



ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1.1	SANS 1200A	SECTION 1: PRELIMINARY & GENERAL				
	8.3.1	FIXED CHARGE AND VALUE RELATED ITEMS				
		CONTRACTUAL REQUIREMENTS				
1.1.1		Surety or bank guarantee	Sum	1		
1.1.2		Common Law Liability insurance	Sum	1		
1.1.3		Insurance of construction plant and equipment	Sum	1		
1.1.4		Third Party Insurance	Sum	1		
		ESTABLISH FACILITIES ON THE SITE				
	8.3.2.1	FACILITIES FOR THE ENGINEER				
1.1.5		(a) Construction and setting out of survey beacons	No.	20		
1.1.6	PSAB 3.1	(b) Name boards	No.	2		
1.1.7	PSAB 8.3.1	(c) Services	Sum	1		
1.1.8	PSAB 3.2	(d) Engineer's Office	Sum	1		
1.1.9	PSAB 3.2.7	(e) Chemical Ablution Facility	Sum	1		
1.1.10	PSAB 8.3.5 (f)	(f) Living accomodation	Sum	1		
1.1.11		(g) Telephone and communication	Sum	1		
1.1.12		(h) Transport	Sum	1		
1.1.13	PSAB 8.3.2	(i) Personal Protection Equipment	PC Sum	1	25,000	R 25,000.00
1.1.14		Attendance and profit	%	25,000		
	8.3.2.2	FACILITIES FOR THE CONTRACTOR				
1.1.15		(a) Offices and storage sheds	Sum	1		
1.1.16		(b) Workshops	Sum	1		
1.1.17		(c) Plant	Sum	1		
1.1.18		(d) Tools and equipment	Sum	1		
1.1.19	PSA 8.3.2.2 (g)	(e) Water supplies, electric power & communications	Sum	1		
1.1.20	8.3.2.2	(f) Dealing with water	Sum	1		
1.1.18	PSAB 8.3.2 (c)	Provision and disposal of disposable PPE	Sum	1		
1.1.21		Provision of decontamination installation, wash bays and the like for specific safety requirements for working in an Asbestos area.	Sum	1		
SUB-TOTAL CARRIED FORWARD						



BILL OF QUANTITIES
SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<i>brought forward</i>				-
1.1.22	8.3.3	Other fixed charge obligations	Sum	1		
1.1.23	8.3.4	Removal of site establishment	Sum	1		
1.1.24		Compliance with the Mine Health and Safety Act and Occupational Health and Safety Act and Specification	Sum	1		
1.1.26		Compliance with the Environmental Management Plan	Sum	1		
1.1.27		Hazard Identification and risk assessment	Sum	1		
1.1.28		Health & Safety Plan	Sum	1		
1.1.29		Construction safety officer and other appointments	Sum	1		
1.1.30	PSAB 8.3.4	CETA Accredited Training to local labour	PC Sum	1	50,000	R 50,000.00
1.1.31		Attendance and profit on item 1.1.27	%	50,000		
1.1.32		Work Skills Plan and Implementation Report to CETA	Sum	1		
1.1.33		Pre-employment medical examination	Sum	1		
1.1.34	PSAB 8.3.2	Personal Protective Equipment	Sum	1		
1.1.35	PSAB 8.3.6	Asbestos regulation training (for all employees on site)	Sum	1		
1.1.36		Appointment of Monitory Authority	Sum	1		
1.2		TIME RELATED ITEMS				
	8.4.1	CONTRACTUAL REQUIREMENTS				
1.2.1		Surety or bank guarantee	Month	8		
1.2.2		Common Law Liability insurance	Month	8		
1.2.3		Insurance of construction plant and equipment	Month	8		
1.2.4		Third Party Insurance	Month	8		
1.2.5		Compliance with the Mine Health and Safety Act and Occupational Health and Safety Act and Specification	Month	8		
1.2.6		Compliance with the Asbestos Abatement Regulations	Month	8		
SUB-TOTAL CARRIED FORWARD						



ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<i>brought forward</i>				-
1.2.7		Compliance with the Environmental Management Plan	Month	8		
1.2.8	PSAB 8.3.4	Asbestos regulation training (for all employees on site)	Month	8		
		OPERATE AND MAINTAIN FACILITIES ON THE SITE				
	8.4.2.1	FACILITIES FOR ENGINEER FOR THE DURATION OF CONSTRUCTION				
1.2.10		(a) Engineer's office	Month	8		
1.2.12		(c) Name boards (No. 2)	Month	8		
1.2.13		(c) Services	Month	8		
1.2.13	PSAB 8.2.7	(d) Chemical Ablution Facility	Month	8		
1.2.14	PSAB 8.3.5 (e)	(e) Assistant Resident Engineer (ARE)	Month	8		
1.2.15	PSAB 8.3.5 (f)	(f) Living accommodation	P sum	1		
1.2.15		Telephone and communication	P sum	1		
1.2.16		Transport	P sum	1	150,000	R 150,000.00
1.2.17		Attendance and profit on item 1.2.14, 1.2.16 & 1.1.17	%	150,000		
	8.4.2.2	FACILITIES FOR CONTRACTOR FOR THE DURATION OF CONSTRUCTION				
1.2.18		(a) Offices and storage sheds	Month	8		
1.2.19		(b) Workshops	Month	8		
1.2.20		(c) Ablution and latrine facilities	Month	8		
1.2.21		(d) Tools and equipment	Month	8		
1.2.22	PSA 8.3.2.2 (g)	(e) Water supplies, electric power and communications	Month	8		
1.2.23		(f) Dealing with water	Month	8		
1.2.24		(g) Access	Month	8		
1.2.25		(h) Plant	Month	8		
1.2.26		(i) Supervision for duration of construction	Month	8		
SUB-TOTAL CARRIED FORWARD						



BILL OF QUANTITIES
SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<i>brought forward</i>				-
1.2.27		(j) Asbestos supervisor for the duration of the contract	Month	8		
		Maintenance of decontamination wash bays and the like for specific safety requirements for working in an Asbestos area.	Month	8		
1.2.28	PSAB 8.3.3	Community Liaison Officer	P Sum	1	96,000	R 96,000.00
1.2.29		Environmental Control Officer (ECO)	Month	8		
1.2.30		Control tests by independent laboratory. Additional tests that may be required by the Engineer over and above normal quality control tests performed by the Contractor.	P Sum	1	50,000	R 50,000.00
1.2.31		Land survey to be undertaken by a registered land surveyor with PLATO, as when required by an engineer.	P Sum	1	25,000	R 25,000.00
1.2.32		Stakeholder engagement activities	P Sum	1	100,000	R 100,000.00
1.2.33		Attendance and profit on item 1.2.28, 1.2.30, 1.2.31 & 1.2.32	%	271,000		
1.2.34	PSVC 8.1	Normal Security	Month	8		
1.2.35	PSVC 8.2	Special Security	Month	8		
1.2.36	8.4.4	Company and Head Office Overhead Costs for the Duration of the Contract	Month	8		
1.3	8.7	DAYWORK				
1.3.1		Expenditure on dayworks (i.e. wages paid to workmen and invoiced cost of materials, delivered on site)	P Sum	1	100,000.00	R 100,000.00
		Attendance and profit	%	100,000		
		Extra over item above for supervision, overheads and all other costs related to the daywork items under items below for the following:				
1.3.2		Skilled artisans	h	100		
1.3.3		Unskilled labourers	h	200		
1.3.4		Foreman	h	150		
SUB-TOTAL CARRIED FORWARD						



BILL OF QUANTITIES
SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1.4		<i>brought forward</i> PLANT HIRE RATES The appropriate types and sizes (T&S) of the plant shall be stated in the space provided:				-
1.4.1		Tip Trucks (Type & Size)	hrs.	40		
1.4.2		Excavator (Type & Size)	hrs.	40		
1.4.3		TLB's (Type & Size)	hrs.	40		
1.4.4		Rollers (Type & Size)	hrs.	40		
1.4.5		Water carts (Type & Size)	hrs.	40		
1.4.6		Portable compressor and breakers etc. (Type & Size)	hrs.	40		
1.4.7		Portable pumps and hoses (Type & Size)	hrs.	40		
		STANDING TIME RATES Plant rates should be in accordance to those published in the OFFICIAL RATE GUIDE OF THE CONTRACTORS PLANT HIRE ASSOCIATION (CPHA) The appropriate types and sizes (T&S) of the plant shall be stated in the space provided: Provide a wet rate				
		Tip Trucks (Type & Size)	hrs.	1		
		Excavator (Type & Size)	hrs.	40		
		TLB's (Type & Size)	hrs.	1		
		Rollers (Type & Size)	hrs.	1		
		Water carts (Type & Size)	hrs.	1		
		Portable compressor and breakers etc. (Type & Size)	hrs.	1		
		Portable pumps and hoses (Type & Size)	hrs.	1		
SUB-TOTAL CARRIED FORWARD						



ITEM NO	PAYMEN CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2		<p><u>SECTION 2: TEMPORARY WORKS</u></p> <p>NOTE: Due to the local topographical and vegetation challenges of the site, access to the dispersed work areas contained in these Bills of Quantities is difficult.</p> <p>The contractor is to design, construct and maintain during construction any necessary temporary works which he deems necessary and appropriate to execute the works; and on completion remove these temporary works and rehabilitate any area affected by these temporary works to it's original condition.</p> <p>NOTE: The value of these temporary works will be disbursed pro-rata by the value of construction works certified in each payment certificate relative to the contract value of the construction works to a maximum of 100 % of Item 1 below.</p> <p>Allow for all necessary site surveys, testing, planning, design, provision of method statement and signing off of design by an ECSA registered professional engineer/technologist.</p>				
2.1			Sum	1		
2.2	SANS 1200DM	EARTHWORKS (ROADS, SUBGRADE)				
2.2.1	8.3.2 (a)	Preparation and stripping of Site/removal of topsoil to 150mm, stockpiling and maintaining	m³	1,194		
2.2.2	8.3.3	Treatment of Roadbed				
		a) Road-bed preparation and compaction of material				
		2) Minimum of 93 % mod. AASHTO maximum density	m³	1,194		
		b) In-place treatment of road-bed in intermediate or hard rock material by				
		1) Ripping	m³	119		
		2) Blasting	m³	179		
2.2.3	8.3.4	Cut to fill				
		a) Compact to 93 % mod. AASHTO maximum density	m³	1,230		
2.2.4	8.3.4	Borrow to fill				
		a) Compact to 93 % mod. AASHTO maximum density	m³	1,800		
SUB-TOTAL CARRIED FORWARD						



ITEM NO	PAYMEN CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<i>brought forward</i>				
2.2.5	8.3.6	Extra-over items 2.2.3 & 2.2.4 for excavating and breaking down material in:				
		d) Boulder excavation Class B	m ³	100		
2.2.6	8.3.7	Cut to spoil or stockpile from				
		a) Soft excavation	m ³	1,225		
2.2.7	8.3.12	Overhaul	m ³ km	6,125		
2.2.8	8.3.13	Surface Finishes (Removal of Temporal Access)				
		a) Topsoiling	m ²	7,963		
		b) Grassing (Hydro-seeding)	m ²	7,963		
2.2.9	8.3.16	Gravel surface layer				
2.2.10	8.3.16	Gravel surface layer (Imported from Commercial Sources, 150mm thick, compacted to 95% Mod AASHTO Density)	m ³	1,194		
2.2.11	8.3.16	Gravel surface layer (Imported from Borrow Pit, 150mm thick, compacted to 95% Mod AASHTO Density)	m ³	597		
2.2.12	8.3.15	Stormwater berm and channel (as per Detail 9 of Dwg. MTK0220-002-STTDET-T-00)	m ³	1,820		
2.2.13	PSU 8.1	Removal and Rehabilitation of temporary access road	Sum	1		
2.2.14		All items not mentioned above or excess quantities, in order to satisfy the temporal access road design and construction requirements. (Specify)				
		1)				
		2)				
		3)				
		4)				
		5)				
SUB-TOTAL CARRIED FORWARD						



ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3		<u>SECTION 3: SITE CLEARANCE</u>				
3.1	SANS 1200C	SITE CLEARANCE				
3.1.1	8.2.1	Clear and grub	ha	2		
3.1.2	8.2.3	Remove and grub all trees and tree stumps regardless of girth	ha	2		
3.1.3	8.2.9	Transport materials and debris to unspecified sites and dump (Provisionally)				
		Transport debris and shrubs of materials cleared on the site to a dumping site identified by the Engineer (incl. hauling up to 5km)	m ³	3,900		
		Transport debris and shrubs of materials cleared for temporary access to the dumping site identified by the Engineer (in excess of 5 km freehaul)	m ³ .km	1,875		
3.2	PSVD 9	Dust Suppression				
		Approved surfactant sprays, especially on dry and windy days, on access roads and where vegetation is being / has been cleared to maintain a moisture content of 4% and the addition of surfactant as per Environmental Specification. Surfactant to be applied twice a day. Surfactant to be approved by the Engineer				
3.2.1	PSVD 9		kl	2,155		
3.2.2	PSVD 9	Dust suppression by water sprays on access roads and where vegetation is being / has been cleared to maintain a moisture content of 4% as per the engineer's instruction.	kl	862		
SUB-TOTAL CARRIED TO SUMMARY						



ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4.1	SANS 1200D	SECTION 4: REHABILITATION WORKS				
4.1.1	8.3.1.2	EARTHWORKS Remove topsoil to nominal depth 150mm, stockpile and maintain				
		(1) Stormwater channels	m ²	2,918		
		(2) Stormwater berms	m ²	1,594		
		(3) Gabions	m ²	1,437		
		(4) Energy dissipation structures	m ²	220		
4.1.2	8.3.2	Bulk Excavation Excavate in all materials and use for embankment or backfill or dispose on existing dump area				
		Area 1	m ³	7,071		
	8.3.2 b)	Extra over for				
4.1.3	8.3.2 b)	(1) Intermediate excavation	m ³	707		
	8.3.3	Restricted Excavation				
4.1.4	8.3.3 a)	Excavate for restricted foundations, footings and pipe trenches in all materials and use for backfill or embankment or dispose				
		(1) Stormwater channels	m ³	504		
		(2) Concrete Canvas	m ³	1,594		
		(3) Gabions	m ³	1,437		
		(4) Energy dissipation structures	m ³	528		
	8.3.3 b)	Extra-over for				
		SUB-TOTAL CARRIED FORWARD				
		brought forward				
4.1.5	8.3.3 b)	(1) Intermediate excavation	m ³	203		
4.1.6	8.3.3 b)	(2) Hard rock excavation	m ³	203		
	8.3.4	Importing of materials				



ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4.1.7	8.3.4 a)	Supply and deliver to site clean G7 material or better from commercial sources (nominal size as per COLTO Specification - March 1998) and deposit as cover in minimum two No. 150mm thick layers to shallow slopes (< 10°) and compact to 93% Mod AASHTO and shape to required levels	m ³	4,243		
4.1.8	8.3.4 a)	Supply and deliver to site clean G7 material or better from borrow pit sources (nominal size as per COLTO Specification - March 1998) and deposit as cover in minimum two No. 150mm thick layers to shallow slopes (< 10°) and compact to 93% Mod AASHTO and shape to required levels	m ³	9,900		
4.1.9	8.3.4 b)	Opening up and closing down of designated borrow pit	Sum	1		
4.1.10	8.3.4 c)	Dealing with overburden (designated borrow pits only)	m ³	212		
4.1.11	PSD 8.3.2 (1)	Earthworks by hand (<u>without the use of shovels, etc.</u>) Visually identify asbestos containing material and collect by hand without the use of shovels, etc. in rocky areas and place in existing nearby adits Opening of designated quarry pits	m ³	200		
4.1.12	8.3.4 b)	Opening up of designated quarry pits including siting, testing, approvals and any other work required to make the borrow pit functional.	Sum	1		
4.1.13	PSVA 5.7.1.1	Maintaining of designated borrow pits	Month	6		
4.1.14	PSD 8.3.4 (2)	Allow for dismantling, moving to a new position (within 5km radius on site) and erection.	No.	2		
4.1.15	8.3.3.c	Dealing with overburden (designated borrow pits only)	m ³	2,828		
4.1.16		Blasting and transport material (freehaul 5km) obtained from quarry pit identified by Engineer to crushing and screening plants	m ³	2,121		
4.1.17		Closing down and rehabilitation of designated quarry pits	Sum	1		
4.1.18	8.3.3	Extra over in normal rock for: 3) Excavation in Class A boulders	m ³	1,414		
4.1.19		4) Excavation in Class B boulders	m ³	1,414		
SUB-TOTAL CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<i>brought forward</i>				
	PSD 8.3.4 (1)	Screening plant and Crushing plant				
4.1.20	PSD 8.3.4 (2)	Provide, erect and commission on site	Sum	1		
4.1.21	PSD 8.3.4 (2)	Allow for dismantling, moving to a new position (within 5km radius on site) and erection.	No.	2		
4.1.22	PSD 8.3.4 (2)	Dismantle, remove from site and clean up	Sum	1		
4.1.23	PS 5.9.1	Laboratory testing at an accredited laboratory facility for MOD AASHTO maximum dry density and moisture content (inclusive of sampling, transporting, laboratory fees and analysis)	No	10		
4.2	SANS 1200DK	GABIONS AND PITCHING				
	8.2.1	Surface preparation for bedding of gabions				
4.2.1	8.2.1 a)	Cavities filled with approved excavated material or rock	m ²	17,504		
		Gabion formed with a hot dipped galvanized 275mg/m ² coated with 4mm PVC coating (4mm SANS 1580) hexagonal double twist 3mm wire mesh type 60 with 0.08mm tolerance (SANS 675) filled with selected dump rock (without asbestos seams) and tied into adjoining gabions.				
4.2.2	8.2.2	Gabion 1000mm x 1000mm x 1000mm basket	m ³	4,540		
		Reno Mattress				
		The following in Reno Mattress's formed with hot dipped galvanised (275mg/m ²) PVC coated (4mm - SANS 1580) hexagonal double twist 3.2mm wire mesh type 60 with 0.08mm tolerance (to SANS 675) filled with selected dump rock tied into adjoining gabions.				
		Reno mattress with basket size 3600mm long x 2000mm wide x 300mm high to sides of channel	m ³	540		
4.2.4	PSLE 8.2.16	Supply and install non-woven spun bonded geotextile of 210g/m ²	m ²	17,504		
4.2.5	PSLE 8.2.17	Bio-Mat Biojute BJ250 or approved equivalent geo-mat placed over topsoil to shallow slopes (< 10%) after revegetation seeds have been sown with and including approved anchoring method	m ²	22,448		
4.2.6		Y12 hot dipped galvanised ground anchor pegs 1.5m in length (as shown in Detail D7 on Dwg. MTK36-002-STDDET-T-00)	No.	2,744		
4.3	SANS 1200G	CONCRETE - STRUCTURAL				
	8.2	Formwork				
4.3.1	8.2.1	Rough	m ²	10		
	8.3	Reinforcement				
4.3.2	8.3.1	High tensile Y16 steel bars	t	1		
SUB-TOTAL CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<i>brought forward</i>				
	8.4	Concrete				
4.3.3	8.4.1	25 MPa concrete	m ³	13		
4.3.4		Complete energy dissipating structure as per DWG no. MTK36-004-STDDT-T00	no.	2		
		Concrete Canvas				
		The following in Concrete Canvas type CC5 concrete impregnated fibre laid in full accordance with the manufacturer's recommendations including all cutting, fitting and jointing in:				
		Lining 2,0m girth to run-off channel including trimming and preparing excavated surfaces laid on watered and compacted in-situ surfaces	m	350		
		15MPa Mass concrete in-situ edge beams to Concrete Canvas	m	350		
4.4		LANDSCAPING AND GRASSING				
		Topsoiling on site with:				
4.4.1	PSVA 8.3 a) (i)	Supply and deliver to site (from commercial sources) 150mm thick topsoil and place in areas of re-vegetation to shallow slopes (< 10°)	m ²	22,448		
4.4.2	PSVA 8.4 a)	Hydroseeding	m ²	22,448		
		Planting and establishing of:				
4.4.3	PSVA 8.7 c) (1)	Trees	No.	224		
4.4.4	PSVA 8.7 c) (2)	Shrubs	No.	224		
		SIGNAGE				
4.5		Supply and install permanent sign boards	Prov. Sum	1	R25,000.00	R25,000.00
		Attendance and profit on item 4.6.1 & 4.6.2	%			
SUB-TOTAL CARRIED FORWARD						

[illegible]



BILL OF QUANTITIES

SUMMARY OF BILL OF QUANTITIES

Section	Description	Amount	
		R	
1	Preliminary and General	R	-
2	Temporary Works	R	-
3	Site clearance	R	-
4	Rehabilitation works	R	-
5	Fencing	R	-
	Subtotal 1	R	-
ADD	Contingency @ 10% (Solely for the use of the Client, and only on instruction to Contractor)	R	-
	Subtotal 2	R	-
ADD	VAT @ 15%	R	-
	TOTAL CARRIED TO FORM OF OFFER	R	-

.....
SIGNATURE OF TENDERER

.....
DATE

.....
NAME OF TENDERER

.....
DESIGNATION