SECTION 1 - GENERAL ITEMS							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	SANS1200A		**GENERAL ITEMS**				
	8,3		**FIXED-CHARGE ITEMS**				
1,1	8.3.1		Contractor's Contractual Requirements.	Sum	1		
	8.3.2		Establish Facilities on the Site:				
	8.3.2.1		**Facilities for Employer's Agent:**				
1,2	8.3.2.1.a)		Furnished office	No	2		
1,3	8.3.2.1.b)		Name board (No. 2)	Sum	1		
1,4	8.3.2.1.c)		Provision of survey equipment	Sum	1		
1,5	PSA 8.3.2.1.d)		Conference/Boardroom	Sum	1		
	8.3.2.2		**Facilities for Contractor:**				
1,6	8.3.3.2.a)		Offices and storage sheds.	Sum	1		
1,7	8.3.2.2.b)		Workshops.	Sum	1		
1,8	8.3.2.2.c)		Laboratories.	Sum	1		
1,9	8.3.2.2.d)		Living Accommodation.	Sum	1		
1,10	8.3.2.2.e)		Ablution and latrine facilities.	Sum	1		
1,11	8.3.2.2.f)		Tools and equipment.	Sum	1		
1,12	8.3.2.2.g)		Water supplies, electric power and communication.	Sum	1		
1,13	8.3.2.2.h)		Dealing with water. (sub 5.5)	Sum	1		
1,14	8.3.2.2.i)		Access. (sub-clause 5.8)	Sum	1		
1,15	8.3.2.2.j)		Plant.	Sum	1		
1,16	8.3.3		Other fixed-charge obligations.	Sum	1		
1,17	8.3.4		Remove Contractor's Site Establishment.	Sum	1		
	8,4		**TIME-RELATED ITEMS**				
1,18	8.4.1		Contractual Requirements.	Sum	1		
	8.4.2		**Operate and maintain facilities on the Site for duration of Construction:**				
			Facilities for the Employer's Agent:				
1,19	8.4.2.1.a)		Cellular Telephone Cost.	Sum/month	36		
1,20	8.4.2.1.b)		Name board (No. 2)	Sum/month	1		
1,21	8.4.2.1.c)		Survey Assistant and Materials	Sum/month	36		
1,22	PSA8.4.2.1.d)		Accommodation for the Employer's Agent Representative.	Sum/month	36		
1,23	PSA8.4.2.1.e)		Administrative assistance to the Contractor	Sum/month	36		
1,24	PSA8.4.2.1.f)		Health and Safety Inspections on Site.	Sum/month	36		
1,25	PSA8.4.2.1.g)		Environmental Management Plan Audits.	Sum/month	36		
	8.4.2.2		**Facilities for Contractor:**				
1,26	8.4.2.2.a)		Office and storage sheds.	Sum/month	36		
1,27	8.4.2.2.b)		Workshops.	Sum/month	36		
1,28	8.4.2.2.c)		Laboratories. This include allowance for a commercial laboratory to be established in Amsterdam with the sole purpose of material testing for the works.	Sum/month	36		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 1 - GENERAL ITEMS							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
1,29	8.4.2.2.d)		Living accommodation.	Sum/month	36		
1,30	8.4.2.2.e)		Ablution and latrine facilities.	Sum/month	36		
1,31	8.4.2.2.f)		Tools and equipment.	Sum/month	36		
1,32	8.4.2.2.g)		Water supplies, electric power and communication.	Sum/month	36		
1,33	8.4.2.2.h)		Dealing with water.	Sum/month	36		
1,34	8.4.2.2.i)		Access.	Sum/month	36		
1,35	8.4.2.2.j)		Plant.	Sum/month	36		
1,36	8.4.3		Contractor's supervision for duration of construction.	Sum/month	36		
1,37	8.4.4		Company and Head Office overhead costs for the duration of construction.	Sum	1		
1,38	8.4.5		Other time related obligations.	Sum	1		
1,39			Standing time due to riots outside the Contractors control.	Sum/wd	60		
	8,5		**SUMS STATED PROVISIONALLY BY THE EMPLOYER'S AGENT**				
1,40	8.5 b)1		Employment of a full-time Social Facilitator (ISD Consultant) to liaise with and facilitate all communication, meetings and ISD administration with the Local Municipality, local community structures and local Business Forum.	**PSum/ Month**	**36**	**R 45 000,00**	**R 1 620 000,00**
1,41	8.5 b)1		Employment of a Community Liaison Officer (CLO) to be identified by the Project Steering Committee (PSC) in consultation with the Ward Councillor and ISD Consultant.	**PSum/ Month**	**36**	**R 8 000,00**	**R 288 000,00**
1,42	8.5 b)1		Additional tests that may be required by the Employer's Agent over and above normal quality control tests performed by the Contractor.	**PSum**	**1**	**R 600 000,00**	**R 600 000,00**
1,43	8.5 b)1		Provision of Training for targeted Labourers	**PSum**	**1**	**R1 000 000,00**	**R 1 000 000,00**
1,44	8.5 b)1		Safeguarding of excavations as required by the Engineer	**PSum**	**1**	**R 100 000,00**	**R 100 000,00**
1,45	8.5 b)2		Overheads, charges and profit on items 1.40 - 1.44 here above.	**%**		**R3 608 000,00**	
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 1 - GENERAL ITEMS							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			OCCUPATIONAL HEALTH AND SAFETY				
1,46	PSA 9.3		Compile and submit for approval by Employer's Agent a comprehensive Health and Safety Plan, based on the requirements of the OHS Act, No. 85, Amendment Act No. 181 of 1993 and OHSA Construction Regulations 2014.	Sum	1		
1,47	PSA 9.4		Implement Health and Safety requirements based on approved H&S Plan and submit monthly reports as prescribed. **A detailed schedule to be included as appendix to the Bill of Quantities, to demonstrate sufficient provision has been made in costing item 1.47 to meet and maintain OHS requirements for the duration of construction.**	Month	36		
1,48	PSA 9.5		Compile and submit for approval by Employer's Agent, a realistic construction programme within the stated period and before commencement of construction.	Sum	1		
1,49			iii) Fulfil legislated and/or specified requirements for blasting (incl. submission of plans).	Sum	1		
1,50	PSA 9.6		Compile and submit for approval by Employer's Agent a comprehensive Project Specific EMP, based on the requirements of the Environmental Authorisation, approved EMPr, Environmental specification and any other licence/permit obtained for this development.	Sum	1		
1.51	PSA 9.7		Implement and monitor the approved Project Specific EMP based on approved EMPr with monthly Reporting. **A detailed schedule to be included as appendix to the Bill of Quantities, to demonstrate sufficient provision has been made in costing item 1.51 to meet and maintain EMPr requirements for the duration of construction.**	Month	36		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 1 - GENERAL ITEMS							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			GEOTECHNICAL ACTIVITIES				
1.52			Detailed evaluation and reporting on stilling basin and access road slide areas and stability, shear key requirements on right flank shear zone and paleochannel treatment by geotechnical specialist.	**PSum**	**1**	**R 186 000,00**	**R 186 000,00**
1.53			Laboratory shear strength tests to inform item 1.51	No	15		
1.54			Inspection of excavation bases by geotechnical specialist and signing off as being competent for the structure.	**PSum**	**1**	**R76 000,00**	**R76 000,00**
1.55			Excavation trials to evaluate best excavation method. Trials to be directed by geotechnical specialist.	m³	3860		
			Extra-over for:				
1.56	8.3.2b) ii		Hard rock excavation. (Blasting or pneumatic drilling)	m³	730		
1.57			Additional geotechnical drilling investigation and laboratory testing directed by the Geotechnical Specialist.	**PSum**	**1**	**R380 000,00**	**R380 000,00**
1.58			Geotechnical Close-out Report	**PSum**	**1**	**R165 000,00**	**R165 000,00**
1.59			Overheads, charges and profit on items 1.52,1.54,1.57 and 1.58 here above.	**%**		**R807 000,00**	
TOTAL FORWARDED TO SUMMARY							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 2 - DAYWORKS							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	SABS 1200 A 8.7		**DAYWORKS**				
			LABOUR				
			Expenditure on Dayworks items (e.g. wages paid to workmen and invoiced sum of cost of material delivered on site).				
2,1			Unskilled	Days	30		
2,2			Semi-skilled	Days	30		
2,3			Construction-hand and operator	Days	30		
2,4			Carpenter	Days	30		
2,5			Clerk	Days	30		
2,6			Artisan	Days	30		
2,7			Foreman	Days	30		
2,8			Gangers and section leaders	Days	30		
2,9			Steel fixer	Days	30		
2,10			Bricklayer or plasterer	Days	30		
2,11			Welder	Days	30		
			MATERIALS				
2,12			Provisional sum for cost of the materials during the execution of Dayworks	**PSum**	**1**	**R 1 722 000,00**	**R 1 722 000,00**
2,13			Contractors mark-up on item 2.12	**%**		**R 1 722 000,00**	
			PLANT				
			Tenderers to insert the hire rate at which each item will be charged that will cover all relevant costs of plant hire, including operating crew				
2,14			Lowbed transport of plant to and from site	km	500		
2,15			Bulldozer and ripper (D6 or equivalent)	Days	30		
2,16			Grader (120G or equivalent)	Days	30		
2,17			Front end wheel loaders (Cat950 or similar)	Days	30		
2,18			Back acting excavators (Hitachi EX200 or similar)	Days	30		
2,19			TLB	Days	30		
2,20			Tractors and drawn trailers and rollers	Days	30		
2,21			Compactors (D72Y or equivalent)	Days	30		
2,22			Compressors (250CFM or equivalent)	Days	30		
2,23			Trucks (7t or equivalent)	Days	30		
2,24			Tip trucks (10t or equivalent)	Days	30		
2,25			10 000L Water tanker	Days	30		
2,26			Plate compactor	Days	30		
2,27			Light delivery vehicles (1t or equivalent)	km	10000		
2,28			Generator	Days	30		
2,29			Large Water pumps	Days	30		
TOTAL FORWARDED TO SUMMARY							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 3 - TEMPORARY WORKS							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
			Survey Works				
3,1	PSA 9.2 C3.4.13		Detail setting out of the Works from survey beacons by a registered surveyor and all other survey related work.	Sum	1		
3,2	8.8.5(a)		Tri-goniometrical survey beacons, bench marks and plot boundary pegs, -locate and record and expose on completion of Works	Sum	1		
3,3	8.8.5(b)		Tri-goniometrical survey beacons and plot boundary pegs, -protect and re-establish located under item 3.2, as ordered, by a Registered Land Surveyor on completion of the Works	Sum	1		
3,4	PSA 9.1		Submit detail As-built drawings of all existing services and adjustments to construction drawings at completion.	Sum	1		
3,5	PSA 9.8		Control of ground water, sub-surface, stormwater or spoiled water during construction.	Sum	1		
			Roads & Traffic Accommodation				
3,6	8.8.1		Main Access Road to Works (construct and maintain)	Sum	1		
3,7	PSDB 8.3.7		Accommodation of Traffic. (At Site Entrance)	Sum	1		
			Provision of temporary bridges for maintaining access during dam construction				
3,8			Temporary pedestrian bridges	No	5		
3,90			Temporary vehicular bridges	No	5		
			Moving of temporary bridges to and their re-erection in entirely new positions				
3,10			Temporary pedestrian bridges	No	2		
3,11			Temporary vehicular bridges	No	5		
			Temporary traffic-control facilities				
3,12			Flagmen	Person/ hour	720		
3,13			Portable Stop and Go-Ry signs	No	4		
3,14			Amber flicker lights	No	2		
3,15			Road signs, TR-series, 1200 mm in diameter	No	10		
3,16			Road signs, TW-series, 1524 mm sides	No	10		
3,17			Danger plates and delineators (1000 mm x 250 mm)	No	20		
3,18			Traffic cones (500mm height)	No	20		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 3 - TEMPORARY WORKS							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Re-use or removal of traffic-control facilities				
3,19			Amber flicker lights	No	2		
3,20			Road signs, TR-series, 1200 mm in diameter	No	5		
3,21			Road signs, TW-series, 1524 mm sides	No	5		
3,22			Danger plates and delineators (1000 mm x 250 mm)	No	10		
3,23			Traffic cones (500mm height)	No	10		
			Concrete batch plant				
3,24			Establish Concrete Mixing Facilities on the site	Sum	1		
3,25			Maintain facilities on site	Months	36		
3,26			Remove Concrete Mixing Facilities from the site	Sum	1		
			Control testing of:				
3,27			Aggregates	No.	200		
3,28			Concrete mix & cube test	No.	30		
3,29			Concrete Mix design - Trial mixes	No.	10		
			Rockfill				
3,30			Rock UCS on core	No.	10		
3,31			Rock UCM on core	No.	10		
3,32			XRF Analysis - mineralogy	No.	10		
			Control testing of:				
3,33			Asphalt	No.	30		
3,34			Bitumen	No.	10		
3,35			Asphalt Mix design	No.	5		
3,36			Batch	No.	720		
3,37			Production of concrete	m^3	39 833		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 3 - TEMPORARY WORKS							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			ENVIRONMENTAL				
	COTO 1.6		**CLEARING AND GRUBBING**				
	C1.6.8		**Conservation of vegetation:**				
3,38			Establishment of a temporary nursery				
	PSC1.6.8.1 a)		Fixed Cost - Establishment	Sum	1		
	PSC1.6.8.1 b)		Time Related - Operate and Maintain	Months	36		
	PSC1.6.8.1 c)		Fixed Cost - De-establishment	Sum	1		
	PSC1.6.8.7		Specialist to identify and mark all plants to be conserved including application for relevant permits and the like.	Sum	1		
3,39	C1.6.8.2		Removal, storage and maintenance of shrubs	No.	100		
3,40	C1.6.8.2		Removal, storage and maintenance of trees, girth up to and including 1,0 m	No.	50		
3,41	C1.6.8.3		Removal, storage and maintenance of trees, girth exceeding 1,0 m up to and	No.	20		
	COTO 11.8		**LANDSCAPING AND PLANTING PLANTS**				
	C11.8.9		**Trees and Shrubs**				
	C11.8.9.2		Planting and Establishing:				
3,42			Trees, all types and sizes	No.	70		
3,43			Shrubs, all types and sizes	No.	100		
			Biomonitoring according to EMP:				
3,44			Fixed Cost - Establishment	Sum	1		
3,45			Time Related - Operate and Maintain	Months	36		
3,46			Fixed Cost - De-establishment	Sum	1		
TOTAL FORWARDED TO SUMMARY							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 4 - RIVER DIVERSION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
			TEMPORARY WATERCOURSE DIVERSION AND COFFER DAM				
4,1	C3.2.2.1		Compile and submit for approval by Engineer, a comprehensive Watercourse Diversion and Coffer Dam Plan including method statement of dealing with water during construction phase, inclusive of sketches and quantities. Plan to be based on Engineer's river diversion methodology Phases 1-4 as per DDR. Construction of River Diversion Works based in the approved River Diversion Plan, inclusive of any and all additional insurance costs due to risks reflect on the Contractor for this portion of the Work	Sum	1		
			Phase 1				
4,2			Main Cofferdam and Roadway with culverts through platform 2. Cofferdams for protection of right bank and part central causeway foundation. Refer to Drwg.2021/04/DW-L07	Sum	1		
			Phase 2				
4,3			Spillway apron area and left bank of causeway coffered off, to allow excavation of apron area and completion of causeway. Refer to Drwg.2021/04/DW-L08	Sum	1		
			Phase 3				
4,4			Cofferdam modification to divert flow through outlet works. Refer to Drwg.2021/04/DW-L09	Sum	1		
			Phase 4				
4,5			Impoundment, with closure of the outlet block diversion, removal of the channelling wall in the apron and part closure of the causeway.	Sum	1		
TOTAL FORWARDED TO SUMMARY							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 5 - DRILLING AND GROUTING							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	PART. SPEC. PJ		**DRILLING AND GROUTING**				
			SETTING UP: Initial setting up and removal of plant and equipment at each hole, moving same to next hole, clearing up on completion at each borehole.				
5,1	PJ7.1 a)		On natural surfaces or earth fill	No.	---		Rate Only
5,2	PJ7.1 b)		On concrete base - 1m thick	No.	75		
5,3	PJ7.1 c)		On Gravity Section	No.	45		
5,4	PJ7.1 d)		In Gallery	No.	90		
5,5	PJ7.1 e)		Extra over 5.1 through 5.4 for setting up drilling equipment at existing hole where staged grouting or testing requires removal of drilling equipment.	No.	210		
5,6	PJ7.1 f)		for Drilling drainage holes	No.	210		
5,6	PJ7.1 g)		for Paleo channel remedial work	No.	10		
			DRILLING				
			Drilling holes for grouting or drainage holes				
5,7	PJ7.2.1 a)		Subvertical down	m	990		
5,8	PJ7.2.1 b)		Inclined down 60 - 30 degrees	m	1 370		
5,9	PJ7.2.1 c)		Sub horizontal	m	---		Rate Only
5,10	PJ7.2.1 d)		Inclined up 60 - 30 degrees	m	---		Rate Only
5,11	PJ7.2.1 e)		Subvertical up	m	---		Rate Only
			Redrilling through grout				
5,12	PJ7.2.2 a)		Subvertical down	m	685		
5,13	PJ7.2.2 b)		Inclined down 60 - 30 degrees	m	---		Rate only
5,14	PJ7.2.2 c)		Sub horizontal	m	---		Rate only
5,15	PJ7.2.2 d)		Inclined up 60 - 30 degrees	m	---		Rate only
5,16	PJ7.2.2 e)		Subvertical up	m	---		Rate only
			Drilling into Paleo boulder deposit				
5,17	PJ7.2.3 a)		Subvertical down	m	250		
	PJ7.3		**Casings / Standpipes**				
5,18			Setting in galvanised MS pipe casing, including screwed caps	m	1 050		
5,19	PJ7.4		**Pressure tests**	No.	480		
			Grout Materials				
5,20	PJ7.5 a)		Cement	50kg	7 000		
5,21	PJ7.5 b)		Bentonite	40kg	450		
5,22	PJ7.5 c)		Sand	m^3	---		Rate only
5,23	PJ7.6		Flushing of Grout	No.	420		
	PJ7.7		**Remedial work to Paleo Channel Void**				
5,24			Colcrete grouting of Voids	m^3	240		
5,25	PJ7.8		Progress and Grout Takes Reporting and Completion Report	Sum	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 5 - DRILLING AND GROUTING							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
5,26			Grout tests within trial excavation	No.	30		
5.27			Grout efficiency testing by geotechnical specialist including fieldwork and reporting.	**PSum**	**1**	**R 139 000,00**	**R 139 000,00**
5.28			Overheads, charges and profit on items 5.27 here above.	**%**		**R 139 000,00**	
TOTAL FORWARDED TO SUMMARY							

Contractor | Witness 1 | Witness 2 | Employer | Witness 1 | Witness 2

SECTION 6 - QUARRY							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	COTO 1.6		**CLEARING AND GRUBBING**				
	C1.6.1		**Clearing**				
6,1	C1.6.1.1		Clearing with machines and some hand labour where necessary	ha	2,5		
6,2	C1.6.1.2		Clearing with hand labour only when labour enhanced work is specified	ha	0,25		
	C1.6.2		**Grubbing**				
6,3	C1.6.2.1		Grubbing with machines and some hand labour where necessary	ha	0,33		
6,4	C1.6.2.2		Grubbing with hand labour only when labour enhanced work is specified or it is not practical to use a machine	ha	0,05		
	C1.6.3		**Removal and grubbing of large trees and tree stumps:**				
6,5	C1.6.3.1		Girth equal or exceeding 1,0m up to and including 2,0m	No.	30		
6,6	C1.6.3.2		Girth equal or exceeding 2,0m up to and including 3,0m	No.	15		
6,7	C1.6.3.3		Girth exceeding 3,0m	No.	5		
	C1.6.8		**Conservation of vegetation:**				
6,8	C1.6.8.1		Establishment of a temporary nursery	No.	1		
6,9	C1.6.8.2		Removal, storage and maintenance of shrubs	No.	100		
6,10	C1.6.8.2		Removal, storage and maintenance of trees, girth up to and including 1,0 m	No.	50		
6,11	C1.6.8.3		Removal, storage and maintenance of trees, girth exceeding 1,0 m up to and including 2,0 m	No.	20		
	C1.6.9		**Conservation of topsoil:**				
6,12	C1.6.9.1		Stockpiling topsoil	m³	4 850		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 6 - QUARRY							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	C1.6.10		**Disposal of hazardous waste material:**				
6,13	C1.6.10.1		Disposal of hazardous waste material at an approved hazardous waste material facility	**PSum**	**1**	**R 300 000,00**	**R 300 000,00**
6,14	C1.6.10.2		Handling cost, profit and all other charges in respect of item 6.13	**%**		**R 300 000,00**	
	COTO 3.1		**DRAINS**				
	C3.1.6		**Construction of banks and dykes:**				
6,15	C3.1.6.1		Banks and dykes using conventional methods	m³	4 550		
6,16	C3.1.6.2		Banks and dykes using labour enhanced construction methods	m³	450		
	COTO 4.1		**BORROW MATERIALS**				
	C4.1.1		**Compiling and implementing M&U plans:**				
6,17	C4.1.1.2		For the quarry	No.	1		
	C4.1.2		**Additional material investigations during the supplementary exploration:**				
6,18	C4.1.2.1		Cost of additional trail pits and/or drilling and laboratory testing	**PSum**	**1**	**R 500 000,00**	**R 500 000,00**
6,19	C4.1.2.2		Handling cost, profit and all other charges in respect of item 6.18	**%**		**R 500 000,00**	
	C4.1.4		**Removing of the overburden**				
	C4.1.4.2		**In quarries:**				
6,20			a) Soft Material	m³	3750		
6,21			b) Hard Material	m³	11200		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 6 - QUARRY							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	C4.1.5		**Excavating of materials in the quarry, material obtained from**				
6,22	C4.1.5.1		Soft excavation	m³	5525		
6,23	C4.1.5.2		Boulder excavation class A	m³	8290		
6,24	C4.1.5.3		Boulder excavation class B	m³	8290		
6,25	C4.1.5.4		Hard excavation (other than by blasting)	m³	11050		
6,25	C4.1.5.4		Hard excavation (by blasting)	m³	77350		
	C4.1.6		**Providing crushing, screening and related plants:**				
6,26	C4.1.6.3		Multiple-stage crushing and screening plant	No.	1		
	C4.1.7		**Producing the material by:**				
	C4.1.7.3		Multiple-stage crushing including screening:				
6,27			Rockfill material	m³	59 300		
6,28			Asphalt Protection Zone	m³	5 900		
6,29			Filter Zone	m³	14 950		
6,30			Concrete Aggregate	m³	24 000		
6,31			Asphalt Concrete Aggregate	m³	1 750		
6,32			Riprap	m³	4 600		
	C4.1.8		**Moving and re-erecting the crushing, screening and related plants on the site:**				
6,33	C4.1.8.3		Multiple-stage crushing and screening plant	No.	1		
6,34	C4.1.9		Breaking down oversize material	m³	8 000		
6,35	C4.1.10		Compacting the floor of the stockpile sites	m³	1 400		
6,36	C4.1.11		Construction a platform for the stockpile site	m³	12 100		
	C4.1.12		**Stockpiling the material:**				
6,37	C4.1.12.1		Material from a producing plant	m³	110 500		
6,38	C4.1.12.2		Material directly from the excavation	m³	110 500		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 6 - QUARRY							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
6,39	C4.1.13		Removing surplus material from the stockpile	m³	11 050		
	C4.1.14.1		**Removing the fill platform and temporary banks at the stockpile sites upon completion:**				
6,40	C4.1.14.2		Temporary banks	m³	3 100		
	C4.1.15		**Shaping and finishing the borrow pit and quarry areas, and the stockpile sites**				
			Shaping and finishing the borrow pit and quarry areas, and the stockpile sites:				
6,41			b) Quarry	ha	1,5		
	C4.1.16		**Personnel**				
6,42	C4.1.16.1		Materials manager	month	20		
6,43	C4.1.16.2		Excavation controller	month	20		
6,44	C4.1.16.3		Stockpile controller	month	20		
	COTO 11.5		**FENCING**				
	PSC11.5.11		**Supply and erect new fencing material complete for new fences and for supplementing material in existing fences which are being repaired or removed:**				
6,45			7 Strand Zinc-coated barbed wire (2mm) with wooden straining posts and droppers	m	700		
	COTO 11.8		**LANDSCAPING AND PLANTING PLANTS**				
	C11.8.3		**Preparing the areas for grassing:**				
6,46	C11.8.3.4		Topsoiling of borrow pits by using topsoil obtained from borrow areas	m³	3 500		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 6 - QUARRY							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	C11.8.4		**Grassing**				
	C11.8.4.3		Hydroseeding:				
6,47			c) Hydroseeding	ha	1		
	C11.8.9		**Trees and Shrubs**				
	C11.8.9.2		Planting and Establishing:				
6,48			a) Trees, all types and sizes	No.	70		
6,49			b) Shrubs, all types and sizes	No.	100		
	COTO 12.6		**MECHANICALLY STABILISED FILL AND GABIONS**				
6,50	C12.6.17		Geotextile (GeoJute)	m^2	5 500		
	COTO 12.10		**HARD EXCAVATION BY BLASTING**				
6,51	C12.10.1		Excavation in hard rock using controlled blasting techniques	m^3	77 210		
	C12.12		**CONSTRUCTION DEWATERING**				
6,52	PSC12.12.9		Installing and commissioning all requisite plant and equipment to undertake dewatering by well system offered.	Sum	1		
TOTAL FORWARDED TO SUMMARY							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 7 - INSTRUMENTATION AND EQUIPMENT							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	PART. SPEC. PI	**SC**	**INSTRUMENTATION AND EQUIPMENT**				
	PI8.1		**Design Development of Monitoring Instrumentation and Equipment**				
7,1			Allowance for the design, supply, delivery and installation of monitoring instrumentation. Instrumentation to be done by a nominated **specialist sub-contractor**. The following minimum measurements to be allowed for.	Sum	1		
	PI8.2		**Piezometers**				
7,2	PI10.2 a)		Piezometer installation at foundation sites complete	No.	12		
7,3	PI10.2 b)		Cables and cable ducts including bends and draw boxes	m	1 200		
7,4	PI10.2 c)		Temporary Terminal Box	Sum	1		
7,5	PI10.2 d)		Permanent Terminal	Sum	1		
7,6	PI10.2 e)		Readout Unit and Calibration	Sum	1		
	PI8.3		**Dam Internal Temperature Measurement**				
	PI10.3 a)		Cabled Temperature Sensors				
7,7	PI10.3 a) i)		Unit	No.	13		
7,8	PI10.3 a) ii)		Cables and cable ducts including bends and draw boxes	m	1 300		
7,9	PI10.3 a) iii)		Temporary Terminal Box	Sum	1		
7,10	PI10.3 a) iv)		Permanent Terminal	Sum	1		
7,11	PI10.3 a) v)		Readout Unit and Calibration	Sum	1		
	PI10.3 b)		Wireless Temperature Sensors				
7,12	PI10.3 b) i)		Unit	No.	7		
7,13	PI10.3 b) ii)		Readout Unit and Calibration	m	1		
	PI8.4		**Displacement measurement**				
7,14	PI10.3 a)		3D Crack Displacement / Tilt Surface Displacement Gauges	No.	12		
7,15	PI10.3 a) i)		Digital micrometer reading units	No.	3		
	PI8.5		**Physical Measurement Systems**				
	PI8.5 a)		Reservoir Level				
7,16	PI8.5 a) i)		i) Automatic Sensing / Recoding Unit with SCADA connection (0-25m)	Sum	1		
7,17	PI8.5 a) ii)		Reservoir Level Gauge Plates	Sum	1		
	PI8.5 b)		Release Flow Measurement				
7,18	PI8.5 b) i)		200mm dia. Strap-On Magflo Meter	No.	2		
7,19	PI8.5 b) ii)		800mm dia. Strap-On Magflo Meter	No.	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Employer | Witness 1 | Witness 2

SECTION 7 - INSTRUMENTATION AND EQUIPMENT							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
7,20	PI8.5 c)		Seepage Flow Measurement				
	PI8.5 c) i)		Electronic Level Sensor (0-500mm)	No.	6		
	PI8.5 c) ii)		Sensor Mounting and Cabling	No.	5		
	PI8.5 c) iii)		Readout Display and Recording & SCADA connection	No.	5		
	PI8.5 c) iv)		Gauge Plates	No.	5		
	PI8.6		**Training**				
7,21	PI8.6 a)		a) Formal Training	**PSum**	**1**	**R 100 000,00**	**R 100 000,00**
7,22	PI8.6 b)		b) Site Training	**PSum**	**1**	**R 50 000,00**	**R 50 000,00**
7,23	PI8.7		Handling fee for Contractor's cost and expenses on items 7.21 to 7.23.	**%**		**R 150 000,00**	
TOTAL FORWARDED TO SUMMARY							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	SABS1200C		**CLEAR SITE**				
	PSC 8.2.1		Clear and grub all shrubs and vegetation for areas as required and instructed by Employer's Agent for construction:				
8,1			Areas	m²	10 200		
	8.2.2		Remove and grub large trees (including tree stumps and roots) of girth over				
8,2	8.2.2.a)		and up to 1,0 m.	No.	10		
8,3	8.2.2.b)		1,0 m - 2,0 m.	No.	5		
8,4	8.2.2.c)		2,0 m - 3,0 m.	No.	2		
8,5	PSDB 3.1		Removal of boulders Class A and B and dispose.	m³	300		
8,6	8.2.10		Remove topsoil to nominal depth of 150mm and stockpile.	m³	1 530		
	SABS 1200 D		**BULK EARTHWORKS**				
	8,3		**SCHEDULED EARTHWORKS ITEMS**				
			Bulk Excavation:				
	PSD 8.3.2		Excavate by machine in all materials and use for embankment or backfill or dispose, as ordered:				
8,7			Stockpile and use for backfill at dam	m³	44 150		
8,8			Dispose	m³	29 450		
			Extra-over for:				
8,9	8.3.2b) ii		Hard rock excavation. (Blasting or pneumatic drilling)	m³	16 500		
8,10	PSD 8.3.2		Boulder excavation and dump, Class A and B.	m³	12 130		
	PSD 8.3.3		Restricted Excavations:				
8,11			Excavate in all materials and use for embankment or backfill or dispose, as ordered.	m³	1 500		
	PSD 5.2.5		Overhaul:				
8,12	PSD 5.2.5.1		Extra-over items 8.7 to 8.11 for hauling of material in excess of the free haul distance, only if instructed by Employer's Agent.	m³.km	29 500		
8,13	8.3.4.a)		Filling cavity underneath apron with crushed rock: process, place and compact.	m³	1 950		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SABS 1200 DE		**SMALL EARTH DAMS**				
	8.3.4		Preparation of Exposed Surfaces				
8,14	8.3.4 a)		Core Trench	m²	200		
8,15	8.3.4 b)		Area to be covered by dam wall	m²	5 000		
	8.3.5		Forming Embankment - including all compaction and density testing				
8,16	8.3.5 a)		Selected Impervious Material - Asphalt Core - including all temporary formwork, handling, reheating, placing and compaction	m³	1 716		
8,17	8.3.5 b)		Transition - Fine Protection Zone	m³	5 864		
8,18	8.3.5 g)		Coarse Filter Material - Filter Zone	m³	7 700		
8,19	8.3.5 c)		Unselected Pervious Material - Upstream Spoilfill Embankment	m³	22 028		
8,20	PSDE 8.3.5 i)		Upstream Rockfill Embankment	m³	13 134		
8,21	PSDE 8.3.5 i)		Downstream Rockfill Embankment	m³	25 131		
8,22	8.3.5 d)		Riprap	m³	4 600		
8,23	8.3.5 h)		Gravel Capping	m³	200		
8,24	8.3.6		Toe Drain, Complete Construction - Drainage channel, Ref. 395 mesh with rock inserts. See DWG 2021/04/DW-D01	m	170		
8,25	8.3.7		Extra over 8.14 to 8.21 for forming trial embankments	Sum	1		
8,26	8.2.8 b)		Overhaul - Long haul	m³.km	191 380		
	SABS1200G		**CONCRETE (STUCTURAL)**				
	8,2		**SCHEDULED FORMWORK ITEMS**				
	8.2.1		**Rough** (Measured to 150mm below FGL where applicable)				
			Vertical				
8,27			Upstream dam LF	m²	407		
8,28			Downstream steps LF	m²	407		
8,29			Upstream Spillway	m²	500		
8,30			Downstream Spillway	m²	500		
8,31			Retaining walls LF	m²	430		
8,32			Retaining walls RF	m²	1 800		
8,33			Intake wing walls	m²	205		
8,34			Outlet Block access	m²	270		
8,35			Core footing	m²	210		
8,36			Asphaltic concrete core	m²	5 200		
8,37			Apron toe	m²	180		
8,38			Drainage collection chamber	m²	170		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Smooth (Measured to 150mm below FGL where applicable)				
			Vertical				
8,39			Upstream dam LF	m²	780		
8,40			Downstream steps LF	m²	780		
8,41			Upstream Spillway	m²	945		
8,42			Downstream Spillway	m²	945		
8,43			Retaining walls LF	m²	430		
8,44			Retaining walls RF	m²	1 375		
8,45			Intake wing walls	m²	160		
8,46			Outlet Block	m²	1 065		
8,47			Access Shaft	m²	300		
8,48			Stair Shaft	m²	220		
8,49			Gallery	m²	600		
8,50			Gate storage	m²	14		
8,51			Pipe Gallery	m²	150		
8,52			River diversion Tunnel	m²	105		
8,53			Drainage collection chamber	m²	120		
8,54			Collection chamber roof	m²	5		
			Horizontal				
8,55			Pipe Gallery	m²	50		
8,56			River diversion Tunnel	m²	32		
8,57			NOC LF Cantilever Slabs	m²	33		
8,58			V-Notch bay	m²	5		
8,59			Collection chamber roof	m²	26		
			Special Smooth, Repaired and Rubbed / Special Off-Form				
			Vertical				
8,60			Spillway Toe	m²	65		
8,61			Breakers and Splitters	m²	62		
8,62			Apron and Stilling Basin Blocks	m²	560		
8,63			Shear Key Joints between Blocks	m²	1 915		
			Horizontal curved				
8,64			Spillway Crest	m²	630		
8,65			Gallery	m²	404		
8,66			Access Gallery	m²	26		
	8.2.6		Boxed out holes Small, other than circular of area up to and including 0.1m²				
8,67			Up to and including 0.5m deep	No	4		
8,68			Over 0.5m and including 1m deep	No	---		Rate only
			Large, other than circular, of area over 0.1m² and up to 1.0m²				
8,69			Up to and including 0.5m deep	No	----		Rate only
8,70			Over 0.5m and including 1m deep	No	20		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	8,3		**SCHEDULED REINFORCEMENT ITEMS**				
8,71			High tensile steel bars	t	694		
8,72			Mild steel bars	t	5		
8,73			Rock Anchors 32mm dia.	t	17		
			CONCRETE				
	8.4.2		Blinding layer:				
8,74			Class A19 S21, minimum 50mm thick	m²	5 240		
	8.4.2		No Fines:				
8,75			Class A20 S25	m³	100		
	8.4.3		Strength concrete:				
8,76			Class A20 S16	m³	10		
8,77			Class A40 S16	m³	10		
			Class A8 S20				
8,78			Screed in inlet building	m³	12		
8,79			Screed in gallery	m³	30		
8,80			Pipe Gallery	m³	7		
8,81			River diversion	m³	7		
8,82			Access Gallery	m³	4		
8,83			Drainage chamber	m³	3		
			Class A75 S20				
8,84			Spillway bottom layers	m³	1 760		
8,85			Spillway other lifts of hearting	m³	17 600		
8,86			Concrete Gravity bottom layers	m³	725		
8,87			Concrete Gravity other lifts of hearting	m³	7 220		
			Class A13 S25				
8,88			Survey Bollards	m³	10		
			Class A20 S25				
8,89			Apron	m³	1 855		
8,90			Retaining - West wall	m³	4 425		
8,91			Retaining - East wall	m³	604		
8,92			Inlet wing walls	m³	186		
8,93			Drainage chamber	m³	120		
8,94			Chamber roof	m³	31		
8,95			Outlet Block	m³	1 950		
			Class A25 S25				
8,96			Asphalt Core Footing	m³	320		
			Class A40 S25				
8,97			Spillway surface layer	m³	352		
8,98			Spillway crest body	m³	880		
8,99			Spillway around galleries, shafts and openings	m³	405		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Class A75 S25				
8,100			Spillway bottom layer	m³	880		
			Class A25 S35				
8,101			Spillway crest 400mm skim	m³	275		
			Class A20 S35				
8,102			Concrete Balustrade	m³	26		
8,103			In filling of overbreak in excavation in rock to form blinding layer	m³	200		
			Asphalt				
8,104			0-3% Voids Asphalt	m³	1 716		
	8.4.4		Unformed surface finishes:				
			Wood-floated finishes to:				
8,105			Pipe Gallery	m²	50		
8,106			River diversion	m²	35		
8,107			Retaining Footing - West wall	m²	1 015		
8,108			Retaining Footing - East wall	m²	355		
8,109			Core footing	m²	400		
8,110			NOC Left Flank	m²	295		
8,111			Downstream Steps Left Flank	m²	595		
8,112			Spillway Steps	m²	985		
8,113			Stilling Basin and Apron	m²	1 595		
8,114			Retaining - West wall	m²	60		
8,115			Retaining - East wall	m²	35		
8,116			Gallery Floor	m²	255		
8,117			Access Gallery Floor	m²	26		
8,118			Outlet Block Floors and Steps	m²	196		
8,119			Spillway Guide Piers	m²	13		
8,120			Drainage chamber	m²	19		
8,121			Drainage chamber roof	m²	26		
			Steel-floated finishes to:				
8,122			Extra over Wood-Floated Finishes as instructed.	m²	30		
8,123			Spillway crest screeded and floated to very tight tolerances	m²	1 190		
	8,5		**JOINTS**				
8,124			Shear Key Joints:				
			350mm PVC Centre Bulb Waterbar	m	520		
			Formed drain	m	260		
			Embedded tube-a-manchette grout duct - 50mm ms pipe with drilled holes @ 250mm c/c with rubber pipe cover.	m	260		
			Formed or Drilled drain connection to inspection gallery or downstream face.	m	60		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
8,125			Apron and Stilling Basin Blocks - 350mm PVC Centre Bulb Waterbar	m	560		
8,126			Concrete Plinth Joints - Swellable Seal (SikaSwell or similar)	m	150		
	8,7		**GROUTING**				
	PSG 8.7 c)		Grouting of anchor bars with non-shrink grout	m³	4		
	SABS1200HA		**STRUCTURAL STEELWORK**				
	8.3.1		Structural Steel				
8,127			Outlet Block - Top structure as per drawings including portal frames for Crawl Beam and Electrical Hoist	t	7,5		
8,128			Outlet Block - Working Platforms	t	0,5		
8,129			Drainange Chamber - Working Platforms	t	0,5		
8,130	PSHA 8.3.2		Galvanised steel handrailing	m	13		
8,131	PSHA 8.3.3		Internal cat ladder (SS grade 304)				
			a) Service shaft with safety cage (4m)	Sum	1		
			b) Drainage chamber (2.5m)	Sum	1		
8,132	PSHA 8.3.4		SS 304 open grid steel flooring complete and installed with SS 304 frames.				
			a) Outlet Block	m²	34		
			b) Drainage chamber	m²	11		
8,133	PSHA 8.3.7		Internal staircase complete with handrailing and resting platforms (Galvanised)				
			a) Outlet Block (18.5m high)	Sum	1		
			b) Drainage chamber (10m high Internal, 3.5m high External)	Sum	1		
8,134	PSHA 8.3.8		**PIPE SUPPORTS** Pipe supports complete as per detail drawings. Steel support brackets to be galvanised (heavy coating). Primary Supports - with bonded 3mm teflon liner				
			a) 50mm STD Typical Pipe Shoe	No.	22		
			b) 100mm STD Typical Pipe Shoe	No.	14		
			c) 200mm STD Typical Pipe Shoe	No.	26		
			d) 600mm STD Typical Pipe Shoe	No.	1		
			e) 800mm STD Typical Pipe Shoe	No.	5		
			Secondary Supports & Structure				
			a) M/S Standard Members - Hot Dip Galvanized	kg	1 500		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	PM4		**GATES, SCREENS, GATE GUIDE FRAMES & BUILT IN PARTS**				
8,135			2400mm x 2800mm River Diversion Gate complete with seal, S355JR, drawing ref. DCE-2565-S-23, Mass 1620kg	No.	1		
8,136			Intake gates (complete with seal) for:				
			a) 800mm Gate, S355JR Galvanised, drawing ref. DCE-2565-S-14, Mass 330kg	No.	1		
			b) 200mm Top Gate, S355JR Galvanised, drawing ref. DCE-2565-S-13, Mass 70kg	No.	2		
			c) 200mm Bottom Gate, S355JR Galvanised, drawing ref. DCE-2565-S-12, Mass 60kg	No.	2		
8,137			Intake screens for:				
			a) 200mm Gate, 304L SS, drawing ref. DCE-2565-S-16, Mass 70kg	No.	10		
8,138			Grapple beam for:				
			a) 800mm Outlet gate, S355JR Galvanised, drawing ref. DCE-2565-S-17, Mass 120kg	No.	1		
			b) 200mm Outlet gate, S355JR Galvanised, drawing ref. DCE-2565-S-18, Mass 30kg	No.	1		
			Gate Guide Frame - provide as frames with guides for both sides from 304 L Stainless Steel rolled sections				
8,139			Intake gate guides for:				
			a) Part 1, drawing ref. DCE-2565-S-06, Mass 590kg, 2408mm	No.	1		
			b) Part 2, drawing ref. DCE-2565-S-06, Mass 580kg, 2400mm	No.	3		
			c) Part 3, drawing ref. DCE-2565-S-08, Mass 380kg, 1054mm	No.	1		
			d) Part 4, drawing ref. DCE-2565-S-07, Mass 610kg, 2524mm	No.	2		
			e) Part 5, drawing ref. DCE-2565-S-09, Mass 370kg, 1034mm	No.	1		
			f) Part 6, drawing ref. DCE-2565-S-07, Mass 170kg, 1592mm	No.	2		
			g) Part 7, drawing ref. DCE-2565-S-10, Mass 550kg, 1752mm	No.	1		
8,140			River diversion gate				
			i) Cast-in Frame, S355JR, drawing ref. DCE-2565-S-21, Mass 610kg	No	1		
			ii) Gate Frame, S355JR, drawing ref. DCE-2565-S-22, Mass 1760kg	No	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
8,141			Allowance for Bolts, Nuts & Washers and general other parts				
			a) Bolts, Nuts and Washers	Sum	1		
			b) General Parts - 304L SS	Sum	1		
			c) General Parts - S355JR Galvanised	Sum	1		
	PSHA 8.3.14		**Lifting Gear for Equipment**				
	PSHA 8.3.14a) & PM6		**Manual Lifting Gear for Equipment**				
8,142			Supply and installation of 203 x 133 x 30 kg/m galvanised I-Beam with trolley stops and hanging bolts @ nominal 750mm c/c.in Outlet galleries.				
			i) Straight	m	30		
			ii) 30 degree Bend 500mm radius with 500mm straight each end (1261mm oa).	No.	1		
			Supply and install telescopic sub rail with fixed wheels at 1.5m cc to extend overhead 3.5m beam by 2.0m.	No.	2		
8,143			Supply and install chain block 0,5ton capacity, 10m lift, 2m chain hang - hook support (no trolley) in Seepage Measurement well	No	1		
	PSHA 8.3.14b) & PM5		**Electrical Lifting Gear for Equipment**				
8,144			i) Steel gantry crane (2.0 ton) complete with electrical multi-directional crawler beam for Outlet Block. Nominal maximum hoist 8m/min (7.5kW).	No.	1		
8,145			Roof hooks (M16 U-Bolts with anchor plate) fixed in the Pipe Gallery every 2.5m	No.	8		
8,146			Security gate as per drawings to fit access gallery entrance, modified to accommodate I-Beam.	No.	1		
8,147	PSHA 8.3.10		Stainless Steel Penstock Gates for 400mm openings in drainage collection	No.	1		
8,148	PSHA 8.3.11		Stainless steel weir and baffle plates for leakage monitoring chamber	No.	5		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
8,149	PSHA 8.3.12		**Floating Boom** a) Markers complete as per drawing. 550mm Ø Special Water Marker - Detail 2	No.	5		
			400mm Ø Demarcation Marker - Detail 3	No.	8		
			600mm Ø Demarcation Marker - Detail 3	No.	3		
			600mm Ø Demarcation Marker with Anchor Block - Detail 1	No.	2		
			b) Cables 10mm Ø 7x19 Strand Wire Rope (Stainless Steel)	m	200		
	PB 8.2.1		**GENERAL BUILDING WORK** **BRICKWORK**				
8,150			Supply and construct double brick wall (230mm), inclusive of mortar and brick force every third layer, inside to be plastered.	m²	140		
8,151			Supply and construct single brick wall (110mm), inclusive of mortar and brick force every third layer, to be plastered.	m²	20		
8,152			Supply and install Kilcher Limitless bearing (40kN/m) between concrete roof and brickwork. (230mm wide)	m²	5		
	PB 8.2.5		**Tiling**				
8,153			Ceramic tiles inside the forebays of the drainage collection chamber	m²	17		
			ROOFING, CLADDING AND CEILINGS				
8,154	PB 8.2.12		Roof structure and sheeting (Klip-Lok Chromadek or similar) for: Intake Building	m²	80		
8,155	PB 8.2.12		Cladding (Klip-Lok Chromadek or similar) for: Intake Building	m²	60		
8,156	PB 8.2.15		Ceilings complete with cornice and paint	m²	21		
	PB 8.2.17		**JOINERY**				
8,157			Supply and install door D1 (800mmx2100mm high) complete with frame. (Solid wood)	No.	2		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
8,158			Supply and install door D2 (1200mmx2100mm high) complete with frame. (Steel Transformer Type CV)	No.	1		
8,159			Supply and install door D3 (1600mmx2100mm high) complete with frame. (Steel Transformer Type MV)	No.	1		
8,160			Supply and install door (800mmx2100mm high) complete with frame. (Steel Transformer Type BV)	No.	1		
	PB 8.2.18		**METALWORK**				
8,161			Supply and install window W1 (2300mmx1400mm high) complete with frame.	No.	2		
8,162			Supply and install Window W3 (650mmx2100mm high) complete with frame.	No.	1		
8,163			Supply and install Louvred Window (400mmx600mm high) complete with frame.	No.	2		
	PB 8.2.20		**PAINTING**				
8,164			Door D1 and frame with Woodoc 50 or approved water repellent wood sealer.	No.	2		
8,165			Door D2 and frame with Plascon Velveglo or approved.	No.	1		
8,166			Door D3 and frame with Plascon Velveglo or approved.	No.	1		
8,167			Door BV and frame with Plascon Velveglo or approved.	No.	1		
8,168			Windows and frame with Plascon Velveglo or approved.	No.	5		
			PLUMBING Plumbing to include all supply, waste, vent and soil piping and fittings, taps, stopcocks etc. to provide a complete installation.				
8,169			Hand wash basin	No.	1		
8,170			WC and cistern	No.	1		
8,171			Gulley and sewer piping, fittings and connection to sewer pipes.	No.	1		
8,172			Water piping, fittings and connection to water supply.	No.	1		
8,173			Shower fittings, water piping, fittings and connection to water supply. Gulley and drain piping, fittings and connection to sewer pipes.	No.	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SABS 1200 L		**MEDIUM PRESSURE PIPE LINES**				
	8.2.5 & PM3		**Supply and Place Pipes, Valves and Specials** Outlet Block - Drawing DCE-2565-G-01 to 24				
			Pipes and Specials				
8,174			***100mm*** *dia PIPE, WELDED, SCH. 10S, ASME B36.19M-ASTM A312-304L S/S*	m	48		
8,175			***200mm*** *dia PIPE, WELDED, SCH. 10S, ASME B36.19M-ASTM A312-304L S/S*	m	60		
8,176			***25mm*** *dia PIPE, WELDED, SCH. 10S, ASME B36.19M-ASTM A312-304L S/S*	m	6		
8,177			***25mm*** *dia ELBOW, 90 DEG., LR, BW, SCH. 10S-ASTM A403-304L S/S*	No.	4		
8,178			***50mm*** *dia PIPE, WELDED, SCH. 10S, ASME B36.19M-ASTM A312-304L S/S*	m	66		
8,179			***600mm*** *dia PIPE, WELDED, SCH. 10S, ASME B36.19M-ASTM A312-304L S/S*	m	6		
8,180			***800mm*** *dia PIPE, WELDED, SCH. 10S, ASME B36.19M-ASTM A312-304L S/S*	m	12		
8,181			***100mm*** *dia ELBOW, 90 DEG., LR, BW, SCH. 10S-ASTM A403-304L S/S*	No.	10		
8,182			***200mm*** *dia ELBOW, 90 DEG., LR, BW, SCH. 10S-ASTM A403-304L S/S*	No.	7		
8,183			***200mm*** *dia ELBOW, 30 DEG., LR, BW, SCH. 10S-ASTM A403-304L S/S*	No.	2		
8,184			***600mm*** *dia ELBOW, 30 DEG., LR, BW, SCH. 10S -ASTM A403-304L S/S*	No.	1		
8,185			***100mm*** *dia TEE, EQUAL, BW, SCH. 10S-ASTM A403-304L S/S*	No.	2		
8,186			***800mm*** *dia TEE, EQUAL, BW, SCH. 10S-ASTM A403-304L S/S*	No.	1		
8,187			***200x100mm*** *dia TEE, UNEQUAL, BW, SCH. 10S-ASTM A403-304L S/S*	No.	2		
8,188			***100x50mm*** *dia REDUCER, CONCENTRIC, BW, SCH. 10S-ASTM A403-304L S/S-WX*	No.	2		
8,189			***200x100mm*** *dia REDUCER, CONCENTRIC, BW, SCH. 10S-ASTM A403-304L S/S-WX*	No.	2		
8,190			***800x600mm*** *dia REDUCER, ECCENTRIC, BW, SCH. 10S-ASTM A403-304L S/S-WX*	No.	1		
8,191			***100mm*** *dia WELDRING NECK EN1092-1 TYPE 35 PN10*	No.	62		
8,192			***200mm*** *dia WELDRING NECK EN1092-1 TYPE 35 PN10*	No.	74		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
8,193			***200mm*** *dia SLIP-ON RF EN1092-1 TYPE 01 PN6*	No.	2		
8,194			***25mm*** *dia WELDRING NECK EN1092-1 TYPE 35 PN10*	No.	18		
8,195			***50mm*** *dia WELDRING NECK EN1092-1 TYPE 35 PN10*	No.	46		
8,196			***600mm*** *dia WELDRING NECK EN1092-1 TYPE 35 PN6*	No.	3		
8,197			***800mm*** *dia WELDRING NECK EN1092-1 TYPE 35 PN6*	No.	17		
8,198			***600mm*** *dia LOOSE PLATE FLANGE, TYPE 02, EN1092 PN6-SANS 1431 GR 300W (Galvanised)*	No.	3		
8,199			***800mm*** *dia LOOSE PLATE FLANGE, TYPE 02, EN1092 PN6-SANS 1431 GR 300W (Galvanised)*	No.	17		
8,200			***100mm*** *dia LOOSE PLATE FLANGE, TYPE 02, EN1092 PN10-SANS 1431 GR 300W (Galvanised)*	No.	62		
8,201			***200mm*** *dia LOOSE PLATE FLANGE, TYPE 02, EN1092 PN10-SANS 1431 GR 300W (Galvanised)*	No.	74		
8,202			***25mm*** *dia LOOSE PLATE FLANGE, TYPE 02, EN1092 PN10-SANS 1431 GR 300W (Galvanised)*	No.	18		
8,203			***50mm*** *dia LOOSE PLATE FLANGE, TYPE 02, EN1092 PN10-SANS 1431 GR 300W (Galvanised)*	No.	46		
8,204			***600mm*** *dia Pipe Puddle Flange (800mm diameter)*	No.	1		
8,205			***200mm*** *dia Pipe Puddle Flange*	No.	2		
			Valves and In-Line Fittings				
8,206			***25mm*** *dia Full Bore Valve - Flanged*	No.	6		
8,207			***50mm*** *dia Full Bore Valve - Flanged*	No.	6		
8,208			***50mm*** *dia Dismantling Joint - Flanged*	No.	4		
8,209			***50mm*** *dia Perforated Air Inlet Basket - Flanged*	No.	2		
8,210			***100mm*** *dia Butterfly Valve - Wafer Type*	No.	4		
8,211			***100mm*** *dia Dismantling Joint - Flanged*	No.	4		
8,212			***100mm*** *dia Perforated Air Inlet Basket - Flanged*	No.	2		
8,213			***200mm*** *dia Butterfly Valve - Wafer Type*	No.	4		
8,214			***200mm*** *dia Cone Valve - Flanged*	No.	10		
8,215			***200mm*** *dia Dismantling Joint - Flanged*	No.	1		
8,216			***600mm*** *dia Cone Valve - Flanged*	No.	1		
8,217			***600mm*** *dia Dismantling Joint - Flanged*	No.	1		
8,218			***800mm*** *dia Clamp-On Ultrasonic Flow Meter - Flanged*	No.	1		
8,219			***800mm*** *dia Dismantling Joint - Flanged*	No.	1		
8,220			***800mm*** *dia Butterfly Valve - Wafer Type*	No.	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Nuts, Botls and Washers				
8,221			*(Continuous Threaded Stud Bolt/Nut and two washers)* *316SS Studbolts C/W Heavy Nuts (ASTM A193/BS1506)*	kg	800		
			Gaskets				
8,222			*25mm dia - Chemflon Pink*	No.	12		
8,223			*50mm dia - Chemflon Pink*	No.	30		
8,224			*100mm dia - Chemflon Pink*	No.	40		
8,225			*200mm dia - Chemflon Pink*	No.	52		
8,226			*600mm dia - Chemflon Pink*	No.	3		
8,227			*800mm dia - Chemflon Pink*	No.	11		
	PM7		**Dewatering Pumps** Supply to site, handle, installation with motor as per manufacturer's specifications on base plates with rawl bolts to floor, connect to pipe work, testing, commissioning and finishing off				
8,228			a) Submersible raw water pump (KSB Amaporter 503 or equivalent), complete with motors, base plates, holding down bolts and all equipment as specified.	No.	3		
8,229	**PM9**		350mm NB Galvanised industrial extractor fan accommodating air requirements for pump demand and water	No	1		
8,230	**PN11**		Hydraulic power pack for operating valves	Sum	1		
			INSTALLATION AND COMMISSIONING				
8,231			Installation, testing, calibration, commissioning, training and maintenance during the Defects Liability Period of the plant supplied.	Sum.	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			PERIPHERAL DRAINAGE				
8,232			Supply and install complete, as indicated on the drawings, Bidim A2 filter cloth, or similar, in trench.	m²	2 900		
			Supply, handle and install high strength rigid slotted HDPE perforated subsoil drainage pipe.				
8,233			300mm	m	625		
8,234			400mm	m	180		
			Supply, handle and install high strength rigid slotted HDPE pipe.				
8,235			400mm PE Class 10	m	130		
			Provide and place 19mm concrete stone in drainage trench.	m³	420		
	PA		**FENCING**				
8,236	PA 9.2.1		Clear fence line for installation of new fencing.	m	600		
	PA 9.2.2		**Supply and Erect New Security Fence**				
8,237			Supply and install of new galvanised 2.4m high Clear Vu or similar approved fence to manufacturer and supplier specification. Rate to include galvanised posts, panels, excavation, concrete and backfilling.	m	600		
	PA 9.2.3		**Supply and Erect New Security Gates**				
8,238			Supply and install of new Clear Vu or similar approved vehicle swing gate to manufacturer and supplier specification.	No.	2		
8,239			Supply and install of new Clear Vu or similar approved pedestrian gate to manufacturer and supplier specification.	No.	1		
			Trash Rack				
8,240			Precast prestressed concrete palisade 40MPa or similar	m	25		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 8 - DAM							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SANS1200MM		**ANCILLARY ROADWORKS**				
			GUARDRAILS				
8,174	8.2.1	LI	Supply and erect galvanized steel guardrails on timber posts, backfilled with material available on Site	m	210		
	8.2.3		End Units				
8,175	8.2.3 (a)	LI	End wings	No	4		
8,176	8.2.3 (b)	LI	Terminal sections as per Drawing	No	4		
8,177	8.2.5	LI	Reflector plates	No	30		
			MISCELLANEOUS				
	PSHA 8.3.13		**Geodetic Measurement**				
8,178			Survey Beacons (x7)	No.	7		
8,179			Measuring Point Targets (x11)	No.	11		
TOTAL FORWARDED TO SUMMARY							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.1 - MAIN ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	SANS1200C		**SITE CLEARANCE**				
9.1.1	8.2.1		Clear and grub site within road reserves	ha	1,4		
	8.2.2		Remove and grub large trees and tree stumps of girth				
9.1.2	8.2.2 (a)	LI	Exceeding 1m and up to and including 2m	No.	29		
9.1.3	8.2.2 (b)		Exceeding 2m and up to and including 3m	No.	15		
9.1.4	8.2.2 (c)		Over 3m, in steps of 1m	No.	4		
9.1.5	8.2.4		Reclear surfaces (only on instruction from the engineer)	ha	1		
9.1.6	8.2.5	LI	Taking down existing fences including neatly stacking on site designated by the Engineer	km	0,1		
9.1.7	8.2.9		Transport material and debris to unspecified dump site (on instruction of the Engineer only)	m³.km	---		Rate Only
9.1.8	8.2.10		Remove topsoil to a depth of 150mm and stockpile and maintain	m³	774		
	SANS1200D		**EARTHWORKS**				
	8.3.2		Bulk Excavation				
9.1.9	8.3.2 (a)		Excavate in all materials and use for embankment or backfill or dispose, as ordered	m³	3 251		
	8.3.2 (b)		Extra over for				
9.1.10	8.3.2 (b) 1		Intermediate excavation	m³	1 138		
9.1.11	8.3.2 (b) 2		Hard rock excavation irrespective of depth	m³	228		
	8.3.6		Overhaul				
9.1.12	8.3.6 (a)		Limited overhaul (provisional)	m³	---		Rate Only
9.1.13	8.3.6 (b)		Long overhaul (provisional)	m³	---		Rate Only
9.1.14	8.3.10		Top soiling with material from stockpile or from within the road reserve including all haul	m³	120		
9.1.15	8.3.11	LI	Grassing with an approved seed mixture for hydroseeding	m²	600		
	SANS1200DB		**EARTHWORKS (PIPE TRENCHES)**				
	8.3.2 (a)		Excavate in all materials for trenches, backfill, compact and dispose of surplus material:				
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.1 - MAIN ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	8.3.2 (a)		Pipes over 125 mm dia up to 700 mm dia for depths:				
9.1.16	8.3.2 (a)		Up to 1,0 m deep	m	30		
9.1.17	8.3.2 (a)		Over 1,0 m up to 2,0 m deep	m	100		
	8.3.2 (a)		Pipes over 700 mm dia up to 1,000 mm dia for depths:				
9.1.18	8.3.2 (a)		Up to 1,0 m deep	m	5		
9.1.19	8.3.2 (a)		Over 1,0 m up to 2,0 m deep	m	25		
	8.3.2 (a)		Pipes over 1,000 mm dia up to 2,000 mm dia for depths:				
9.1.20	8.3.2 (a)		Up to 1,0 m deep	m	5		
9.1.21	8.3.2 (a)		Over 1,0 m up to 2,0 m deep	m	10		
	8.3.2 (b)		Extra over item (a) above for:				
9.1.22	8.3.2 (b) 1		Intermediate excavation	m³	170		
9.1.23	8.3.2 (b) 2		Hard rock excavation	m³	120		
	8.3.3.1		Make up deficiency in backfill material				
9.1.24			a) from other necessary excavations on site	m³	40		
9.1.25			b) by importation from a designated borrow pit	m³	40		
	SANS1200DK		**GABIONS AND PITCHING**				
9.1.26	8.2.1	LI	Surface preparation for bedding of gabions	m²	1 304		
	8.2.2		Gabions				
	8.2.2 (a)		Galvanized and PVC coated gabions boxes using 150mm stone and 80mm x 100mm x 2,5mm mesh:				
9.1.27	8.2.2 (a) (i)	LI	2 m x 1 m x 1 m	m³	486		
9.1.28	8.2.2 (a) (ii)	LI	1 m x 1 m x 1 m	m³	44		
			Reno Mattresses				
	8.2.2 (b)		Galvanized and PVC coated gabions boxes using 150mm stone and 80mm x 100mm x 2,5mm mesh:				
9.1.29	8.2.2 (b) (i)	LI	2 m x 1 m x 0,3 m	m³	---		Rate Only
9.1.30	8.2.2 (b) (ii)	LI	3 m x 1 m x 0,3 m	m³	198		
9.1.31	8.2.2 (b) (iii)	LI	3 m x 1 m x 0,15 m	m³	11		
9.1.32	8.2.4		Geotextile (Kaytech Bidim A4 or similar approved type) placed where ground water seepage occurs or where directed by Engineer	m²	1304		
			Pitching				
	8.2.5		Stone pitching:				
9.1.33	8.2.5 (a)	LI	Plain pitching	m²	---		Rate Only
9.1.34	8.2.5 (b)	LI	Grouted stone pitching	m²	200		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.1 - MAIN ACCESS ROAD							
ITEM NO	PAYMENT REFERENCE	LI SC	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SANS1200DM		EARTHWORKS (ROADS, SUBGRADE)				
	8.3.3		Treatment of roadbed:				
	8.3.3 (a)		Roadbed preparation and compaction of material to:				
9.1.35	8.3.3 (a) 1		Minimum of 90% of modified AASHTO maximum density	m³	---		Rate Only
9.1.36	8.3.3 (a) 2		Minimum of 93% of modified AASHTO maximum density	m³	1 299		
	8.3.3 (b)		In-place treatment of roadbed in intermediate or hard rock material by:				
9.1.37	8.3.3 (b) 1		Ripping	m³	909		
9.1.38	8.3.3 (b) 2		Blasting	m³	390		
	8.3.4		Cut to fill:				
9.1.39	8.3.4 (a)		Compact to 90% of modified AASHTO maximum density	m³	3 627		
9.1.40	8.3.4 (b)		Rockfill, process and compact to 93% of modified AASHTO maximum density	m³	1 814		
	8.3.4		Borrow to fill:				
9.1.41	8.3.4 (a)		Compact to 90% of modified AASHTO maximum density	m³	---		Rate Only
9.1.42	8.3.4 (b)		Rockfill, process and compact	m³	---		Rate Only
	8.3.6		Extra over items 8.3.4 for excavating and breaking down material in:				
9.1.43	8.3.6 (a)		Intermediate excavation	m³	1 814		
9.1.44	8.3.6 (b)		Hard rock excavation	m³	1 269		
	8.3.7		Cut to spoil:				
9.1.45	8.3.7 (a)		Soft excavation	m³	301		
9.1.46	8.3.7 (b)		Intermediate excavation	m³	211		
9.1.47	8.3.7 (c)		Hard rock excavation	m³	91		
9.1.48	8.3.10		Materials bladed to windrow on instruction from Engineer	m³	1 299		
9.1.49	8.3.11		Extra-over items 8.3.2 and 8.3.4 for temporary stockpiling of material	m³	1088		
9.1.50	8.3.12		Overhaul	m³.km	---		Rate Only
9.1.51	8.3.15		Catchwater mounds and channels and mitre banks and channels	m³	553		
9.1.52			Final finishing and cleaning up of the Site of Works	Sum	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.1 - MAIN ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SANS1200 G		**CONCRETE STRUCTURAL**				
			SCHEDULE FORMWORK ITEMS				
	8.2.1		**Rough (Measured to 150mm below FGL where applicable)**				
			a) Vertical				
9.1.53		LI	i) Sides of retaining and wing wall footing	m²	95		
9.1.54		LI	ii) Sides of pier footing	m²	85		
9.1.55		LI	iii) Sides of upstream and downstream surface including key	m²	305		
9.1.56		LI	iv) Sides of surface beds in between piers	m²	45		
	8.2.3		**Smooth**				
			a) Vertical				
9.1.57		LI	i) Plumb faces of retaining wall and wing walls	m²	160		
9.1.58		LI	ii) Battered faces of retaining wall and wing walls @ 1:4.5	m²	170		
9.1.59		LI	iii) Faces of piers	m²	255		
9.1.60		LI	iv) Sides of deck slabs	m²	120		
9.1.61		LI	v) Sides of deck upstand 80mm high	m²	55		
9.1.62	8.2.5	LI	vi) Sides of deck upstand recess	m²	20		
	8.2.3		b) Vertical Curved Cylindrical				
9.1.63		LI	i) Sides of piers	m²	40		
	8.2.4		c) Special off-form Horizontal for Soffits				
9.1.64		LI	i) Soffit of deck slab	m²	325		
9.1.65		LI	ii) Soffit of upstand recess	m²	10		
	8.2.3		d) Chamfers equals to and exceeding 20mm x 20mm				
9.1.66		LI	i) 20 x 20mm chamfers	m	674		
9.1.67		LI	ii) 100 x 100mm chamfer	m	85		
	8,3		**SCHEDULED REINFORCEMENT ITEMS**				
			a) High Tensile Steel Bars				
9.1.68	8.1.2.3a)		i) Y25mm diameter: Basic Price	t	60		
			b) Extra and Over Item 4.21 (Provisional Quantities) for bars of Diameter				
9.1.69	8.1.2.3b)		i) Y10mm	t	1		
9.1.70			ii)Y12mm	t	15		
9.1.71			iii) Y16mm	t	25		
9.1.72			iv) Y20mm	t	25		
9.1.73			v) Y32mm	t	5		
	8.3.2		c) High Tensile Welded Mesh				
9.1.74			i) Mesh Ref No. 617 in surface bed between piers	m²	250		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

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SECTION 9.1 - MAIN ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	8.1.3		**CONCRETE**				
	8.4.2		a) Blinding Layer in 20 Mpa/19mm concrete				
9.1.75			i) Minimum 75mm thick under footings, surface beds, key, and no-fines concrete	m²	815		
	8.4.3		b) Strength concrete				
			Class 20MPa/19mm				
9.1.76			i) Mass concrete for cut off beams and as ordered by the engineer	m³	10		
			ii) Class 30MPa/19mm				
9.1.77			iii)Footings	m³	110		
9.1.78			iv) Surface beds including key	m³	195		
9.1.79			v) Retaining wall and wing walls	m³	125		
9.1.80			vi) Piers	m³	80		
9.1.81			vii) Deck slab including upstand	m³	160		
	SANS1200GF		**PRECAST CONCRETE**				
9.1.82	8.2.4		i) 100 x 230 x 500mm concrete continuous behind weep holes	m³	2		
9.1.83			ii) Precast concrete posts including dowelling and grout	m³	110		
	8.4.4		**Unformed surface finish**				
			a) Wood-floated finishes to:				
9.1.84		LI	i) Top surface of footings	m²	45		
			b) Steel-floated finishes to :				
9.1.85		LI	i) Top of surface bed	m²	645		
9.1.86		LI	ii) Top of retaining and wing walls	m²	25		
9.1.87		LI	iii) Top of piers	m²	25		
9.1.88		LI	iv) Top of deck slab	m²	295		
9.1.89		LI	v) Top of deck upstand	m²	30		
	PSG		**JOINTS**				
9.1.90			a) 10mm thick joint including joint former as per joint detail K	m	305		
9.1.91			b) 10mm joint as Per joint detail L	m	105		
	SANS1200LB		**BEDDING (PIPES)**				
	8.2.1		Provision of bedding from Trench Excavation				
9.1.92	8.2.1 (a)		Selected granular material	m³	36		
9.1.93	8.2.1 (b)		Selected fill material	m³	176		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.1 - MAIN ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	8.2.2		Supply only of Bedding by Importation				
9.1.94	8.2.2.2 (a)		Selected granular material	m³	16		
9.1.95	8.2.2.2 (b)		Selected fill material	m³	176		
	SANS1200LE		**STORMWATER DRAINAGE**				
	8.2.1		Supply, handle and lay interlocking concrete pipes on Class B bedding:				
9.1.96	8.2.1 (i)		450mm Ø, Class 100D	m	18		
9.1.97	8.2.1 (ii)		600mm Ø, Class 100D	m	43		
9.1.98	8.2.1 (iii)		900mm Ø, Class 100D	m	21		
9.1.99	8.2.1 (iv)		1200mm Ø, Class 100D	m	9		
	8.2.2 (a)		Supply, handle and lay rectangular portal culverts complete with Invert Slabs:				
9.1.100	8.2.2 (a) (i)		600 mm x 300 mm Class 200	m	13		
	8.2.4		Extra-over items for cutting end units for culverts on site:				
			Straight cut:				
9.1.101		LI	a) 450-600mm Ø Pipe	No	---		Rate Only
9.1.102		LI	b) 1200 x 1200 mm Culvert	No	---		Rate Only
			Skew cut				
9.1.103		LI	a) 450-600mm Ø Pipe	No	12		
9.1.104		LI	b) 1200 x 1200 mm Culvert	No	1		
	8.2.8		Supply and install Manholes, Catchpits and the Like (Complete)				
			Field Inlet:				
9.1.105	8.2.8	LI	Construct field inlet complete as per detail drawing	No	8		
			Wing Wall:				
9.1.106	8.2.8	LI	Construct wing wall complete as per detail drawing	No	10		
		LI	**Precast Concrete Chute:**				
9.1.107	8.2.8		Construct precast concrete chute for fills complete as per detail drawing	No	2		
	8.2.9 (a)		Brickwork (English Bond)				
9.1.108	8.2.9 (a) (i)		230 mm thick	m²	7		
9.1.109	8.2.9 (b)		Plaster if instructed by Engineer (not less than 10mm and not more than 15mm thick)	m²	7		
9.1.110	8.2.9 (c)		Benching in prescribed mix 20 concrete with granolithic rendering	m³	2		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.1 - MAIN ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	PSLE 8.3		**SUBSOIL DRAINAGE**				
9.1.111		LI	(a) Excavate by machine in all materials for subsoil pipe trenches and use for embankment or backfill or dispose, as ordered. (600mm wide and up to 1m deep)	m	200		
9.1.112	PSLE 8.3.3		(b) Supply and install complete, as indicated on the drawings, Bidim A4 filter cloth, or similar, in trench.	m³	400		
9.1.113	PSLE 8.3.1		(c) Supply, handle, excavate and install a 110mm diameter (PVC or HDPE) perforated subsoil drainage pipe in trench.	m	200		
9.1.114	PSLE 8.3.2		(d) Provide and place 19mm concrete stone in drainage trench.	m³	32		
9.1.115			(e) Provide and place selected sand fill material in drainage trench specification.	m³	40		
			(f) Subsoil Masonry Junction Boxes and Outlets complete as per details.				
9.1.116		LI	(i) Outlet Structures	No	2		
9.1.117		LI	(ii) Junction boxes	No	1		
9.1.118		LI	(iii) Cleaning eyes	No	3		
			CCTV Camera inspection of pipes CCTV camera inspection of stormwater pipes to include establishment, camera inspections and submission of inspection report for approval by the Engineer				
9.1.119			(a) All pipes	m	200		
	SANS1200ME		**SUBBASE**				
9.1.120	8.3.2 (a)		Excavate in all materials from designated excavations, select and stockpile or place on the road for the subbase course/ shoulders/gravel wearing course	m³	666		
9.1.121	8.3.2 (b)		Construct the subbase course, shoulders and gravel wearing course with material excavated in all materials from designated excavations				
9.1.122	8.3.2 (b) (i)		Construct gravel subbase and compact to 95% modified ASSHTO density, G6 type material (the rate shall include for blading the material to a windrow to do the necessary roadbed preparation)	m³	666		
	8.3.4		Extra over items 8.3.1 for class of excavation:				
9.1.123	8.3.4 (a)		Intermediate excavation	m³	133		
9.1.124	8.3.4 (b)		Hard rock excavation	m³	100		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.1 - MAIN ACCESS ROAD							
ITEM NO	PAYMENT REFERENCE	LI SC	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	8.3.5		Process subbase material by one of the following processes, as relevant, and use in the subbase:				
9.1.125	8.3.5 (a)		Screening	m³	333		
9.1.126	8.3.5 (b)		Heavy grid rolling	m³	100		
9.1.127	8.3.5 (c)		Mechanical modification	m³	233		
9.1.128	8.3.5 (d)		Stabilization	m³	666		
	8.3.8		Stabilizing agent:				
9.1.129	8.3.8 (a)		Road lime	t	---		Rate Only
9.1.130	8.3.8 (b)		Portland cement	t	35		
	SANS1200MF		**BASE**				
	8.3.2		Construct base with material from designated excavations after construction phase				
9.1.131	8.3.2 (a)		Excavate from designated excavations, select and stockpile for base G5 type material	m³	1 037		
9.1.132	8.3.2 (b)		Construct gravel base G5 type material 150mm layer compacted to 95% Modified AASHTO density	m³	1 037		
	8.3.4		Extra over 8.3.1 and 8.3.2, as applicable, for class of excavation				
9.1.133	8.3.4 (a)		Intermediate excavation	m³	259		
9.1.134	8.3.4 (b)		Hard rock excavation	m³	156		
	8.3.5		Process base material by one of the following processes, as relevant, and use in the base (applicable to 8.3.1 and 8.3.2):				
9.1.135	8.3.5 (a)		Screening	m³	259		
9.1.136	8.3.5 (b)		Heavy grid rolling	m³	52		
9.1.137	8.3.5 (c)		Mechanical modification	m³	104		
9.1.138	8.3.5 (d)		Stabilization	m³	518		
	8.3.8		Stabilizing agent:				
9.1.139	8.3.8 (a)		Road lime	t	---		Rate Only
9.1.140	8.3.8 (b)		Portland cement	t	27		
	SANS1200MH		**ASPHALT BASE AND SURFACING**				
	8.5.1		Prime coat using:				
9.1.141	8.5.1 (a)		MC30 cutback bitumen prime coat applied at a rate of 0,8 l/m²	m²	450		
	8.5.3		Tack coat using:				
9.1.142	8.5.3 (a)		30% stable-grade emulsion	m²	450		
	8.5.4		Continuously graded asphalt surfacing:				
9.1.143	8.5.4 (a)		30mm thick bitumen type 70/100 penetration grade	t	32		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.1 - MAIN ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SANS1200MJ		**SEGMENTED PAVING**				
	8.2.2		Construction of paving complete				
9.1.144	8.2.2 (a)	LI	60mm thick, Type S-C, Class 25, Colour Grey, fully interlocking on a 20-25mm sand bedding complete with a 1:4 fine sand cement ration dry vibrated grout infill	m²	2916		
9.1.145	8.2.3	LI	Cutting Units to Fit Kerbing	m	1 080		
	SANS1200MK		**KERBING AND CHANNELLING**				
9.1.146	8.2.1		Concrete kerbing, including joints (Class 25/19) as per Typical Drawings				
9.1.147	8.2.1 (a)	LI	Concrete edge beams, Class 25/19 (200mm x 150mm)	m	2160		
9.1.148	8.2.1 (b)	LI	Concrete edge beams, Class 25/19 (300mm x 200mm)	m	145,8		
9.1.149	8.2.1 (c)	LI	Precast concrete kerbing Fig 8C, SANS 927	m	140		
	8.2.3		Variation of tests on extruded kerbing				
9.1.150	8.2.3 (b)		Set of 3 cubes (Provisional)	No	18		
9.1.151	8.2.3 (c)		Set of 3 cores (Provisional)	No	18		
9.1.152	8.2.14	LI	Supply, Handle and install Amorflex 180 or similar approved complete with galvanized steel wire including anchors as per detail drawings	m²	72		
9.1.153	8.2.15	LI	Supply, Handle and Install Loffelstein or similar approved complete as per detail drawings	m²	90		
	SANS1200 MM		**ANCILLARY ROADWORKS**				
			GUARDRAILS				
9.1.154	8.2.1	LI	Supply and erect galvanized steel guardrails on timber posts, backfilled with material available on Site	m	360		
9.1.155	8.2.6	LI	Dismantling Existing Guardrails	m	150		
9.1.156	PSMM 8.2.6 (b)		(b) Renovating guardrail material	m	150		
9.1.157	PSMM 8.2.6 (c)		(c) Re-erection of guardrails with recovered or provided material	m	150		
9.1.158	8.2.2	LI	Extra-over Item 8.2.1 for horizontally curved guardrails factory-bent to a radius of less than 150 m	m	70		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.1 - MAIN ACCESS ROAD							
ITEM NO	PAYMENT REFERENCE	LI SC	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	8.2.3		End Units				
9.1.159	8.2.3 (a)	LI	End wings	No	4		
9.1.160	8.2.3 (b)	LI	Terminal sections as per Drawing	No	10		
9.1.161	8.2.4	LI	Additional timber guardrail posts	No	10		
9.1.162	8.2.5	LI	Reflector plates	No	150		
			PERMANENT TRAFFIC SIGNS				
	8.3.1		Sign faces with painted or galvanized (as stated) background, with painted symbols, characters, legend, and borders, and with signboards constructed from				
9.1.163	8.3.1 (a)		Aluminium sheet (2,0 mm thick), of area up to 2 m^2	m^2	28		
	8.3.2		Provision and application of retro-reflective material				
9.1.164	8.3.2 (a)		Engineering grade retro-reflective background, characters, symbols, legend and borders	m^2	28		
	8.3.3		Sign Supports				
9.1.165	8.3.3 (b)	LI	2,5mm Thick galvanized steel square tubing (50 mm x 50 mm)	No	35		
9.1.166	8.3.3 (c)	LI	Timber diameter 100 mm - 150 mm treated in accordance to SANS 673	m	25		
9.1.167	8.3.4	LI	Excavation and backfilling with cement ratio 1:12 stabilized in-situ material for sign supports	m^3	6		
9.1.168	8.3.6		Statutory signs, street names, and the like, supplied and erected complete	No	15		
			ROAD MARKINGS				
	8.4.1		Retro-reflective road marking paint				
	8.4.1 (a)		White lines (broken or unbroken)				
9.1.169	8.4.1 (a) (i)		100 mm wide	km	0,2		
9.1.170	8.4.1 (a) (ii)		150 mm wide	km	0,4		
9.1.171	8.4.1 (a) (iii)		300 mm wide	km	0,1		
	8.4.1 (b)		Yellow lines (broken of unbroken)				
9.1.172	8.4.1 (b) (i)		150 mm wide	km	0,4		
9.1.173	8.4.1 (c)		White Characters and symbols	m^2	20		
	8.4.4		Setting out and premarking of lines				
9.1.174	8.4.4 (a)		Lines (excluding traffic island markings, characters, and symbols)	km	1,1		
TOTAL FORWARDED TO SUMMARY							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.2 - DAM ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	SANS1200C		**SITE CLEARANCE**				
9.2.1	8.2.1		Clear and grub site within road reserves	ha	0,2		
	8.2.2		Remove and grub large trees and tree stumps of girth				
9.2.2	8.2.2 (a)	LI	Exceeding 1m and up to and including 2m	No.	3		
9.2.3	8.2.2 (b)		Exceeding 2m and up to and including 3m	No.	1		
9.2.4	8.2.2 (c)		Over 3m, in steps of 1m	No.	1		
9.2.5	8.2.4		Reclear surfaces (only on instruction from the engineer)	ha	0,2		
9.2.6	8.2.9		Transport material and debris to unspecified dump site (on instruction of the Engineer only)	m³.km	---		Rate Only
9.2.7	8.2.10		Remove topsoil to a depth of 150mm and stockpile and maintain	m³	144		
	SANS1200D		**EARTHWORKS**				
	8.3.2		Bulk Excavation Culverts				
9.2.8	8.3.2 (a)		Excavate in all materials and use for embankment or backfill or dispose, as ordered	m³	300		
	8.3.2 (b)		Extra over for				
9.2.9	8.3.2 (b) 1		Intermediate excavation	m³	60		
9.2.10	8.3.2 (b) 2		Hard rock excavation irrespective of depth	m³	240		
	SANS1200DK		**GABIONS AND PITCHING**				
9.2.11	8.2.1	LI	Surface preparation for bedding of gabions	m²	200		
	8.2.2		Gabions				
	8.2.2 (a)		Galvanized and PVC coated gabions boxes using 150mm stone and 80mm x 100mm x 2,5mm mesh:				
9.2.12	8.2.2 (a) (i)	LI	2 m x 1 m x 1 m	m³	40		
9.2.13	8.2.2 (a) (ii)	LI	1 m x 1 m x 1 m	m³	4		
			Reno Mattresses				
	8.2.2 (b)		Galvanized and PVC coated gabions boxes using 150mm stone and 80mm x 100mm x 2,5mm mesh:				
9.2.14	8.2.2 (b) (i)	LI	2 m x 1 m x 0,3 m	m³	---		Rate Only
9.2.15	8.2.2 (b) (ii)	LI	3 m x 1 m x 0,3 m	m³	18		
9.2.16	8.2.2 (b) (iii)	LI	3 m x 1 m x 0,15 m	m³	---		Rate Only
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

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SECTION 9.2 - DAM ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
9.2.17	8.2.4		Geotextile (Kaytech Bidim A4 or similar approved type) placed where ground water seepage occurs or where directed by Engineer	m²	250		
			Pitching				
	8.2.5		Stone pitching:				
9.2.18	8.2.5 (a)	LI	Plain pitching	m²	---		Rate Only
9.2.19	8.2.5 (b)	LI	Grouted stone pitching	m²	48		
	SANS1200DM		**EARTHWORKS (ROADS, SUBGRADE)**				
	8.3.3		Treatment of roadbed:				
	8.3.3 (a)		Roadbed preparation and compaction of material to:				
9.2.20	8.3.3 (a) 1		Minimum of 90% of modified AASHTO maximum density	m³	---		Rate Only
9.2.21	8.3.3 (a) 2		Minimum of 93% of modified AASHTO maximum density	m³	120		
	8.3.3 (b)		In-place treatment of roadbed in intermediate or hard rock material by:				
9.2.22	8.3.3 (b) 1		Ripping	m³	---		Rate Only
9.2.23	8.3.3 (b) 2		Blasting	m³	120		
	8.3.4		Cut to fill:				
9.2.24	8.3.4 (a)		Compact to 90% of modified AASHTO maximum density	m³	120		
9.2.25	8.3.4 (b)		Rockfill, process and compact to 93% of modified AASHTO maximum density	m³	120		
	8.3.4		Borrow to fill:				
9.2.26	8.3.4 (a)		Compact to 90% of modified AASHTO maximum density	m³	---		Rate Only
9.2.27	8.3.4 (b)		Rockfill, process and compact	m³	---		Rate Only
	8.3.6		Extra over items 8.3.4 for excavating and breaking down material in:				
9.2.28	8.3.6 (a)		Intermediate excavation	m³	60		
9.2.29	8.3.6 (b)		Hard rock excavation	m³	42		
	8.3.7		Cut to spoil:				
9.2.30	8.3.7 (a)		Soft excavation	m³	272		
9.2.31	8.3.7 (b)		Intermediate excavation	m³	408		
9.2.32	8.3.7 (c)		Hard rock excavation	m³	2039		
9.2.33	8.3.10		Materials bladed to windrow on instruction from Engineer	m³	20		
9.2.34	8.3.11		Extra-over items 8.3.2 and 8.3.4 for temporary stockpiling of material	m³	36		
9.2.35	8.3.15		Catchwater mounds and channels and mitre banks and channels	m³	30		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.2 - DAM ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SANS1200 G		**CONCRETE STRUCTURAL**				
			SCHEDULE FORMWORK ITEMS				
	8.2.1		**Rough (Measured to 150mm below FGL where applicable)**				
			a) Vertical				
9.2.36		LI	i) Sides of plumb surface bed downstand	m²	40		
9.2.37		LI	ii) Sides of sloped surface bed downstand	m²	55		
9.2.38		LI	iii) Sides of surface bed	m²	90		
	8.2.3		**Smooth**				
			a) Vertical				
9.2.39		LI	i) Sides of concrete in-between box culverts	m²	25		
9.2.40		LI	ii) Sides of deck slab	m²	40		
9.2.41		LI	iii) Sides of guide blocks - sloped	m²	10		
	8.2.3		c) Chamfers equals to and exceeding 20mm x 20mm				
9.2.42		LI	i) 20 x 20mm chamfers on deck slab	m	675		
9.2.43		LI	ii) 20 x 20mm chamfers on guide blocks	m	85		
	8,3		**SCHEDULED REINFORCEMENT ITEMS**				
			a) High Tensile Steel Bars				
9.2.44	8.1.2.3a)		i) Y25mm diameter: Basic Price	t	25		
			b) Extra and Over Item 4.21 (Provisional Quantities) for bars of Diameter				
9.2.45	8.1.2.3b)		i) Y10mm	t	1		
9.2.46			ii)Y12mm	t	5		
9.2.47			iii) Y16mm	t	9		
9.2.48			iv) Y20mm	t	8		
9.2.49			v) Y32mm	t	2		
	8.1.3		**CONCRETE**				
	8.4.2		a) Blinding Layer in 20 Mpa/19mm concrete				
9.2.50			i) Minimum 75mm thick under footings, surface beds, key, and no-fines concrete	m²	260		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.2 - DAM ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	8.4.3		b) Strength concete				
			Class 20MPa/19mm				
9.2.51			i) Mass concrete for cut off beams and as ordered by the engineer	m³	2		
			Class 30MPa/19mm				
9.2.52			i) Surface bed downstand	m³	25		
9.2.53			ii) Surface bed	m³	155		
9.2.54			iii) In-between box culverts	m³	60		
9.2.55			iv) Deck slab	m³	50		
9.2.56			v) Guide blocks	m³	1		
	8.4.4		Unformed surface finish				
			a) Steel-floated finishes to :				
9.2.57		LI	i) Top of surface bed	m²	260		
9.2.58		LI	ii) Top of deck slap	m²	190		
9.2.59		LI	iii) Top of guide blocks	m²	1		
	8,5		JOINTS				
9.2.60			a) 10mm thick joint including joint former as per joint detail C	m	20		
9.2.61			b) 10mm joint as oer joint detail L	m	65		
	SANS1200LE		**STORMWATER DRAINAGE**				
	8.2.2 (a)		Supply, handle and lay rectangular portal culverts complete with Invert Slabs:				
9.2.62	8.2.2 (a) (i)		3 000 mm x 3 000 mm Class 200	m	50		
	8.2.4		Extra-over items for cutting end units for culverts on site:				
			Straight cut:				
9.2.63		LI	b) 3000 x 3000 mm Culvert	No	---		Rate Only
	PSLE 8.3		*SUBSOIL DRAINAGE*				
9.2.64		LI	(a) Excavate by machine in all materials for subsoil pipe trenches and use for embankment or backfill or dispose, as ordered. (600mm wide and up to 1m deep)	m	---		Rate Only
9.2.65	PSLE 8.3.3		(b) Supply and install complete, as indicated on the drawings, Bidim A4 filter cloth, or similar, in trench.	m³	---		Rate Only
9.2.66	PSLE 8.3.1		(c) Supply, handle, excavate and install a 110mm diameter (PVC or HDPE) perforated subsoil drainage pipe in trench.	m	---		Rate Only
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.2 - DAM ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
9.2.67	PSLE 8.3.2		(d) Provide and place 19mm concrete stone in drainage trench.	m³	---		Rate Only
9.2.68			(e) Provide and place selected sand fill material in drainage trench specification.	m³	---		Rate Only
			(f) Subsoil Masonry Junction Boxes and Outlets complete as per details.				
9.2.69		LI	(i) Outlet Structures	No	---		Rate Only
9.2.70		LI	(ii) Junction boxes	No	---		Rate Only
9.2.71		LI	(iii) Cleaning eyes	No	---		Rate Only
	SANS1200ME		**SUBBASE**				
9.2.72	8.3.2 (a)		Excavate in all materials from designated excavations, select and stockpile or place on the road for the subbase course/ shoulders/gravel wearing course	m³	---		Rate Only
	8.3.2 (b)		Construct the subbase course, shoulders and gravel wearing course with material excavated in all materials from designated excavations				
9.2.73	8.3.2 (b) (i)		Construct gravel subbase and compact to 95% modified ASSHTO density, G6 type material (the rate shall include for blading the material to a windrow to do the necessary roadbed preparation)	m³	---		Rate Only
	8.3.4		Extra over items 8.3.1 for class of excavation:				
9.2.74	8.3.4 (a)		Intermediate excavation	m³	---		Rate Only
9.2.75	8.3.4 (b)		Hard rock excavation	m³	---		Rate Only
	8.3.5		Process subbase material by one of the following processes, as relevant, and use in the subbase:				
9.2.76	8.3.5 (a)		Screening	m³	---		Rate Only
9.2.77	8.3.5 (b)		Heavy grid rolling	m³	---		Rate Only
9.2.78	8.3.5 (c)		Mechanical modification	m³	---		Rate Only
9.2.79	8.3.5 (d)		Stabilization	m³	---		Rate Only
	8.3.8		Stabilizing agent:				
9.2.80	8.3.8 (a)		Road lime	t	---		Rate Only
9.2.81	8.3.8 (b)		Portland cement	t	---		Rate Only
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.2 - DAM ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SANS1200MF		**BASE**				
	8.3.2		Construct base with material from designated excavations after construction phase				
9.2.82	8.3.2 (a)		Excavate from designated excavations, select and stockpile for base G5 type material	m³	116		
9.2.83	8.3.2 (b)		Construct gravel base G5 type material 150mm layer compacted to 95% Modified AASHTO density	m³	116		
	8.3.4		Extra over 8.3.1 and 8.3.2, as applicable, for class of excavation				
9.2.84	8.3.4 (a)		Intermediate excavation	m³	---		Rate Only
9.2.85	8.3.4 (b)		Hard rock excavation	m³	116		
	8.3.5		Process base material by one of the following processes, as relevant, and use in the base (applicable to 8.3.1 and 8.3.2):				
9.2.86	8.3.5 (a)		Screening	m³	116		
9.2.87	8.3.5 (b)		Heavy grid rolling	m³	6		
9.2.88	8.3.5 (c)		Mechanical modification	m³	58		
9.2.89	8.3.5 (d)		Stabilization	m³	58		
	8.3.8		Stabilizing agent:				
9.2.90	8.3.8 (a)		Road lime	t	---		Rate Only
9.2.91	8.3.8 (b)		Portland cement	t	3		
	SANS1200MH		**ASPHALT BASE AND SURFACING**				
	8.5.1		Prime coat using:				
9.2.92	8.5.1 (a)		MC30 cutback bitumen prime coat applied at a rate of 0,8 l/m²	m²	---		Rate Only
	8.5.3		Tack coat using:				
9.2.93	8.5.3 (a)		30% stable-grade emulsion	m²	---		Rate Only
	8.5.4		Continuously graded asphalt surfacing:				
9.2.94	8.5.4 (a)		30mm thick bitumen type 70/100 penetration grade	t	---		Rate Only
	SANS1200MJ		**SEGMENTED PAVING**				
	8.2.2		Construction of paving complete				
9.2.95	8.2.2 (a)	LI	60mm thick, Type S-C, Class 25, Colour Grey, fully interlocking on a 20-25mm sand bedding complete with a 1:4 fine sand cement ration dry vibrated grout infill	m²	770		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.2 - DAM ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SANS1200MK		**KERBING AND CHANNELLING**				
	8.2.1		Concrete kerbing, including joints (Class 25/19) as per Typical Drawings				
9.2.96	8.2.1 (a)	LI	Concrete edge beams, Class 25/19 (200mm x 150mm)	m	25		
9.2.97	8.2.1 (b)	LI	Concrete edge beams, Class 25/19 (300mm x 200mm)	m	24		
9.2.98	8.2.1 (c)	LI	Precast concrete kerbing Fig 8C, SANS 927	m	---		Rate Only
	8.2.3		Variation of tests on extruded kerbing				
9.2.99	8.2.3 (b)		Set of 3 cubes (Provisional)	No	6		
9.2.100	8.2.3 (c)		Set of 3 cores (Provisional)	No	6		
9.2.101	8.2.14	LI	Supply, Handle and install Amorflex 180 or similar approved complete with galvanized steel wire including anchors as per detail drawings	m²	---		Rate Only
9.2.102	8.2.15	LI	Supply, Handle and Install Loffelstein or similar approved complete as per detail drawings	m²	---		Rate Only
	SANS1200 MM		**ANCILLARY ROADWORKS**				
			GUARDRAILS				
9.2.103	8.2.1	LI	Supply and erect galvanized steel guardrails on timber posts, backfilled with material available on Site	m	60		
9.2.104	8.2.6	LI	Desmantling Existing Guardrails	m	---		Rate Only
9.2.105	PSMM 8.2.6 (b)		(b) Renovating guardrail material	m	---		Rate Only
9.2.106	PSMM 8.2.6 (c)		(c) Re-erection of guardrails with recovered or provided material	m	---		Rate Only
9.2.107	8.2.2	LI	Extra-over Item 8.2.1 for horizontally curved guardrails factory-bent to a radius of less than 150 m	m	20		
	8.2.3		End Units				
9.2.108	8.2.3 (a)	LI	End wings	No	4		
9.2.109	8.2.3 (b)	LI	Terminal sections as per Drawing	No	---		Rate Only
9.2.110	8.2.4	LI	Additional timber guardrail posts	No	4		
9.2.111	8.2.5	LI	Reflector plates	No	20		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 9.2 - DAM ACCESS ROAD							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			PERMANENT TRAFFIC SIGNS				
	8.3.1		Sign faces with painted or galvanized (as stated) background, with painted symbols, characters, legend, and borders, and with signboards constructed from				
9.2.112	8.3.1 (a)		Aluminum sheet (2,0 mm thick), of area up to 2 m^2	m²	3		
	8.3.2		Provision and application of retro-reflective material				
9.2.113	8.3.2 (a)		Engineering grade retro-reflective background, characters, symbols, legend and borders	m²	3		
	8.3.3		Sign Supports				
9.2.114	8.3.3 (b)	LI	2,5mm Thick galvanized steel square tubing (50 mm x 50 mm)	No	4		
9.2.115	8.3.3 (c)	LI	Timber diameter 100 mm - 150 mm treated in accordance to SANS 673	m	10		
9.2.116	8.3.4	LI	Excavation and backfilling with cement ratio 1:12 stabilized in-situ material for sign supports	m³	1		
9.2.117	8.3.6		Statutory signs, street names, and the like, supplied and erected complete	No	2		
TOTAL FORWARDED TO SUMMARY							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 10 - ADMIN BUILDING SITE							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	SABS1200C		**CLEAR SITE**				
10,1	PSC		Clear and grub all shrubs and vegetation for areas as required and instructed by Engineer for construction.	m²	1 400		
	SABS 1200 D		**BULK EARTHWORKS**				
	8.3.2		Bulk Excavation:				
	8.3.2 (a)		Excavate by machine in all materials for foundations and pipe trenches and use for embankment or backfill or dispose, as ordered.				
10,2			i) 0m up to 2m	m³	185		
	8.3.2 (b)		Extra-over for:				
10,3			i) Hard rock excavation. (Blasting or pneumatic drilling)	m³	75		
10,4			ii) Boulder excavation and dump, Class A and B.	m³	20		
10,5			iii) 5% soil cement backfilling as ordered by the Engineer	m³	90		
	8.3.4		Importing of materials				
			a) Extra-over for importation of materials from borrow pits.				
			Foundation Fill (Provisional) Compacted to 95% MOD AASTHO in layers of 150mm thickness, consisting of:				
10,6			Approved G6 material from borrow pits or other site excavations for platform construction	m³	630		
	SABS 1200 G		**CONCRETE (STRUCTURAL)**				
			SCHEDULED FORMWORK ITEMS				
	8.2.1		Rough (Measured to 150mm below FGL where applicable)				
10,7			i) Trimming/ preparing vertical sides of excavation to cast concrete against it in soft and intermediate material	m²	40		
10,8			ii) Sides of Apron	m²	12		
10,9			iii) Water Storage Tank Footings	m²	11		
10,10			iv) Generator Building Base	m²	8		
	8,3		**SCHEDULED REINFORCEMENT ITEMS**				
	8.3.1		High tensile steel bars				
10,11			Basic price	t	1,0		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 10 - ADMIN BUILDING SITE							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	8.3.1		Mild steel bars				
10,12			Basic price	t	0,1		
	8.3.2		High tensile welded mesh				
10,13			Ref No. 395	m²	90		
10,14			Ref No. 617	m²	77		
	8,4		**SCHEDULED CONCRETE ITEMS**				
	8.4.2		Blinding layer:				
10,15			Class 20/19, minimum 50mm thick	m²	367		
	8.4.3		Strength concrete:				
			Class 20/19				
10,16			i) Filling of overbreak in excavation in rock to form blinding layer	m²	5		
10,17			ii) Mass concrete where ordered by the Engineer	m³	1		
10,18			iii) Foundation to brick walls.	m³	23		
10,19			iv) Apron	m³	12		
10,20			v) Screed at generator base	m³	3		
			Class 25/19				
10,21			i) Floor	m³	15		
10,22			ii) Generator Building Base	m³	6		
			Class 30/19				
10,23			i) Water Storage Tower Bases	m³	1		
	8.4.4		Unformed surface finishes:				
			Steel-floated finishes to:				
10,24			i) To upper surfaces of floor slabs.	m²	90		
10,25			ii) To upper surfaces of apron.	m²	53		
10,26			iii) Upper screed surfaces of Generator Base	m²	15		
	SABS 1200 H		**STRUCTURAL STEEL**				
			WATER STORAGE TOWER				
	8.3.4		Heavy Duty Anchors				
10,27			Supply and install M16 galvanized steel bolts complete with washers and nuts	No.	16		
	8.3.1		Base Plates				
10,28			280 x 280 x 10 mm Base plate with 4 x 18mm drilled holes welded to columns	No.	4		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 10 - ADMIN BUILDING SITE							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	8.3.1		Structural Steel Elements				
10,29			100 x 100 x 10 mm hot rolled equal angle columns	m	40		
10,30			80 x 80 x 8 hot rolled equal angle structs and horizontal bracing	m	46		
10,31			125 x 75x 10 hot rolled unequal angle beam	m	5		
10,32			30 x 6 mm mild steel flat bar	m	105		
10,33			125 x 50 x 20 x 2.5 cold rolled lipped channel for tank floor	m	30		
	8.3.1.1		Preparation of shop drawing details for approval by the Engineer	Sum	1		
			GENERATOR BUILDING ROOF				
	8.3.4		Heavy Duty Fixings				
10,34			Supply and install M16 galvanized steel bolts complete with washers and nuts	No.	8		
	8.3.1		Base Plates				
10,35			270 x 270 x 10 mm Base plate with 4 x 18mm drilled holes welded to columns	No.	12		
	8.3.1		Structural Steel Elements				
10,36			75 x 75 x 3 mm Mild steel square tubing (galvanized) column.	m	15		
10,37			150 x 50 x 20 x 3mm Cold formed lipped channel (Galvanized).	m	25		
10,38			75 x 50 x 20 x 3mm Cold formed lipped channel (Galvanized).	m	30		
10,39			Complete sliding gate as per detail.	No.	1		
10,40			Short side frame as per detail.	No.	2		
10,41			Long side frame as per detail.	No.	1		
10,42			75 x 75 x 5mm Lifting eyes as per detail. Complete with 30mm Ø hole as indicated.	No.	4		
10,43	8.3.1.1		Preparation of shop drawing details for approval by the Engineer	Sum	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 10 - ADMIN BUILDING SITE							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SANS1200 HB		**CLADDING AND SHEETING**				
	8.2.2		Supply and Install Cladding and Sheeting:				
10,44			Square fluted profile roof sheeting (IBR or similar approved) Galvanized and with a minimum material thickness of 0.58mm. Rate to include all fixing materials.	m²	25		
	8.2.3		Supply and Install Ancillaries				
10,45			Supply and installation of 115x125mm GMS Gutter (galvanised). Installed as per supplier specifications. Rate to include all required fixings.	m	6		
10,46			75mm Dia GMS Down pipes including bends and galvanised holding brackets.	No.	1		
	PART SPEC		**GENERAL BUILDING WORK**				
	PB 8.2.1		**BRICK WORK**				
10,47			Supply and construct double brick wall (230mm), inclusive of mortar and brick force every third layer, both faces face brick.	m²	190		
10,48			Supply and construct brick (230x230mm) columns, inclusive of mortar, all faces face brick.	No.	3		
10,49			Supply and construct single brick wall (110mm), inclusive of mortar and brick force every third layer, both faces face brick.	m²	40		
	PB 8.2.9		**WATERPROOFING**				
10,50			Supply and install 250 micron plastic sheeting underneath floor slabs.	m²	105		
10,51			Supply and install two layers 500 micron thick plastic sheeting, 230mm wide between floor slab and brick wall.	m²	20		
	PB 8.2.10		**EXPANSION JOINTS**				
10,52			Supply one layers 5mm thick masonite or similar approved joint between floor and walls	m	80		
	PB 8.2.5		**TILING**				
10,53			Non slip tiles	m²	45		
10,54			Tiles inside shower	m²	12		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 10 - ADMIN BUILDING SITE							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	PB 8.2.17		**JOINERY** Supply and install the following doors and windows complete with frame, hinges, locking devices, glass and burglar bars:				
10,55			D1 (1500x2032mm steel)	No.	1		
10,56			D2 (900x2200mm hardwood)	No.	1		
10,57			D3 (813x2032mm steel)	No.	4		
	PB 8.2.18		**METAL WORK**				
10,58			NE1	No.	2		
10,59			NE2	No.	1		
10,60			NE11	No.	2		
10,61			NE4	No.	1		
10,62			ND4F	No.	2		
10,63			ND11F	No.	1		
	PB 8.2.12		**ROOFING COVERING** Complete roof structure. Construction and fixing of roof structure to be done as per the relevant details.				
10,64			Wooden roof trusses	No.	30		
10,65			Concrete roof tiles with 400 micron plastic sheeting	m²	147		
10,66			38x38mm battens installed as per roof tiles supplier	m	450		
10,67			Roof truss support fixings as per detail	No.	60		
10,68			Ceilings complete with cornice and paint	m²	100		
10,69			Ceiling insulation	m²	100		
	PB 8.2.14		**GUTTERS AND RAINWATER DOWN PIPES**				
10,70	PB 8.2.14 a)		Supply and installation of 115x125mm GMS Gutter (galvanised). Installed as per supplier specifications. Rate to include all required fixings.	m	30		
10,71	PB 8.2.14 b)		75mm Dia GMS Down pipes including bends and galvanised holding brackets.	No.	4		
	PB 8.2.20		**PAINTING**				
10,72			Door D1 and frame with Plascon Velveglo or approved.	No.	1		
10,73			Door D2 and frame with Woodoc 50 or approved water repellent wood sealer.	No.	1		
10,74			Door D3 and frame with Plascon Velveglo or approved.	No.	4		
10,75			Windows and frame with Plascon Velveglo or approved.	No.	9		
			MISCELLANEOUS				
10,76			Office desks	No.	2		
10,77			Office chairs	No.	4		
10,78			Notice board (1500x1000mm)	No.	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 10 - ADMIN BUILDING SITE							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
10,79			Cabinet	No.	2		
10,80			Wooden cupboards with basin	No.	2		
10,81			Wooden cupboards	No.	3		
			PLUMBING Plumbing to include all supply, waste, vent and soil piping and fittings, taps, stopcocks etc. to provide a complete installation.				
10,82			Hand wash basin	No.	1		
10,83			WC and cistern	No.	1		
10,84			Gulley and sewer piping, fittings and connection to sewer pipes.	No.	1		
10,85			Water piping, fittings and connection to water supply.	No.	1		
10,86			Shower fittings, water piping, fittings and connection to water supply. Gulley and drain piping, fittings and connection to sewer pipes.	No.	1		
	SABS1200MJ		**SEGMENTED PAVING**				
	8.2.1		Provision of edge restraints:				
			Provision of concrete edge beams				
10,87			a) For straight edging (100x100mm)	m	15		
	8.2.2		Construction of paving complete				
10,88	8.2.2 (a)		60mm thick, Type S-C, Class 25, colour grey, fully interlocking on a 20-25mm sand bedding complete with a 1:4 fine sand cement ration dry vibrated grout infill	m²	250		
10,89	8.2.3		Cutting units to fit edge restraints	m	90		
	SABS1200MJ		**KERBING AND CHANELLING**				
	8.2.1		Concrete kerbing (precast units) Figure 8C mountable kerbing				
10,90			a) Straight sections	m	50		
10,91			b) Radius over 1m and up to 4m	m	10		
	SABS1200 MM		**ANCILLARY ROADWORKS**				
	8,4		Scheduled items for road markings				
	8.4.1		Non-reflectorized paint applied at a rate of 0.42l/m² (or proprietary brand road-marking material (nominal rate of application and particulars stated), as scheduled.				
10,92			a) White Lines (100mm wide)	m	35		
10,93			c) White characters and symbols	m²	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 10 - ADMIN BUILDING SITE							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	PA		**FENCING**				
10,94	PA 9.2.1		Clear fence line for installation of new fencing.	m	148		
	PA 9.2.2		Supply and erect new security fence				
10,95			Supply and install of new galvanised 2.4m high Clear Vu or similar approved fence to manufacturer and supplier specification. Rate to include galvanised posts, panels, excavation, concrete and backfilling.	m	148		
10,96	PA 9.2.3		Supply and install of new Clear Vu or similar approved vehicle swing gate to manufacturer and supplier specification.	No.	1		
10,97	PA 9.2.3		Supply and install of new Clear Vu or similar approved pedestrian gate to manufacturer and supplier specification.	No.	1		
10,98			Allowance for enlargement	%	169 532		
			WATER SERVICES				
	SANS1200 DB		**PIPE TRENCHES**				
	8.3.2		Excavation Excavate in all materials for trenches, backfill, compact, and dispose of surplus/ unsuitable material, for pipes: 25 mm diam. to 160 mm for total trench depth:				
10,99			Exceeding 0,0m but not exceeding 1,0m.	m	165		
10,100			Exceeding 1,0m but not exceeding 2,0m.	m	20		
	8.3.2		Extra-over item 10.95 included for (provisional):				
10,101			Intermediate excavation	m^3	7		
10,102			Hard rock excavation	m^3	1		
	SANS1200 L		**MEDIUM PRESSURE PIPELINES**				
	8.2.1		Supply, lay in the appropriate bedding, joint with as required, test and disinfect HDPE pipes Class 12.5 in accordance with SANS 4427-2 - for:				
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 10 - ADMIN BUILDING SITE							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Straight pipe lengths				
10,103			25mm NB	m	15		
10,104			50mm NB	m	185		
	8.2.2		Extra-over 8.2.1 for the supplying, laying in the appropriate bedding, jointing with as required, testing and disinfect HDPE pipes Class 12.5 in accordance with SANS 4427-2 - for:				
			BENDS				
			90° medium radius bends:				
10,105			25mm NB	No	4		
10,106			50mm NB	No	4		
			Reducing Tee				
10,107			25mm x 20mm x 25mm	No	2		
10,108			Water meter (20mm with housing)	No	2		
	8.2.11		**Anchor/Thrust Blocks and Pedestals:**				
10,109			Concrete Grade 20/19	m^3	1		
	8.2.12		**Concrete Casing:**				
10,110			Concrete Grade 20/19 for 50mmND	m^3	1		
	8.2.13		**Valve Chambers**				
10,111			Isolation-Valve Chamber with 50mm NB isolation-Valve. Complete construction inclusive of pipe specials and valves. Water storage tank inlet and outlet isolation and source isolation.	No	3		
10,112	PSL 8.2.16		Construct and Install Concrete pipeline markers to be installed at 200m c/c and all changes in direction and road crossings.	No	10		
10,113	PSL 8.2.18		5000l water storage tank (Jojo or similar approved). Contractors rate to cover the complete supply, delivery and installation of water storage tank onto 10meter high elevated tower as constructed and measured elsewhere.	Sum	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 10 - ADMIN BUILDING SITE							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SANS1200LB		**BEDDING (PIPES)**				
	8.2.1		Provision of Bedding from trench excavation within 0,5 km (Sub-clause 3.4.1):				
10,114			Selected granular material	m³	35		
10,115			Selected fill material	m³	20		
	8.2.2		**Supply only of bedding by importation:**				
	8.2.2.2		**From borrow pits (provisional):**				
10,116			Selected granular material.	m³	9		
10,117			Selected fill material.	m³	5		
			SANITATION SERVICES				
	SANS1200 DB		**PIPE TRENCHES**				
	8.3.2		**Excavation:** Excavate in all materials for trenches, backfill, compact, and dispose of surplus/ unsuitable material, for pipes: 100 mm diam. to 200 mm for total trench depth:				
10,118			Exceeding 0,0m but not exceeding 1,0m.	m	20		
10,119			Exceeding 1,0m but not exceeding 2,0m.	m	5		
	8.3.2		Extra-over items 10.114 to 10.115 included for (provisional):				
10,120			Intermediate excavation	m³	4		
10,121			Hard rock excavation	m³	2		
	SANS1200 LB		**BEDDING (PIPES)**				
	8.2.1		Provision of Bedding from trench excavation within 0,5 km (Sub-clause 3.4.1):				
10,122			Selected granular material	m³	5		
10,123			Selected fill material	m³	2		
	8.2.2		**Supply only of bedding by importation:**				
	8.2.2.2		**From borrow pits (provisional):**				
10,124			Selected granular material.	m³	2		
10,125			Selected fill material.	m³	2		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 10 - ADMIN BUILDING SITE							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SANS1200 LD		**SEWERS**				
	8.2.1		Supply, handle, lay, join, bed in specified class, test PVC-U pipe for sewers. (Class 34 - 400kPa stiffness)				
10,126			110mm ND	m	25		
	8.2.2		Extra-over 8.2.1 for specials				
10,127			22.5° medium radius bends (Socketed): 110mm ND	No	2		
10,128			45° medium radius bends (Socketed): 110mm ND	No	2		
10,129			90° medium radius bends (Socketed): 110mm ND	No	2		
10,130			PVC plain junction	No	5		
10,131			Underground PVC 45° (rodding eye)	No	2		
10,132	PSLD 8.2.13		2500l underground conservancy tank (Jojo or similar approved). Contractors rate to cover the complete supply, delivery and installation of underground conservancy tank according to detailed drawing and supplier specification. Inclusive of bulk earthworks.	Sum	1		
TOTAL FORWARDED TO SUMMARY							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 11 - BULK POWER SUPPLY							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
11,1			**PRELIMINARY AND GENERAL**				
			Fixed-Charge Items				
11.1.1			Contractor's Contractual Requirements.	Sum	1		
11.1.2			Compliance with the Preliminary and General items of the Contract	Sum	1		
11.1.3			Compliance with the specific Contract Data, Part C1.2	Sum	1		
11.1.4			The Contractor will be responsible for the all risk insurance applicable to his own plant, workmen and tools.	Sum	1		
11.1.5			The Contractor will be responsible for the Special Risk Insurance	Sum	1		
11.1.6			Submission of documentation to and obtaining approvals from and inspections by the Local Authority	Sum	1		
			Time-Related Items				
11.1.7			Contractor's Contractual Requirements.	Month	3		
11.1.8			The cost for any special security arrangements required on site	Month	3		
			SUMS STATED PROVISIONALLY BY THE EMPLOYER'S AGENT				
11.1.9			Employment of a Community Liaison Officer (CLO) to be identified by the Project Steering Committee (PSC) in consultation with the Ward Councillor.	**PSum/ month**	**3**	**R 8 000,00**	**R 24 000,00**
			OCCUPATIONAL HEALTH AND SAFETY				
1.1.10			Compliance with the Construction Regulations in terms of the OHS Act, including Safety Files and Induction	Sum	1		
11,2			**11kV OVERHEAD POWER LINE**				
			Survey and Pegging Out				
11.2.1			Surveying and determining pole positions, turning, straining and terminal points, and pegging out of route	Sum	1		
			Clearing of route				
11.2.2			Remove obstructions, trees, bush and prepare route for line construction	m	6 000		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 11 - BULK POWER SUPPLY							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Excavation of Holes Excavation of hole for planting of 11m pole to a depth of 1 800mm in soils as classified in the Specifications				
11.2.3			In Earth	No.	95		
11.2.4			In Soft Rock	No.	2		
11.2.5			In Hard Rock	No.	2		
11.2.6			In Very Hard Rock	No.	2		
			Planting of Poles				
11.2.7			Planting, backfilling and compaction of 11m pole	No.	95		
			Excavation for Stays Excavation of hole for installation of normal stay to a depth of 1 500mm in soils as classified in the Specifications				
11.2.8			In Earth	No.	60		
11.2.9			In Soft Rock	No.	2		
11.2.10			In Hard Rock	No.	2		
11.2.11			In Very Hard Rock	No.	2		
			Excavation of hole for installation of flying stay to a depth of 1 500mm in soils as classified in the Specifications				
11.2.12			In Earth	No.	2		
11.2.13			In Soft Rock	No.	2		
11.2.14			In Hard Rock	No.	2		
11.2.15			In Very Hard Rock	No.	2		
			Installation of stays Install stay, including backfilling and				
11.2.16			Normal stay	No.	60		
11.2.17			Flying stay	No.	2		
			Supply and delivery of Wooden Poles and Hardware Intermediate single pole:				
11.2.18			Supply, deliver to site and off-loading of 11m Pole Extra over 11m pole for pole hardware kit as outlined in Clause 26.1 and dressing of pole, including drilling and fixing of hardware	No.	60		
11.2.19			Supply	No.	60		
11.2.20			Install	No.	60		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 11 - BULK POWER SUPPLY							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Single pole Strain Structure:				
11.2.21			Supply, deliver to site and off-loading of 11m Pole	No.	1		
			Extra over 11m pole for pole hardware kit as outlined in Clause 26.2 and dressing of pole, including drilling and fixing of hardware				
11.2.22			Supply	No.	1		
11.2.23			Install	No.	1		
			Single pole Corner Strain Structure:				
11.2.24			Supply, deliver to site and off-loading of 11m Pole	No.	25		
			Extra over 11m pole for pole hardware kit as outlined in Clause 26.3 and dressing of pole, including drilling and fixing of hardware				
11.2.25			Supply	No.	25		
11.2.26			Install	No.	25		
			Single pole Turn Structure:				
11.2.27			Supply, deliver to site and off-loading of 11m Pole	No.	1		
			Extra over 11m pole for pole hardware kit as outlined in Clause 26.4 and dressing of pole, including drilling and fixing of hardware				
11.2.28			Supply	No.	1		
11.2.29			Install	No.	1		
			Single Termination Structure:				
11.2.30			Supply, deliver to site and off-loading of 11m Pole	No.	1		
			Extra over 11m pole for pole hardware kit as outlined in Clause 26.5 and dressing of pole, including drilling and fixing of hardware				
11.2.31			Supply	No.	2		
11.2.32			Install	No.	2		
			Out-of-line 3-Phase Transformer Structure				
11.2.33			Supply, deliver to site and off-loading of 11m Pole	No.	1		
			Extra over 11m pole for pole hardware kit as outlined in Clause 26. and dressing of pole, including drilling and fixing of hardware				
11.2.34			Supply	No.	1		
11.2.35			Install	No.	1		
			Supply and delivery of Stay Hardware				
11.2.36			Supply, deliver to site and off-loading of materials for complete normal stay as described in Clause 26.7 of the Specification	No.	60		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 11 - BULK POWER SUPPLY							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
11.2.37			Supply, deliver to site and off-loading of materials for complete flying stay as described in Clause 26.8 of the Specification	No.	1		
			Supply and delivery of Line				
11.2.38			Supply, deliver to site and off-loading of ACSR conductor, size Squirrel	m	19200		
			Installation of Line Conductors Stringing, installation and tensioning of ACSR Squirrel conductor, including use of running blocks, fixing of clamps, tie-ins and paste materials				
11.2.39			Install	m	19200		
			Transformer Supply, delivery, off-loading and installation of 75kVA transformer, 11kV/420v Dyn11				
11.2.40			Supply	No.	1		
11.2.41			Installation	No.	1		
			Earthing of Poles Supply and install earthing strips to wooden poles				
11.2.42			Supply	No.	95		
11.2.43			Install	No.	95		
			Testing and Commissioning Provide all test instruments to measure tensioning, pressure test power line and furnish Test Certificates				
11.2.44			Test and Commission	Sum	1		
11.2.45			Issue Test Certificates and Certificate of Compliance	Sum	1		
			As-built Documentation				
11.2.46			Provide all inspection reports, records of work done, quality control and inspection sheets and photographs, measurement results, drawings, marked-up documents and other close-out documentation	Set	1		
11.2.47			Overheads, charges and profit on items 11.1.9 here above.	%		**R 24 000,00**	
TOTAL FORWARDED TO SUMMARY							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
12,1			**PRELIMINARY AND GENERAL**				
12.1.1			Compliance with the General Conditions of	Sum	1		
12.1.2			Compliance with the Preliminary and General items of the Contract	Sum	1		
12.1.3			Compliance with the specific Contract Data, Part C1.2	Sum	1		
12.1.4			Compliance with the Construction Regulations in terms of the OHS Act, including Safety Files and Induction	Sum	1		
12.1.5			The Contractor will be responsible for the all risk insurance applicable to his own plant, workmen and tools	Sum	1		
12.1.6			The Contractor will be responsible for the Special Risk Insurance	Sum	1		
12.1.7			The cost for any special security arrangements required on site	Sum	1		
12.1.8			Submission of documentation to and obtaining approvals from and inspections by the Local Authority	Sum	1		
12,2			**DISTRIBUTION BOARDS AND EQUIPMENT**				
			Supply and install the following distribution boards as per the engineer's drawings to supply the lighting and power to the building areas and site				
			Distribution Board in Administration				
12.2.1			Supply	Sum	1		
12.2.2			Install	Sum	1		
12.2.3			Test and issue Certificate of Compliance	Sum	1		
			Distribution Board in Dam Wall Control Building				
12.2.4			Supply	Sum	1		
12.2.5			Install	Sum	1		
12.2.6			Test and issue Certificate of Compliance	Sum	1		
			Distribution Board in Drainage Collection Chamber				
12.2.7			Supply	Sum	1		
12.2.8			Install	Sum	1		
12.2.9			Test and issue Certificate of Compliance	Sum	1		
			Metering and distribution box at Transformer				
12.2.10			Supply	Sum	1		
12.2.11			Install	Sum	1		
12.2.12			Test and issue Certificate of Compliance	Sum	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
12,3			**CABLING AND DISTRIBUTION EQUIPMENT**				
			LOW VOLTAGE CABLES				
			600/100V grade PVC/SWA/PVC stranded copper conductor cables (terminations and excavations elsewhere measured)				
			Laid in trench, pulled through cavity in wall or sleeves, laid in ducts or installed on cable trays or ladders				
			35mm² 4 core for Mains Supply				
12.3.1			Supply	m	30		
12.3.2			Install	m	30		
			25mm² 4 core with ECC				
12.3.3			Supply	m	300		
12.3.4			Install	m	300		
			16mm² 4 core with ECC				
12.3.5			Supply	m	30		
12.3.6			Install	m	30		
			10mm² 4 core with ECC				
12.3.7			Supply	m	145		
12.3.8			Install	m	145		
			4mm² 4 core with ECC				
12.3.9			Supply	m	40		
12.3.10			Install	m	40		
			2,5mm² 4 and 2 core with ECC				
12.3.11			Supply	m	500		
12.3.12			Install	m	500		
			2,5mm² 12 core				
12.3.13			Supply	m	50		
12.3.14			Install	m	50		
			CABLE TERMINATIONS				
			Terminate 600/1000V grade PVC/SWA/PVC cables complete, including drilling, lugs, identification markers, gland, waterproof shroud, etc. for:				
			35mm² 4 core				
12.3.15			Supply	each	2		
12.3.16			Install	each	2		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			25mm² 4 core				
12.3.17			Supply	each	2		
12.3.18			Install	each	2		
			16mm² 4 core				
12.3.19			Supply	each	2		
12.3.20			Install	each	2		
			10mm² 4 core with ECC				
12.3.21			Supply	each	2		
12.3.22			Install	each	2		
			4mm² 4 core				
12.3.23			Supply	each	2		
12.3.24			Install	each	2		
			2,5mm² 4 and 2 core				
12.3.25			Supply	each	100		
12.3.26			Install	each	100		
			2,5mm² 12 core				
12.3.27			Supply	each	6		
12.3.28			Install	each	6		
			EARTH WIRE				
			Stranded bare copper or composite earth wire laid in trench, pulled through cavity in wall or sleeves or attached to wireway or structure				
			16mm² copper equivalent Kwena earth wire				
12.3.29			Supply	m	30		
12.3.30			Install	m	30		
			25mm² BCE				
12.3.31			Supply	m	10		
12.3.32			Install	m	10		
			Up to 16mm² BCE				
12.3.33			Supply	m	300		
12.3.34			Install	m	300		
			EARTH WIRE TERMINATIONS				
			Terminate stranded bare copper earth wires				
			16mm² copper equivalent Kwena earth wire				
12.3.35			Supply	each	2		
12.3.36			Install	each	2		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Employer | Witness 1 | Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Up to 25mm²				
12.3.37			Supply	each	50		
12.3.38			Install	each	50		
			CONTROL AND INSTRUMENTATION				
			Laid in trench, pulled through cavity in wall or sleeves, laid in ducts or installed on cable trays or ladders				
			2 Pair, 1,5 sq. mm XLPE, OAM, PVC, 300V rated instrumentation cabling				
12.3.39			Supply	m	100		
12.3.40			Install	m	100		
			4 Pair, 1,5 sq. mm XLPE, OAM, PVC, 300V rated instrumentation cabling				
12.3.41			Supply	m	100		
12.3.42			Install	m	100		
			8 Pair, 1,5 sq. mm XLPE, OAM, PVC,				
12.3.43			Supply	m	20		
12.3.44			Install	m	20		
			TERMINATION OF CONTROL AND INSTRUMENTATION CABLES				
			Terminate control and instrumentation cables complete, including drilling, lugs, identification markers, gland, waterproof shroud, etc. for:				
			2 Pair, 1,5 sq. mm XLPE, OAM, PVC,				
12.3.45			Supply	each	10		
12.3.46			Install	each	10		
			4 Pair, 1,5 sq. mm XLPE, OAM, PVC, 300V rated instrumentation cabling				
12.3.47			Supply	each	4		
12.3.48			Install	each	4		
			8 Pair, 1,5 sq. mm XLPE, OAM, PVC, 300V rated instrumentation cabling				
12.3.49			Supply	each	2		
12.3.50			Install	each	2		
			Cable ladders, cable trays or cable racks With T-pieces, reducers, bends, joints and fixings				
			300mm wide				
12.3.51			Supply	m	10		
12.3.52			Install	m	10		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			150mm wide				
12.3.53			Supply	m	20		
12.3.54			Install	m	20		
			EXCAVATIONS				
			All excavations, backfilling and compaction shall be done manually using local labour				
			Nature of ground and classification of materials to be excavated including backfill for electrical installations				
12.3.55			Earth	m³	220		
12.3.56			Soft rock	m³	25		
12.3.57			Hard rock	m³	15		
			BACKFILLING				
12.3.58			Fill trench with bedding and backfill with selected material	m³	260		
			SURFACE COVERING				
			Lift and reinstate surface (for cable excavating) to original condition				
12.3.59			Tar	m²	5		
12.3.60			Paving	m²	5		
12.3.61			Concrete	m²	5		
			CABLE SLEEVES				
			Provision of 110mm dia. Cable sleeve under surface covering, "Kabelflex" or similar approved				
12.3.62			Supply	m	100		
12.3.63			Install	m	100		
			Testing and Commissioning Test and commission the entire installation and issue the necessary Certificate of Compliance as per SANS 10142				
12.3.64			Supply	Item	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Employer | Witness 1 | Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
12,4			**LIGHTING AND SMALL POWER**				
			Conduit				
			Conduit, including saddles and fixings				
			20mm diameter conduit				
12.4.1			Supply	m	400		
12.4.2			Install	m	400		
			25mm diameter conduit				
12.4.3			Supply	m	50		
12.4.4			Install	m	50		
			100 X 100mm conduit boxes				
12.4.5			Supply	each	20		
12.4.6			Install	each	20		
			100 X 50mm conduit boxes				
12.4.7			Supply	each	25		
12.4.8			Install	each	25		
			Round conduit boxes				
12.4.9			Supply	each	60		
12.4.10			Install	each	60		
			Wireways				
			Galvanised wireways O-Line or similar with lid:				
			P2000				
12.4.11			Supply	m	50		
12.4.12			Install	m	50		
			P9000				
12.4.13			Supply	m	10		
12.4.14			Install	m	10		
			Luminaires				
			Linear 54W LED IP65 surface mounted, 1200mm				
12.4.15			Supply	each	35		
12.4.16			Install	each	35		
			LED outdoor floodlight, 34W, IP65				
12.4.17			Supply	each	5		
12.4.18			Install	each	5		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			LED Bulkhead luminaires				
12.4.19			Supply	each	65		
12.4.20			Install	each	65		
			Provision and installation of LED area-lighting luminaire, 36W, IP65; Beka type Ziya-E or similar approved, complete with PV panel and photocell.				
12.4.21			Supply	each	15		
12.4.22			Install	each	15		
			Extra over area lighting luminaire for 6m galvanised pole				
12.4.23			Supply	each	15		
12.4.24			Install	each	15		
			Light switches, switched socket outlets and welding plugs				
			16A single switched socket outlets				
12.4.25			Supply	each	20		
12.4.26			Install	each	20		
			400 volt 63 amp 3 ph+N+E welding plugs				
12.4.27			Supply	each	2		
12.4.28			Install	each	2		
			16A light switches				
12.4.29			Supply	each	25		
12.4.30			Install	each	25		
			CONDUCTORS				
			600/1000V Grade PVC insulated stranded copper conductors drawn into conduit and wireways				
			1,5 mm²				
12.4.31			Supply	m	750		
12.4.32			Install	m	750		
			2,5 mm²				
12.4.33			Supply	m	500		
12.4.34			Install	m	500		
			4 mm²				
12.4.35			Supply	m	50		
12.4.36			Install	m	50		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Bare stranded copper wire earth conductors drawn into conduit and wireways				
			1,5 mm²				
12.4.37			Supply	m	500		
12.4.38			Install	m	500		
			2,5 mm²				
12.4.39			Supply	m	250		
12.4.40			Install	m	250		
			4 mm²				
12.4.41			Supply	m	30		
12.4.42			Install	m	30		
			Isolators				
			Provision and installation of isolator in enclosure				
			32A 3-phase				
12.4.43			Supply	each	2		
12.4.44			Install	each	2		
			16A single phase				
12.4.45			Supply	each	5		
12.4.46			Install	each	5		
			Testing and Commissioning				
			Test and commission the entire installation and issue the necessary Certificate of Compliance as per SANS 10142-1				
12.4.47			Supply	Item	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Employer | Witness 1 | Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
12,5			**EARTHING AND LIGHTNING PROTECTION**				
			Building and system earthing				
			LIGHTNING PROTECTION				
12.5.1			Provide service of authorised lightning protection specialist for layout for lightning protection to structures in accordance with SANS 62305: 2007	Item	1		
			Provide all materials, earth rods, air conductors, air terminals, down conductors and common bonding as specified on specialist's drawings for tower structure and pump station				
12.5.2			Supply	Item	1		
12.5.3			Install	Item	1		
			Documentation				
12.5.4			Test and commission lightning protection system	Item	1		
12.5.5			Issue Certificate of Compliance per SANS 62305: 2007	Item	1		
12,6			**STAND-BY DIESEL GENERATOR AND ATS PANEL**				
12.6.1			Supply, transport to site, deliver, off-load and store one 30kVA diesel generating set in accordance with the specifications	Item	1		
12.6.2			Place in position, install, connect mechanical and electrical equipment, exhaust and fuel systems, mains fail panel, intake and outlet panels, etc. make good and finish off one diesel generating set to render installation complete in working order in accordance with the specification	Item	1		
12.6.3			Test and commission one diesel generating set as set out in the specification, with dummy load	Item	1		
12.6.4			Issue Certificate of Compliance per SANS 10142	Item	1		
12.6.5			Provide first full tank of diesel after completion of testing	Item	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
12,7			**PHOTOVOLTAIC (PV) INSTALLATION**				
			Supply, transport to site, deliver, off-load, store, and install all the following materials and equipment to provide PV Systems as specified				
			Solar PV Panel array 10kWp: Place in position and install solar PV panel support structure				
12.7.1			Supply	Item	1		
12.7.2			Install	Item	1		
			Place in position, install, connect mechanical and electrical equipment, make good and finish-off PV Panel array on roof structure, 10kWp				
12.7.3			Supply	Item	1		
12.7.4			Install	Item	1		
			Supply and install String Combiner boxes				
12.7.5			Supply	Set	1		
12.7.6			Install	Set	1		
			Supply and install set of MPPT Charge Controllers				
12.7.7			Supply	Set	1		
12.7.8			Install	Set	1		
			Batteries and battery housing				
			Provide and install set of Li-Ion batteries to provide 2 hour back-up				
12.7.9			Supply	Set	1		
12.7.10			Install	Set	1		
			Provide and install lockable housing for batteries				
12.7.11			Supply	Each	1		
12.7.12			Install	Each	1		
			Inverter				
			Provide and install 3-phase 10kW inverter with DC protection and mains synchronisation				
12.7.13			Supply	Each	1		
12.7.14			Install	Each	1		
			Provide and install change-over switch and metering switchboard, complete				
12.7.15			Supply	Each	1		
12.7.16			Install	Each	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Employer | Witness 1 | Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Cabling				
			Provide and install cabling for the PV installation. Final lengths are to be measured on-site.				
			DC Cable, single-core, double insulation, 4 sq. mm				
12.7.17			Supply	m	250		
12.7.18			Install	m	250		
			DC Cable, PV array combiner box to charge controller, 50 sq. mm				
12.7.19			Supply	m	50		
12.7.20			Install	m	50		
			DC Cable, charge controller to battery, 25 sq. mm				
12.7.21			Supply	m	50		
12.7.22			Install	m	50		
			AC Cable, 6 sq. mm/4 core				
12.7.23			Supply	m	100		
12.7.24			Install	m	100		
			Earth Wire 16sq mm				
12.7.25			Supply	m	200		
12.7.26			Install	m	200		
			System monitoring				
			Provide and install equipment, software and display devices for system monitoring and alarm annunciation				
12.7.27			Supply	Item	1		
12.7.28			Install	Item	1		
			Miscellaneous items: (cable tray, trunking, fixings, communication cabling, as required)				
12.7.29			Supply	Item	1		
12.7.30			Install	Item	1		
			Solar PV Panel array 3kWp (Dam Control Room)				
			Place in position and install solar PV panel support structure				
12.7.31			Supply	Item	1		
12.7.32			Install	Item	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Employer | Witness 1 | Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Place in position, install, connect mechanical and electrical equipment, make good and finish-off PV Panel array on roof structure, 3kWp				
12.7.33			Supply	Item	1		
12.7.34			Install	Item	1		
			Supply and install String Combiner boxes				
12.7.35			Supply	Set	1		
12.7.36			Install	Set	1		
			Supply and install set of MPPT Charge				
12.7.37			Supply	Set	1		
12.7.38			Install	Set	1		
			Batteries and battery housing				
			Provide and install set of Li-Ion batteries				
12.7.39			Supply	Set	1		
12.7.40			Install	Set	1		
			Inverter				
			Provide and install 3-phase 3kW inverter with DC protection and mains synchronisation				
12.7.41			Supply	Each	1		
12.7.42			Install	Each	1		
			Provide and install change-over switch and metering switchboard, complete				
12.7.43			Supply	Each	1		
12.7.44			Install	Each	1		
			Cabling				
			Provide and install cabling for the PV installation. Final lengths are to be measured on-site.				
			DC Cable, single-core, double insulation, 4 sq. mm				
12.7.45			Supply	m	150		
12.7.46			Install	m	150		
			DC Cable, PV array combiner box to charge controller, 50 sq. mm				
12.7.47			Supply	m	50		
12.7.48			Install	m	50		
			DC Cable, charge controller to battery, 25 sq. mm				
12.7.49			Supply	m	50		
12.7.50			Install	m	50		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Employer | Witness 1 | Witness 2

SECTION 12 - ELECTRICAL INSTALLATION							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			AC Cable, 6 sq. mm/4 core				
12.7.51			Supply	m	100		
12.7.52			Install	m	100		
			Earth Wire 16sq mm				
12.7.53			Supply	m	200		
12.7.54			Install	m	200		
			System monitoring				
			Provide and install equipment, software and display devices for system monitoring and alarm annunciation				
12.7.55			Supply	Item	1		
12.7.56			Install	Item	1		
			Miscellaneous items: (cable tray, trunking, fixings, communication cabling, as required)				
12.7.57			Supply	Item	1		
12.7.58			Install	Item	1		
12,8			**SCADA AND TELEMETRY**				
12.8.1			Design, supply, install, test and commission a comprehensive SCADA and Telemetry system for remote control and monitoring complete as specified.	**PSum**	**1**	**R 400 000,00**	**R 400 000,00**
12.8.2			Handling fee for Contractor's cost and expenses on items 12.8.1.	**%**		**R 400 000,00**	
TOTAL FORWARDED TO SUMMARY							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION 13 - RISING MAIN							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	SABS1200C		**CLEAR SITE**				
	PSC 8.2.1		Clear and grub all shrubs and vegetation for areas as required and instructed by Employer's Agent for construction:				
13,1			3m Wide Strip	m	500		
	8.2.2		Remove and grub large trees (including tree stumps and roots) of girth over:				
13,2	8.2.2.a)		up to 1,0 m.	No.	8		
13,3	8.2.2.b)		1,0 m - 2,0 m.	No.	5		
13,4	8.2.2.c)		2,0 m - 3,0 m.	No.	---		Rate Only
13,5	PSDB 3.1		Removal of Boulders Class A and B and dispose.	m³	50		
	8.2.8		Demolish and remove structures / buildings.				
13,6			Brick, Clay or Concrete Structures.	No.	3		
13,7			Rebuilt structures/buildings demolished in Item a above.	No.	3		
13,8	PSC 8.2.11		Take down, dispose of or re-erect existing fences.	m	50		
13,9	PSC 8.2.11		New fencing as removed/demolished in Item 13.8 above.	m	25		
	SABS 1200D		**BULK EARTHWORKS**				
			Bulk Excavation - Valve Chambers:				
13,10	PSD 8.3.2		Excavate by machine in all materials and use for embankment or backfill or dispose, as ordered.	m³	20		
			Extra-over for:				
13,11	PSD 8.3.2		Hard rock excavation. (Blasting or Pneumatic Drilling)	m³	6		
13,12	PSD 8.3.2		Boulder excavation and dump, Class A and B.	m³	2		
	SABS 1200 DB		**EARTHWORKS (PIPE TRENCHES)**				
	8,3		Scheduled Earthworks Items. Excavation: Excavate in all materials for trenches, backfill, compact and dispose of surplus material:				
13,13	PSDB 8.3.2		Pipes - up to 315mm ND uPVC	m³	890		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 13 - RISING MAIN							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
			Extra-over for:				
13,14	8.3.2.b)		Hard rock excavation. (Blasting or Pneumatic Drilling)	m³	178		
13,15	8.3.2.b)		Boulder excavation and dump, Class A and B.	m³	89		
13,16	8.3.2.b)		Excavate and dispose of unsuitable material from trench bottom.	m³	267		
	8.3.3		Excavation Ancillaries				
13,17	8.3.3.1a)		Make up deficiency in backfill by importation from borrowpit.	m³	550		
			Restricted Excavations:				
13,18	PSD 8.3.3		Excavate in all materials and use for embankment or backfill or dispose, as ordered.	m³	20		
			Overhaul:				
13,19	PSD 5.2.5.1		Extra-over items 13.16 for hauling of material in excess of the freehaul distance (5,5km), only if instructed by Employer's Agent.	m³.km	2 670		
	8.3.6		Finishing:				
	8.3.6.1		Reinstate road surfaces complete with all courses				
13,20	8.3.6.1 a)		Natural gravel material (G5) compacted to 95% MOD AASHTO in layers of 150mm	m³	20		
13,21	8.3.6.1 d)	LI	Asphalt of thickness 80mm in roadway	m²	---		Rate Only
	8.3.5.a)		Existing services that intersect or adjoin a pipe trench				
13,22			Overhead powerlines.	No.	5		
13,23			Existing water pipelines up to 300mmø.	No.	3		
13,24			Existing stormwater pipelines or culverts	No.	3		
13,25			Existing sewer lines up to 300mmø.	No.	2		
	SABS 1200 LB		**BEDDING (PIPES)**				
	8.2.1		Provision of bedding from Trench Excavation:				
13,26	8.2.1.a)		Selected granular material.	m³	165		
13,27	8.2.1.b)		Selected fill material.	m³	70		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 13 - RISING MAIN							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	8.2.2.2		Supply only of Bedding by Importation from Borrow Pit:				
13,28	8.2.2.2.a)		Selected granular material.	m³	110		
13,29	8.2.2.2.b)		Selected fill material.	m³	50		
	SABS 1200L		**MEDIUM PRESSURE PIPELINES**				
			Pipework				
	8.2.1		Supply, Deliver, Lay, Bed and Test on Class B Bedding for Flexible Pipes, Complete with Couplings, Bends and Supports:				
			uPVC				
13,30	PSL 3.7.1		315mm ND Class 9.	m	234		
13,31	PSL 3.7.1		315mm ND Class 12.	m	204		
	8.2.2		Extra over items 13.30-32 for supplying, laying, and bedding of uPVC specials complete with couplings:				
			Bends - 315mm uPVC Class 9:				
13,32			11.25°	No.	2		
13,33			22.5°	No.	3		
13,34			45°	No.	6		
13,35			90°	No.	---		Rate Only
			Bends - 315mm uPVC Class 12:				
13,36			11.25°	No.	2		
13,37			22.5°	No.	2		
13,38			45°	No.	2		
13,39			90°	No.	---		Rate Only
			Valves				
	8.2.5		Supply and Place Pipes, Valves, and Specials				
			Isolating Valves:				
13,40	PSL 3.10.1)		100mm dia NB	No.	3		
13,41	PSL 3.10.1)		250mm dia NB	No.	2		
13,42	PSL 3.10.1)		315mm dia NB	No.	2		
			Double Acting Airvalves:				
13,43	PSL 3.10.2)		25mm dia	No.	---		Rate Only
13,44	PSL 3.10.2)		50mm dia	No.	3		
			Scour Valves:				
13,45	PSL 3.10.3)		100mm dia NB	No.	1		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 13 - RISING MAIN							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	PSL 8.2.11		**Anchor/Thrust Blocks and Pedestals** Supply and construct Anchor/Thrust blocks as detailed on drawing 2021/04/RM-TD02 with class 20/19 Mpa Concrete for:				
13,46			Concrete blocks up to and including 0.5m³.	No.	---		Rate Only
13,47			Over 0.5m³ up to and including 1.0m³.	No.	12		
	8.2.12		**Concrete Casing**				
13,48			Encasing of pipe in 20/19 Mpa Concrete	m^3	10		
	PSL 8.2.13		**Valve and Hydrant Chambers** Construction of complete valve chambers as detailed on respective drawings complete with pipework, specials, fittings, covers and lids (excluding main valves):				
13,49			Air Valve Chamber complete as per drawing 2021/04/RM-D01. Size as per Longitudinal Section.	No.	2		
13,50			Scour Valve Chamber complete as per drawing 2021/04/RM-D02.	No.	1		
13,51			Isolating Valve Chamber complete as per drawing 2021/04/RM-TD01.	No.	2		
13,52	8.2.15		Special Wrapping in Corrosive Soil - Denso Petrolatum Tape	m	40		
13,53	PSL 8.2.17		Supply and install concrete marker block as detailed on drawings 2021/04/RM-TD01, including lettering and painting as specified, at positions indicated by the Employer's Agent.	No.	12		
13,54	PSL 8.2.18		Connect to New or Existing Pipework complete including all excavation, pipes fittings, labour, welding delivery and installation to suit the position described and shown on the drawing (excluding main valves) - to be verified on site.	No	6		
SUB-TOTAL CARRIED FORWARD TO NEXT PAGE							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 13 - RISING MAIN							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
SUB-TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE							
	SABS1200LG		**PIPE JACKING**				
13,55	PSLG 8.2.11		Application of Way Leave of Crossing on the R65 Provincial Road	**PSum**	**1**	**R 20 000,00**	**R 20 000,00**
	8.2.1		Jacking/Drilling Establishment				
13,56	8.2.1 a)		Fixed Charged	Sum	---		Rate Only
13,57	8.2.1 b)		Time Related	Week	4		
13,58	PSLG 8.2.2		Supply of Pipes to be Jacked/Drilled (Provisional)	m	26		
13,59	8.2.3		Jacking/Drilling of Pipes	m	26		
13,60	8.2.4		Excavation for Jacking/Drilling in soft material, backfilling by hand and compacting.	m^3	200		
13,61	8.2.5		Extra-Over 13.57 for Jacking/Drilling in hard material	m	10		
13,62	8.2.6		Extra-Over 13.58 for Excavation in Rock	m^3	80		
TOTAL CARRIED FORWARDED TO SUMMARY							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 14 - GAUGING WEIR							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
14			**GAUGING WEIR**				
14,1			Allowance for the Gauging Weir for outflow measurement downstream of the dam	**PSum**	**1**	**R 14 000 000,00**	**R 14 000 000,00**
14,2	PI 8.5 d)		Allowance for the Gauging Weir instrumentation	**PSum**	**1**	**R 1 000 000,00**	**R 1 000 000,00**
TOTAL CARRIED FORWARDED TO SUMMARY							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SECTION 15 - SOCIO ECONOMIC DEVELOPMENT							
ITEM NO	**PAYMENT REFERENCE**	**LI SC**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
15	C3.3.1		**SOCIO ECONOMIC DEVELOPMENT**				
15,1			Corporate Social Responsibility in line with SED Plan	**PSum**	**1**	**R 2 000 000,00**	**R 2 000 000,00**
15,2			Skills Development in line with SED Plan	**PSum**	**1**	**R 1 000 000,00**	**R 1 000 000,00**
15,3			Overheads, charges and profit on items 15.1 - 15.2 here above.	**%**		**R 3 000 000,00**	
TOTAL CARRIED FORWARDED TO SUMMARY							

Contractor | Witness 1 | Witness 2 | Client | Witness 1 | Witness 2

SUMMARY OF SCHEDULES		
SECTION	**DESCRIPTION**	**AMOUNT**
SECTION 1	GENERAL ITEMS	
SECTION 2	DAYWORKS	
SECTION 3	TEMPORARY WORKS	
SECTION 4	RIVER DIVERSION	
SECTION 5	DRILLING AND GROUTING	
SECTION 6	QUARRY	
SECTION 7	INSTRUMENTATION AND EQUIPMENT	
SECTION 8	DAM	
SECTION 9.1	MAIN ACCESS ROAD	
SECTION 9.2	DAM ACCESS ROAD	
SECTION 10	ADMIN BUILDING SITE	
SECTION 11	BULK POWER SUPPLY	
SECTION 12	ELECTRICAL INSTALLATION	
SECTION 13	RISING MAIN	
SECTION 14	GAUGING WEIR	
SECTION 15	SOCIO ECONOMIC DEVELOPMENT	
SUB-TOTAL A		
Plus 10% for Contingencies on Sub-Total A (Compulsory)		
Plus 5% for Escalation on Sub-Total A (Compulsory)		
SUB-TOTAL		
PLUS 15% VAT (Compulsory)		
TOTAL TENDER PRICE		

TENDERER: _____

ADDRESS: _____

_____

CELL: _____

EMAIL: _____

SIGNATURE: _____

DATE: _____

Contractor	Witness 1	Witness 2	Client	Witness 1	Witness 2