33   Overheads, Charges and Profit on item   %   125000     1.3.34   Overheads, Charges and Profit on item   %   50000     1.3.35   Cellphone allowance for the Engineer for the duration of the contract.   Sum   1   100 000.00     1.3.35   Overheads, Charges and Profit on item   %   50000     1.3.36   Overheads, Charges and Profit on item   %   100000     1.3.37   Overheads, Charges and Profit on item   %   100000     1.3.38   Overheads, Charges and profit on item   %   100000     1.3.39   b) Materials   Prov.   1   100 000.00   100 000.00     1.3.40   Overheads, charges and profit on item   1.3.35 above   100000     1.3.41   C) Plant   Prov.   1   100 000.00   100 000.00     1.3.42   Overheads, charges and profit on item   1.3.38 above   100000     1.3.44   C) Plant   Prov.   1   100 000.00   100 000.00     1.3.45   Overheads, charges and profit on item   1.3.38 above   100000   10000000     1.3.46   Overheads,							
1.3.25   Transportation and accomodation of workers for training where it is not possible to undertake in close proximity   1.3.26   Overheads, charges and profit on 1.3.25   %   10000   150 000.00   150 000.00   13.327   Equipment for the Engineer   Prov. Sum   1   150 000.00   150 000.00   13.328   Overheads, Charges and Profit on item   1.3.27 above   1.3.29   Allowance for Civil Engineering Student / Trainee   Prov. Sum   1   96 000.00   96 000.00   96 000.00   13.330   Overheads, Charges and Profit on item   %   96000   1.3.29 above   1.3.31   Transportation (inluding fuel) for the Engineer for the duration of the contract.   Sum   1   420 000.00   600 000.00   13.31 above   1.3.31 above   1.3.33 above   1.3.34   Overheads, Charges and Profit on item   1.3.33 above   1.3.35 above   1.3.35 above   1.3.35 above   1.3.36   Overheads, Charges and Profit on item   1.3.38 above   1.3.35 above   1.3.35 above   1.3.36   Overheads, Charges and Profit on item   1.3.35 above   1.3.35 above   1.3.35 above   1.3.36   Overheads, Charges and Profit on item   1.3.35 above   1.3.36   Overheads, Charges and Profit on item   1.3.35 above	1.3.23		Allowance for training on targeted labour		1	100 000.00	100 000.00
workers for training where it is not possible to undertake in close proximity   1.3.26   Overheads, charges and profit on 1.3.25   %   10000	1.3.24		_ :	%	100000		
1.3.27   Equipment for the Engineer   Prov. Sum   1   150 000.00   150 000.00     1.3.28   Overheads, Charges and Profit on item   1.3.27 above   Allowance for Civil Engineering Student / Prov. Sum   1   96 000.00   96 000.00     1.3.29   Allowance for Civil Engineering Student / Prov. Sum   1   96 000.00   96 000.00     1.3.30   Overheads, Charges and Profit on item   1.3.29 above   1.3.31   Transportation (inluding fuel) for the Engineer for the duration of the contract. Sum   1   420 000.00   600 000.00     1.3.31   Overheads, Charges and Profit on item   4   420000   1.3.31 above   1.3.31 above   1.3.33   Accomodation for the Engineer for the Sum   1   125 000.00   125 000.00     1.3.34   Overheads, Charges and Profit on item   4   125000   1.3.33 above   1.3.35   Cellphone allowance for the Engineer for the duration of the contract. Sum   1   50 000.00   50 000.00     1.3.35   Overheads, Charges and Profit on item   4   50000   1.3.35 above   PSA 8.7   DAYWORK (See 8.1.2.1 (d))   1.3.35 above   PSA 8.7   DAYWORK (See 8.1.2.1 (d))   1.3.33 above   1.3.33 above   1.3.33 above   1.3.35 above   1	1.3.25		workers for training where it is not possible		1	10 000.00	10 000.00
1.3.28	1.3.26		_ :	%	10000		
1.3.27 above   Allowance for Civil Engineering Student / Sum   1   96 000.00   96 000.00	1.3.27		Equipment for the Engineer		1	150 000.00	150 000.00
1.3.30	1.3.28			%	150000		
1.3.29 above       1.3.29 above       1.3.29 above       1.420 000.00       600 000.00         1.3.31       Transportation (inluding fuel) for the Engineer for the duration of the contract.       Prov. Sum       1.420 000.00       600 000.00         1.3.32       Overheads, Charges and Profit on item duration of the contract.       Prov. Sum       1.125 000.00       125 000.00         1.3.34       Overheads, Charges and Profit on item 1.3.33 above       Prov. Sum       1.50 000.00       50 000.00         1.3.35       Cellphone allowance for the Engineer for the duration of the contract.       Prov. Sum       1.50 000.00       50 000.00         1.3.36       Overheads, Charges and Profit on item 1.3.35 above       Prov. Sum       1.100 000.00       100 000.00         1.3.39       DAYWORK (See 8.1.2.1 (d))       Prov. Sum       1.100 000.00       100 000.00         1.3.39       DMAterials       Prov. Sum       1.100 000.00       100 000.00         1.3.40       Overheads, charges and profit on item 1.3.35 above       Prov. Sum       1.100 000.00       100 000.00         1.3.41       Overheads, charges and profit on item 1.3.38 above       Prov. Sum       1.100 000.00       100 000.00	1.3.29				1	96 000.00	96 000.00
1.3.32	1.3.30			%	96000		
1.3.31 above  Accomodation for the Engineer for the duration of the contract.  Overheads, Charges and Profit on item 1.3.33 above  1.3.35  Cellphone allowance for the Engineer for the duration of the contract.  Overheads, Charges and Profit on item 1.3.35 above  PSA 8.7  DAYWORK (See 8.1.2.1 (d) )  a) Labour  Prov. Sum  Prov. Sum  1 100 000.00  100 000.00  1.3.36  Overheads, charges and profit on item 1.3.33 above  b) Materials  Prov. Sum  1 100 000.00  100 000.00  100 000.00  1.3.40  Overheads, charges and profit on item 1.3.35 above  c) Plant  Prov. Sum  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00  1 100 000.00	1.3.31				1	420 000.00	600 000.00
duration of the contract.   Sum     125000       1.3.34       Overheads, Charges and Profit on item   1.3.33 above     125000       1.3.35     Cellphone allowance for the Engineer for the duration of the contract.   Prov. Sum	1.3.32			%	420000		
1.3.33 above  Cellphone allowance for the Engineer for the duration of the contract.  1.3.36  Overheads, Charges and Profit on item 1.3.35 above  PSA 8.7  DAYWORK (See 8.1.2.1 (d))  a) Labour  Prov. Sum  Prov. Sum  1.00000  1.3.38  Overheads, charges and profit on item 1.3.33 above  b) Materials  Prov. Sum  1.00000  1.3.39  b) Materials  Prov. Sum  1.00000  1.3.30 b) Materials  Prov. Sum  1.00000  1.3.35 above  1.3.40  Overheads, charges and profit on item 1.3.35 above  1.3.41  c) Plant  Prov. Sum  1.00000  1.000000  1.0000000  1.0000000  1.00000000	1.3.33				1	125 000.00	125 000.00
the duration of the contract.    Sum	1.3.34			%	125000		
1.3.35 above PSA 8.7 DAYWORK (See 8.1.2.1 (d) )  1.3.37 a) Labour Prov. Sum 1 100 000.00 100 000.00  1.3.38 Overheads, charges and profit on item 1.3.39 b) Materials Prov. Sum 1 100 000.00 100 000.00  1.3.40 Overheads, charges and profit on item 1.3.35 above Prov. Sum 1 100 000.00  1.3.41 c) Plant Prov. 1 100 000.00 100 000.00  1.3.42 Overheads, charges and profit on item 1.3.38 above 1 100000 1000000	1.3.35				1	50 000.00	50 000.00
1.3.37       a) Labour       Prov. Sum       1 100 000.00       100 000.00         1.3.38       Overheads, charges and profit on item 1.3.33 above       % 100000       100 000.00         1.3.39       b) Materials       Prov. Sum       1 100 000.00       100 000.00         1.3.40       Overheads, charges and profit on item 1.3.35 above       % 100000       100 000.00       100 000.00         1.3.41       c) Plant       Prov. Sum       1 100 000.00       100 000.00         1.3.42       Overheads, charges and profit on item 1.3.38 above       % 100000       1000000	1.3.36			%	50000		
1.3.38 Overheads, charges and profit on item 1.3.39 b) Materials Prov. Sum 1.3.40 Overheads, charges and profit on item 1.3.35 above 1.3.41 c) Plant Prov. Sum 1.3.42 Overheads, charges and profit on item 1.3.38 above 1.3.38 above 1.3.42 Overheads, charges and profit on item 1.3.38 above 1.3.42 Overheads, charges and profit on item 1.3.38 above 1.3.42 Overheads, charges and profit on item 1.3.38 above		PSA 8.7	DAYWORK (See 8.1.2.1 (d) )				
1.3.33 above b) Materials Prov. Sum  1.3.40 Overheads, charges and profit on item 1.3.41 c) Plant Prov. Sum  1.00000 1.000000 1.000000 1.0000000 1.0000000 1.00000000	1.3.37		a) Labour		1	100 000.00	100 000.00
1.3.40 Overheads, charges and profit on item 1.3.41 C) Plant Prov. Sum 100000 1.3.42 Overheads, charges and profit on item 1.3.42 Overheads, charges and profit on item 1.3.42 Overheads, charges and profit on item 1.3.42 No 100000  1.3.42 No 100000  1.3.42 No 100000  1.3.42 No 100000  1.3.42 No 100000 1.3.42 No 100000 1.3.42 No 100000 1.3.42 No	1.3.38			%	100000		
1.3.35 above  1.3.41 c) Plant Prov. Sum  1.3.42 Overheads, charges and profit on item 1.3.38 above 1.3.38 above 1.3.42	1.3.39		b) Materials		1	100 000.00	100 000.00
1.3.42 Overheads, charges and profit on item	1.3.40			%	100000		
1.3.38 above	1.3.41		c) Plant		1	100 000.00	100 000.00
1.4 8.8 TEMPORARY WORKS (See 8.1.2.1 (d) )	1.3.42			%	100000		
	1.4	8.8	TEMPORARY WORKS (See 8.1.2.1 (d) )				

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
1.4.1	8.8.1	Main Access Road to Works (construct and maintain)	Sum	1		
1.4.2	8.8.1	Construct Main Access Road to Completed Reservoir	Sum	1		
1.4.3	PSA 8.8.2	Dealing with traffic	Sum	1		
1.4.4	PSA 8.8.7	Contractor to provide "Construction Record" Information	Sum	1		
1.4.5				0		

### SECTION 2: SABS 1200 C - SITE CLEARANCE (PIPE ROUTE)

m No. No. ha m m	6250 5 5 0.5 100 0.5 50	
No. No. ha m km	5 0.5 100 0.5	
No. ha m km	5 0.5 100 0.5	
No. ha m km	5 0.5 100 0.5	
ha m km m	0.5 100 0.5	
m km m	100 0.5 50	
km m	0.5 50	
m	50	
m	50	

## SECTION 3: SABS 1200 D - EARTHWORKS (PIPE ROUTE)

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
	8.3.8	Existing Services				
	8.3.8.1	Location				
3.1		c) Excavate by hand in soft material to expose water / telkom / electrical service (LI)	m³	50		
	8.3.10	Topsoiling				
.2		(i) Pipeline Route	m²	3905		
	8.3.11	Grassing or Vegetation Cover				
.3		(i) Pipeline Route, outside of canelands	m²	975		
3.4	PSD 8.3.13	Erosion Control Berms	m²	50		
.5	PSD 8.3.14	Sandbag Protection to pipe trench	No.	50		
3.6	PSD 8.3.15	Extra-over Sandbag Protection for Stabilization	No.	50		

#### SECTION 4: SABS 1200 DB - PIPE TRENCHES

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
	8.3.1	Site Clearance and (if specified) Removal of Topsoil				
	PSDB 8.3.1.C	c) Remove Topsoil				
4.1		(i) 150mm	m²	3905		
4.2		(ii) 300mm (within canelands)	m²	975		
	8.3.2	Excavation				
		a) Excavate in all materials for trenches, backfill, compact, and dispose of surplus material				
		For pipes:				
		Up to and including 400mm diam. for total trench depth:				
4.3		Over 0 and up to 1m (LI)	m	1300		
4.4		Over 1m and up to 2m	m	3090		
4.5		Over 2m and up to 3m	m	60		
		b) Extra-over item (a) above for:				
4.6		1) Intermediate excavation	m³	3310		
4.7		2) Hard rock excavation	m³	10		
4.8		Hard rock excavation near residential buildings (Mounted hydraulic breaker where directed by the Engineer)	m³	160		
4.9		c) Excavate and dispose of unsuitable material from trench bottom (provisional)	m³	210		
4.10	8.3.2(b)	Excavate and dispose of unsuitable material from trench bottom within a 1km radius freehaul (Provisional)	m³	3970		
	8.3.3	Excavation Ancillaries				
	8.3.3.1	Make up deficiency in backfill material (provisional)				
4.11		a) from other necessary excavations on site	m³	2010		
4.12		c) by importation from commercial or off site sources selected by the Contractor	m³	250		
4.13	PSDB 8.3.3.1	d) Stabilised backfill (4% cement)	m³	435		
4.14	8.3.3.3	Compaction in road reserves	m³	180		
4.15	8.3.3.4	Overhaul				
4.16		a) Limited Overhaul (provisional)	m³	250		
4.17		b) Long Overhaul (provisional)	m³.km	250		
	8.3.4	Particular Items				
		a) Shore trench opposite structure or service				
4.18		(i) Existing houses and toilet structures	m	50		

#### SECTION 4: SABS 1200 DB - PIPE TRENCHES

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
	8.3.5	Existing Services that Intersect or Adjoin a Pipe Trench				
		a) Services that intersect a trench				
1.19		i) Concrete pipe up to 1000 mm dia.	No.	2.5		
1.20		ii) Water pipe up to 400 mm dia.	No.	3.5		
1.21		iii) Electrical Cables	No.	3.5		
		b) Services that adjoin a trench				
1.22		i) Water pipe up to 400 mm dia.	m	50		
1.23		ii) Telkom Cables	m	10		
1.24		ii) Electrical Cables	m	10		
	8.3.6	Finishing				
	8.3.6.1	Reinstate road surfaces complete with all courses				
1.25		a) Gravel on shoulders and wearing course	m²	20		
1.26		c) Asphalt of thickness 30mm in roadway	m²	120		
		4 CARRIED FORWARD TO SUMMARY				

#### SECTION 5: SABS 1200 L - MEDIUM-PRESSURE PIPELINES

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
	8.2.1	Supply, Lay and Bed Pipes Complete with Couplings				
		250 Diameter Pipes				
5.1		(i) 250mm diam. mPVC CL16 to SABS 966-2	m	2060		
		200 Diameter Pipes				
5.2		(i) 200mm diam. mPVC CL16 to SABS 966-2	m	1800		
		160 Diameter Pipes				
5.3		(i) 160mm diam. mPVC CL16 to SABS 966-2	m	1180		
		63 Diameter Pipes				
5.4		(i) 63mm diam. HDPe CL16 to SABS 533	m	1200		
	8.2.2	Extra-over 8.2.1 for the Supplying, Laying and Bedding of Specials Complete with Couplings				
		mPVC Double Socketed Bends CL16				
		160 Diameter Pipe Bends				
5.5		(i) 160 mm Ø 11¼° bend	No.	1		
5.6		(ii) 160 mm Ø 22½° bend	No.	4		
5.7		(iii) 160 mm Ø 45° bend	No.	2		
		250 Diameter Pipe Bends				
5.8		(i) 250 mm Ø 11¼° bend	No.	12		
5.9		(ii) 250 mm Ø 22½° bend	No.	5		
5.10		(iii) 250 mm Ø 45° bend	No.	1		
	8.2.3	Extra-over 8.2.1 for the Supplying, Fixing, and Bedding of Valves				
		Isolating Valve assembly complete as per detail on drawing no. PRJ040-CT1-C303				
5.11		i) 250 mm Ø ND, PN16	No.	2		
5.12		ii) 160 mm Ø ND, PN16	No.	1		
		Scour Valve assembly complete as per detail on drawing no. PRJ040-CT1-C302				
5.13		(i) 80 mm Ø ND off 160 mm Ø OD mPVC pipe, PN 16	No.	1		
5.14		(ii) 80 mm Ø ND off 250 mm Ø OD mPVC pipe, PN 16	No.	3		
		Air Valve assembly complete as per detail on drawing no. PRJ040-CT1-C301				
5.15		(i) 25 mm Ø ND, PN 16	No.	7		
5.16		(ii) 50 mm Ø ND, PN 16	No.	1		
	1	(iii) 80 mm Ø ND, PN 16	No.	1		

#### SECTION 5: SABS 1200 L - MEDIUM-PRESSURE PIPELINES

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
		Inlet chamber assembly complete as per drawing no. PRJ040-CT1-C312				
5.18		i) 160 mm Ø ND, PN16	No	1		
	8.2.11	Anchor / Thrust Blocks and Pedestals as per drawing no. PRJ040-CT1-C306				
5.19		b) Concrete Grade 25MPa / 19mm	m³	9		
5.20		b) Formwork	m²	125		
		Reinforced concrete thrust wall complete including excavation, concrete, rough formwork, flanged 1.5m long GMS puddle pipe as per detail drawing including steel to uPVC adaptors for mains testing at each end and every 500m for the following pipe size (concrete to extend both 200mm below invert and above crown of pipes):				
5.21		(i) 200mm dia mPVC	No	4		
		Reinforced concrete thrust wall complete including excavation, concrete, rough formwork, flanged 1.5m long GMS puddle pipe as per detail drawing including steel to uPVC adaptors for mains testing at each end and every 1400m for the following pipe size (concrete to extend both 200mm below invert and above crown of pipes):				
5.22		(i) 160mm dia mPVC	No	1		
	8.2.13	Valves and Hydrant Chambers etc				
5.23		Isolating Valve Chamber complete as per detail on drawing no. PRJ040-CT1-C303	No.	3		
5.24		Scour Valve Chambers complete as per detail on drawing no. PRJ040-CT1-C302	No.	4		
5.25		Air Valve Chambers complete as per detail on drawing no. PRJ040-CT1-C301	No.	9		
5.26		Inlet Chamber complete as per detail on drawing no. PRJ040-CT1-C312	No.	1		
5.27	PSL 8.2.16	Supply and install pipeline markers as per detail on drawing no. PRJ040-CT1-C307	No.	54		
5.28	PSL 8.2.17	Supply and install valve markers as per detail on drawing no. PRJ040-CT1-C307	No.	17		
		Sundry Items				
		Supply, lay, bed and install concrete pipe sleeves for road crossings, inclusive of all items (viz. skids etc) necessary for pipe support through sleeve as per drawing No Class 100D, Spigot and Socket type as per drawing no. PRJ040-CT1-C3 for:				
5.29		(i) 600 mm ND Concrete Sleeve for 400 mm ND mPVC pipe	m	5		

#### SECTION 5: SABS 1200 L - MEDIUM-PRESSURE PIPELINES

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
5.30		(ii) 600 mm ND Concrete Sleeve for 215 mm ND mPVC pipe	m	5		
5.31		(iii) 600 mm ND Concrete Sleeve for 200 mm ND mPVC pipe	m	5		
TOTAL FO	OR SECTION	5 CARRIED FORWARD TO SUMMARY				

SECTION 6: SABS 1200 LB - BEDDING: (PIPES)

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
	8.2.1	Supply only of Bedding from Trench Excavation within 0.5km				
3.1		a) Selected granular material	m³	81.56		
6.2		b) Selected fill material	m³	57.07913		
	8.2.2	Supply only of Bedding by Importation				
	8.2.2.3	From commercial sources (Provisional)				
3.3		a) Selected granular material	m³	888.173		
6.4		b) Selected fill material	m³	513.71217		
6.5		c) 19mm graded crushed stone	m³	200		
5.6	8.2.3	Concrete Bedding Cradle	m³	5		
	8.2.4	Encasing of Pipes in Concrete				
6.7		(i) Grade 25 MPa / 19 mm concrete	m³	7.5		
8.8	8.2.5	Overhaul of Material for Bedding Cradle and Selected Fill Blanket	m³.km	1500		
		6 CARRIED FORWARD TO SUMMARY				

#### **SECTION 7: 750KL ELEVATED TANK**

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
7.1	SABS 1200 C 8.2.1					
7.1.1	PSC 3.1 PSDB 8.3.1.2	Clear and grub elevated tank base area including removing of existing trees, shrubs, rocks and debris as directed by the Engineer	m²	210		
		Remove and grub large trees and tree stumps of girth				
7.1.2		over 0,5m and up to and including 1m	No	2		
7.1.3		over 1m and up to and including 2m	No	1		
7.1.4		over 2m and up to and including 3m	No	1		
7.1.5	8.2.10 PSC 3.1 PSDB 8.3.1.C	Remove topsoil to a depth of 150 mm prior to carrying out bulk excavation, stockpile and maintain for further use	m²	210		
7.2	SABS 1200 DB PSD					
		Bulk Excavations				
7.2.1	8.3.2	Excavate in all materials for structural steel tank stand base, and stockpile for later use and maintain for backfill and dispose of the remainder to an approved spoil site (including shaping to be free-draining and with embankment slopes shallower than 1:3 and compacting)		0		
7.2.2		a) Over 0m up to 2.0m	m³	420		
7.2.3		b) Over 2m up to 3.5m	m³	310		
7.2.4		Extra over for:				
7.2.5		Intermediate materials	m³	75		
7.2.6		Hard rock excavation	m³	75		
7.2.7	8.3.2 b.3	Boulder excavation Class A	m³	15		
		Restricted excavations:				
		Excavate in all materials, and stockpile for later use and maintain for backfill and dispose of the remainder to an approved spoil site (including shaping to be freedraining and with embankment slopes shallower than 1:3 and compacting)				
7.2.8		Under floor slab	m³	235		
		Extra over for:				
7.2.9		Intermediate materials	m³	25		
7.2.10		Hard rock excavation	m³	25		
		Backfill:				
7.2.11		Backfill with material from stockpile Below ground level and compact to 95% Mod. AASHTO from excavation to form new levels	m³	235		

#### **SECTION 7: 750KL ELEVATED TANK**

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
	8.3.4	Imported Geo-fill below floor slab as directed.				
7.2.12		Rip and recompact 150mm layer insitu material, stabilised with 2% lime and compact to 95% mod. Aashto dry density at O.M.C. below floor slab as directed by the engineer.	m²	210		
7.2.13		Import, place and compact in individual layers "G5" material to form Geo-fill below floor slab as directed by the engineer. Fill to be placed in layers typically 200 mm thick when loose and compacted to 97% Modified AASHTO dry density at O.M.C.	m³	165		
7.2.14		Import, place and compact in individual layers "G2" material to form Geo-fill below floor slab as directed by the engineer. Fill to be placed in layers typically 200 mm thick when loose and compacted to 98% Modified AASHTO dry density at O.M.C.	m³	70		
		Finishing				
7.2.15		Topsoil obtained from prescribed stockpile on site in grassed areas 100 mm thick	m²	175		
		Grassing				
7.2.16		Grassing with sods including watering, maintaining etc for the duration of the contract	m²	150		
7.3	SABS 1200 GA & PSG PSG 7.2.6					
		UNREINFORCED CONCRETE				
		15 Mpa / 26mm Concrete				
7.3.1	8.4.2	Blinding layer minimum 75 mm thick	m²	205		
	8.4.3	20 Mpa / 19mm Concrete				
7.3.2		Mass concrete in encasing inlet, scour and outlet pipes	m³	4		
	8.4.3 PSG 5.5.11 PSG 7.2.6	REINFORCED CONCRETE				
		30 Mpa / 19mm Concrete				
7.3.3		concrete base and concrete stubs	m³	308		
7.3.4		Column stubs	m³	5		
	8.2 PSG 8.1.1 8.2.2	FORMWORK				
	8.2.1	Rough Vertical to form				
7.3.5		.01 1500mm high shutter for sides of concrete base	m²	60		

#### **SECTION 7: 750KL ELEVATED TANK**

PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
	BROUGHT FORWARD				
	.02 1000mm high shutter for sides of concrete stubs	m²	30		
8.4.4 8.4.4 (a) PSG 5.5.10.2	UNFORMED SURFACE FINISHES				
	Wood floated finish (to degree of accuracy II)				
	Top of concrete base	m²	205		
8.4.4 (b) PSG 5.5.10.3	Steel float finish				
	Top of concrete stubs	m²	4		
8.1.2	REINFORCEMENT				
8.3.1	Mild steel bars				
	(a) 8 mm	ton	0.5		
	(a) 10 mm	ton	1		
	High - tensile steel bars				
	(a) 12 mm	ton	15		
	(b) 16 mm	ton	10		
	(c) 20 mm	ton	6		
SABS 1200 HA	SUNDRY STEELWORK				
	SECTIONAL STEEL TANK				
	Supply and install a 784kl bolted galvanised sectional steel tank on a 20m high galvanised structural steel tank support (tower). Rate to include internal and external ladders, hand rails and access platform. Lockable access hatch to prevent unauthorised access to the platform must also be provided. All Hot-dip galvanising to SANS 121 (ISO 1461).Rate to include water tightness testing, safety files & structural engineering certificates for the tank and tank support, etc.	Sum			
	8.4.4 8.4.4 (a) PSG 5.5.10.2  8.4.4 (b) PSG 5.5.10.3  8.1.2  8.3.1	BROUGHT FORWARD .02 1000mm high shutter for sides of concrete stubs  8.4.4 8.4.4 (a) PSG 5.5.10.2  Wood floated finish (to degree of accuracy II)  Top of concrete base  8.4.4 (b) PSG 5.5.10.3  Top of concrete stubs  8.1.2  REINFORCEMENT  8.3.1  Mild steel bars (a) 8 mm (a) 10 mm  High - tensile steel bars (a) 12 mm (b) 16 mm (c) 20 mm  SABS 1200 HA  SECTIONAL STEEL TANK Supply and install a 784kl bolted galvanised sectional steel tank on a 20m high galvanised structural steel tank support (tower). Rate to include internal and external ladders, hand rails and access platform. Lockable access hatch to prevent unauthorised access to the platform must also be provided. All Hot-dip galvanising to SANS 121 (ISO 1461).Rate to include water tightness testing, safety files & structural engineering certificactes for the	BROUGHT FORWARD  .02 1000mm high shutter for sides of concrete stubs  8.4.4 8.4.4 (a) PSG 5.5.10.2  Wood floated finish (to degree of accuracy II)  Top of concrete base m²  8.4.4 (b) PSG 5.5.10.3  Top of concrete stubs m²  8.1.2  REINFORCEMENT  8.3.1  Mild steel bars  (a) 8 mm ton  (a) 10 mm ton  High - tensile steel bars  (a) 12 mm (b) 16 mm  (c) 20 mm ton  SABS 1200  SUNDRY STEELWORK  SECTIONAL STEEL TANK Supply and install a 784kl bolted galvanised sectional steel tank support (tower). Rate to include internal and external ladders, hand rails and access platform. Lockable access hatch to prevent unauthorised access to the platform must also be provided. All Hot-dip galvanising to SANS 121 (ISO 1461). Rate to include water tightness testing, safety files & structural engineering certifiactes for the	REFERS  BROUGHT FORWARD  .02 1000mm high shutter for sides of concrete stubs  8.4.4 8.4.4 (a) PSG 5.5.10.2  Wood floated finish (to degree of accuracy II)  Top of concrete base m² 205  8.4.4 (b) PSG 5.5.10.3  Top of concrete stubs m² 4  8.1.2 REINFORCEMENT  8.3.1 Mild steel bars  (a) 8 mm ton 0.5  (a) 10 mm ton 1  High - tensile steel bars  (a) 12 mm ton 15  (b) 16 mm ton 10  (c) 20 mm ton 6  SABS 1200 SUNDRY STEELWORK  HA  SECTIONAL STEEL TANK  Supply and install a 784kl bolted galvanised sectional steel tank support (tower). Rate to include internal and external ladders, hand rails and access platform. Lockable access to the platform must also be provided. All Hot-dip galvanising to SANS 121 (ISO 1461). Rate to include water tightness testing, safety files & structural engineering certifiactes for the	BROUGHT FORWARD  .02 1000mm high shutter for sides of concrete stubs  8.4.4 8.4.4 (a) PSG 5.5.10.2  Wood floated finish (to degree of accuracy II)  Top of concrete base  8.4.4 (b) PSG 5.5.10.3  Top of concrete stubs  REINFORCEMENT  8.3.1 Mild steel bars  (a) 8 mm  (a) 10 mm  High - tensile steel bars  (a) 12 mm  (b) 16 mm  (c) 20 mm  SABS 1200  SABS

**SECTION 8: PIPE JACKING** 

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		Pipe Jacking Establishment				
8.1	8.2.1 a)	Fixed Charges DR08030	Sum	1		
8.2	8.2.1 b)	Fixed Charges Access road to Sindaweni	Sum	1		
8.3		Time Charges DR08031(Period to be stated by Tenderer)	Sum	1		
8.4		Time Charges Access road to Sindaweni (Period to be stated by Tenderer)	Sum	1		
8.5	8.2.2	Supply and Delivery to site of Jacking Pipes (ID600, Class 100D, Concrete Jacking Pipes	m	60		
8.6	8.2.3	Jacking of Pipes Complete, Includign the filling the voids with non organic, sand (ID 600 Class 100D, Concrete Jacking Pipes)	m	60		
8.7	8.2.4	Excavation for Jacking in all Materials (Hard Rock)	m³	30		
8.8		Construction of 460 mm thick , 700 width and 700mm high brick wall closure to ends of concrete jacked pipes following installation of bulk water pipeline and sleevs.	No	4		
		8 CARRIED FORWARD TO SUMMARY				

#### **SECTION 9: BOREHOLE DEVELOPMENT**

ITEM PAYMI	ENT RS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
9.1	en:	Borehole Developments Including Pump House with concrete roof slab, Diesel Generator, Equiping the BH, Pump, all Mechanical and electrical components installed complete with pump controls, including geohydrological assesments, driling and all relevant testing with reports.	ProvSum	1	2 000 000.00	2 000 000.00
TOTAL FOR SEC	TION	O CARRIED FORWARD TO SUMMARY				

SECTION 10: SUBCONTRACTOR'S SCOPE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
10.1	C3.3.2.1	Scope of mandatory subcontract works	Sum	1	6 600 000.00	6 600 000.00
 TOTAL F	OR SECTION	10 CARRIED FORWARD TO SUMMARY				

SECTION	DESCRIPTION	AMOUNT R
1	SABS 1200 A - GENERAL	R
2	SABS 1200 C - SITE CLEARANCE (PIPE ROUTE)	R
3	SABS 1200 D - EARTHWORKS (PIPE ROUTE)	R
4	SABS 1200 DB - PIPE TRENCHES	R
5	SABS 1200 L - MEDIUM-PRESSURE PIPELINES	R
6	SABS 1200 LB - BEDDING: (PIPES)	R
7	750KL ELEVATED TANK	R
8	PIPE JACKING	R
9	BOREHOLE DEVELOPMENT	R
10	SUBCONTRACTOR'S SCOPE	R
А	NETT TOTAL OF TENDER	R
В	ADD CONTINGENCIES 10.0% OF NETT TOTAL	R
С	TENDER AMOUNT	R
D	ALLOWANCE FOR CONTRACT PRICE ADJUSTMENT	R
E	ALLOWANCE FOR VAT AT 15.0%	R
F	TOTAL TENDER SUM	R