PART C2
PRICING DATA

C2.1 PRICING INSTRUCTIONS

PREAMBLE TO THE BILL OF QUANTITIES

1. The General Conditions of Contract, the Special Conditions of Contract, the Specifications (including the Project Specifications) and the drawings shall be read in conjunction with the Bill of Quantities.

2. The Bill includes items covering the cost of general liabilities and obligations, and the cost of construction or installation of temporary and permanent works.

3. All quantities given in the Bill of Quantities are provisional whether so marked as such or not, and are subject to re-measuring during the execution of the work. The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

4. The amounts and rates inserted in the Bill of Quantities shall be the full inclusive cost to the Employer for the work described under each item. Such amounts and rates shall cover all costs, expenses, overheads and profits as may be required for construction of the work and, shall include for all general risks, liabilities, obligations, and taxes (excluding Value Added Tax) as described or implied in the documents on which the tender is based.

5. The measurement and payment clause of each standardised and particular specification, read together with the relevant clauses of the project specification set out the ancillary or associated activities which are included in the rates for the operations specified.

6. Descriptions in the Schedule may be abbreviated and tenderers are referred to the specifications and the project specifications for full definition of the requirements under that item. The payment clause reference in the Schedule refers to the applicable specification or project specification clause.

7. Should there be any conflict between definitions or specifications covering any item, the order of precedence shall be as follows:

   i) The project specification
   ii) Variations to a standardised or particular specification.
   iii) The standardised or particular specification.

8. Read together, the above three specifications shall take precedence over any other publication or trade custom.

9. Should there be any conflict between the unit of measurement of any item in the Bill and the unit in any applicable specification, the unit in the Bills shall take precedence.

10. Unless stated to the contrary, all items are measured nett in accordance with the designs and specifications and no allowance is made for waste, working space or over-supply.

11. Unless stated to the contrary, all thicknesses are measured in their finished state.

12. The tenderer is at liberty to insert a rate of his choosing for each item in the Bill. However, he should note that the Engineer is obliged to base the assessment of rates for any additional work which may be authorised on the rates in the Bill.

13. An amount or rate is to be entered against each item in the Bill, whether quantities are stated or not. An item against which no amount or rate is entered will be considered to be covered by other amounts or rates in the Bill.

14. All items for which terminology such as “nil”, “inclusive” or “not applicable” have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

15. The Tenderer shall fill in rates for all items where the words “rate only” appears in the “Total” column. The quoted rate shall apply in the event of work under this item being required. The Tenderer shall however, note that in terms of the Tender Data, the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

16. Where Provisional Sums or Prime Cost Sums are provided for in the Bill of Quantities, the Employer reserves the right during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

17. Each Preliminary and General (P&G) item is to be priced separately. A lump sum P&G price will not be accepted and if submitted, may render the Bill of Quantities unresponsive and therefore disqualified.

18. Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialled by the Tenderer.

19. Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication or addition will be corrected by the Engineer at the tender evaluation stage, as set out in Clause F3.9 of the Standard Conditions of Tender.

20. The Tenderer shall complete the Bill in black ink.

21. METHOD OF MEASUREMENT

Quantities have generally been measured in accordance with SABS 1200 Standard Specifications where applicable.

21.1 DEMOLITIONS

21.1.1 All rates shall include for breaking up and removing from Site to a licensed dump site selected by the Contractor or delivery of materials to the Employer’s Stores on Site where specified and / or applicable.

21.2 STRUCTURAL STEELWORK AND METALWORK

21.2.1 Structural steel is generally measured in metric tonnes and quantities are generally rounded off to two decimal places.

21.2.1.1 Masses of steelwork shall be calculated in accordance with the mass list issued by the South African Institute of Steel Construction – Structural Steel Tables current at

enquiry dates and no allowance has or shall be made for rolling margins, binding wire or waste.

21.2.1.2 Should the mass of the steel actually used in the Works vary in any way from the above mass list, the variance shall be for the Contractor's account and the listed masses shall be strictly adhered to in all calculations affecting the mass of steel. The Contractor shall allow for rolling margins, a weld, shop bolts, etc., in the rates and not by a percentage addition to the mass.

21.2.1.3 All bolts, nuts and washers for site bolting of structural steelwork shall be calculated on the basis of 1,5% of the mass calculation of bolted items and costed at the rates applicable to the respective bolted items. No deduction shall be made for bolt holes and notches on rolled section only.

21.2.2 Rates for structural steelwork and metalwork shall include:

21.2.2.1 Fabrication, weld metal, all holes, shop bolts, rolling margins and waste, all fittings and connections included in the measured mass, all shims, laminated packs, wedges, comb shims, etc., and for shop preparation and shop painting of all surfaces or hot dip galvanising as required.

21.2.2.2 Temporary propping and bracing of steelwork during erection.

21.2.2.3 Priming before delivery and touching up primer or touching up galvanising with "Zinc Galv. 6" or other approved cold galvanising compound.

21.2.2.4 Rates for angles, frames, sleeves, bolts, inserts and other sundry metalwork shall include for casting into concrete unless otherwise specified.

21.2.2.5 Rates for gratings shall include for banding around perimeter.

21.2.2.6 Rates for hand and knee rails shall include for closed ends, angles, ramps, stanchions, etc.

21.3 PLUMBING AND DRAINAGE

21.3.1 Rates for pipes shall include if not allowed for in the schedule of quantities:

21.3.1.1 Bending pipes, jointing pipes of differing materials, jointing to taps, valves, traps, etc.

21.3.1.2 Nipples, sockets, collars, couplets, etc., concerned.

21.3.1.3 Supports, clips, saddles, holder bats, etc.

21.3.1.4 Fittings for pipes not exceeding 28mm diameter.

21.3.1.5 Excavation, selected fills blanket and main fill.

21.4 PAINTING

21.4.1 Painting to all work, including isolated components, sundry metalwork items, pipes, gutters, etc., shall be measured in m^2 unless otherwise described in the items.

21.4.1.1 Painting to structural steel shall be measured in tonnes.

21.4.1.2 Painting to handrails shall be measured to the actual length of hand rail and not individual components.

21.4.1.3 Narrow widths have been measured and added to the quantities for the associated major items.

21.5 TERMS USED

In this Schedule of Quantities the following expressions shall have the meanings hereinafter assigned to them unless otherwise described in the items concerned:-

(i) "ALLOW" Where the word "allow" is used in any item of the Schedule of Quantities the sum entered by the Contractor is at his risk and shall cover all costs and charges in respect of the work referred to during the period of the Contract.

(ii) "PROVIDE" Where the word "provide" is used and a sum has been inserted by the Engineer to cover the cost of any particular item of work, the sum so entered shall be dealt with in accordance with the provisions of the General Conditions of Contract.

(iii) "BUDGETARY ALLOWANCE" Where the word "budgetary allowance" is used, the sum inserted by the Engineer to cover the cost of the particular item of work will be omitted during the Contract and the work will be measured in accordance with the procedure set out in the Schedule of Quantities and valued at the rates contained in the priced Schedule of Quantities for similar work.

22. APPROVED, DIRECTED OR SELECTED

22.1 The words "approved". "directed" or "selected" refer to the approval, direction or selection of the Engineer.

23. TRADE NAMES, PROPRIETARY BRANDS, ETC

All materials, fittings, furnishings, etc., specified under a Trade Name, Proprietary Brand or Catalogue Reference, shall be:

23.1 Used in strict accordance with the Manufacturer's latest printed instructions.

23.2 Either exactly as described or of equal quality, weight or specification and approved by the Engineer.

The Contractor shall first obtain written approval from the Engineer before goods are placed on order from a source of supply other than is specified herein. Such approval shall not be unreasonably withheld.

24. MATERIALS AND WORKMANSHIP

All materials shall be the best of their respective kinds specified and the workmanship shall be the standard defined for the trade tests required for such work and to the approval of the Engineer.

In all cases the materials and workmanship shall be in accordance with the latest edition of the relevant South African Bureau of Standards (SABS) or if not defined therein the British Standard Specification (BSS) or Code of Practice (BSCP) unless otherwise specified.

The quantities given in this Schedule should not be used for ordering materials.

C2.2 SCHEDULE OF QUANTITIES

SUMMARY [TENDER № 10969/1/2/C1]

Section	Description	Amount
1	**PRELIMINARY & GENERAL FIXED CHARGES**	
2	**ROADWORKS & EARTH WORKS WORKS, STORMWATER, EQUIPMENT**	
2.1	TRUCK STAGING YARD AND HARDSTAND, STORMWATER	
2.2	CABLE DUCTING	
2.3	PILLING	
2.4	WEIGHBRIDGES FOUNDATIONS AND STEELWORK AND EQUIP	
2.5	HILO OFFLOADER FOUNDATIONS AND INSTALL	
2.6	SPILLER WALL STEELWORK, FOUNDATIONS AND LOADING AREA	
3	**BUILDING WORKS**	
3.1	BUILDING STRUCTURAL REMIDIAL	
3.2	BUILDING ELECTRICALS	
3.3	PLUMBING	
3.4	SEWER GRAVITY MAIN	
3.5	WATER MAIN	
3.6	DAYWORKS	
3.7	DIESEL GENERATOR ROOF STRUCTURE	
3.8	BUILDING REFURB (ARCHITECTURAL)	
4	**GEN ELECTRICAL WORKS**	
	SUBTOTAL A	
	CONTINGENCIES (10% OF SUBTOTAL A)	
	SUBTOTAL B	
	VALUE ADDED TAX (15% TO SUBTOTAL B)	
	TOTAL INCL. VAT CARRIED TO FORM OF OFFER	

Item №	Payment Refers	Description	Unit	Qty	Rate	Amount
1.		**SECTION 1 :** **PRELIMINARY & GENERAL**				
	SABS 1200A	**FIXED CHARGES**				
1.1	8.3.1	Contractual requirements	Sum	1		
	8.3.2	**Establishment of facilities on site:**				
	8.3.2.1	**Facilities for Engineer (SABS 1200AB)**				
1.2	PSAB 1	Nameboard (1 №)	Sum	1		
1.3	PSAB 2	Office building (only rain gauge Installation)	Sum	1		
1.4	PSAB 2	Provision of (1 №) Cellular phone for use by Engineer's representative	Sum	1		
1.5	PSAB 3	Survey assistant, survey equipment and materials and rain gauge installation	Sum	1		
		Facilities for Contractor				
1.6		Offices, storage sheds, fencing, etc.	Sum	1		
1.7		Ablution and latrine facilities	Sum	1		
1.8		Water supplies, electric power and communications, dealing with water and access	Sum	1		
1.9		Tools and equipment	Sum	1		
1.10		Construction plant	Sum	1		
1.11	8.3.3	Other fixed charge obligations	Sum	1		
1.12	8.3.4	Remove all site establishment on completion	Sum	1		
1.13	PSA 2	Provision of access to properties as specified in Clause PSA 2	Sum	1		
1.14	PSA 4	General Safety, Safety Plan, Monitoring and Review. The sum shall include all costs necessary in complying with the Occupational Health and Safety Act (1993 as amended) and the Construction Regulations (2014)	Sum	1		
1.15	PSA 4	Site Stormwater Management	Sum	1		
1.16	PSA 4	Compliance with Environmental Management Plan	Sum	1		
	SABS 1200A	**TIME RELATED ITEMS**				
1.17	8.4.1	Contractual requirements	Weeks	16		
1.18	8.4.2	Operate and maintain facilities on site	Weeks	16		
		Section 1 carried forward				

Item №	Payment Refers	Description	Unit	Qty	Rate	Amount
		Section 1 brought forward				
	8.4.2.1	**Facilities for Engineer for duration of contract (SABS 1200AB)**				
1.19	PSAB 1	Nameboard (1 №)	Weeks	16		
1.20	PSAB 2	Provision of 1 № Cellular phone for use by Engineer's representative	Weeks	16		
1.21	PSAB 2	Offices (only rain gauge Installation)	Weeks	16		
1.22	PSAB 3	Survey assistant, equipment and materials	Weeks	16		
1.23	PSAB 2	Provision of rain gauge installation	Weeks	16		
1.24	PSAB 3	Provision of the following staff, accommodation and equipment				
		(a) Survey Assistant (S2/S3)	Weeks	16		
		(b) Accommodation for Survey Assistant (S2/S3)	Weeks	16		
		Facilities for Contractor for the duration of the Contract				
1.25		Office, storage sheds, fencing, etc.	Weeks	16		
1.26		Ablution and latrine facilities	Weeks	16		
1.27		Water supplies, electric power and communications, dealing with water and access	Weeks	16		
1.28		Tools and equipment	Weeks	16		
1.29	8.4.3	Supervision for duration of construction	Weeks	16		
1.30	8.4.4	Company and head office overhead costs	Weeks	16		
1.31	8.4.5	Other time charge related obligations	Weeks	16		
1.32	PSA 2	Provision of access to properties as specified in Clause PSA 2	Weeks	16		
1.33	PSA 4	Site Stormwater Management	Weeks	16		
1.34	PSA 4	Compliance with Environmental Management Plan	Weeks	16		
		TEMPORARY WORKS				
1.35	8.8.2	Dealing with traffic	Sum	1		R 10,000.00
		Section 1 carried forward				

Item №	Payment Refers	Description	Unit	Qty	Rate	Amount
		Section 1 brought forward				
	SABS 1200A	**SUMS STATED PROVISIONALLY BY THE ENGINEER**				
1.36	PS 8	Proving of existing services where ordered by the Engineer (Prov.)	Sum	1	10,000.00	R 10,000.00
1.37	PS 8	Relocation of existing services where ordered by the Engineer (Prov.)	Sum	1	25,000.00	R 25,000.00
1.38	8.5	Allow provisional sum for repairs to damaged Telkom, electrical or other services which could not have been reasonably foreseen or prevented by the Contractor (Prov.)	Sum	1	50,000.00	R 50,000.00
1.39		Contractors mark-up on Item 1.36 to 1.38	%	85,000		
1.40	PSDB 11	Allow provisional sum for Earthworks (Pipe Trenches) testing, where ordered by the Engineer (Prov.)	Sum	1	10,000.00	R 10,000.00
1.41	PSLB 7	Allow provisional sum for density testing for bedding of pipes, where ordered by the Engineer (Prov.)	Sum	1	10,000.00	R 10,000.00
1.42		Contractors mark-up on Items 1.40 to 1.41	%	20,000		
1.43		Allow for provisional sum for Community Liaison Officer	Sum	1	30,000.00	R 30,000.00
1.44		Contractors mark-up on Item 1.43	%	30,000		R -
1.45		Allow for provisional sum for road signage	Sum	1	50,000.00	R 50,000.00
1.46		Confirm water main flow rate and pressure by test	Sum	1		
1.47		As built, operations and maintenance documentation	Sum	1		
1.48		12 months maintenance	Sum	1		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
2		**SECTION 2: TRUCK STAGING YARD AND HARDSTAND**				
	SABS 1200C	**EARTHWORKS**				
2.1	8.2.1	Clear and strip vegetation	m²	5502		
2.2	8.2.9	Transport materials and debris to:				
		a) Nearest official dumpsite (Prov.)	m³	1915		
2.3	8.2.10	Remove topsoil to nominal depth 300mm and stockpile for re-use	m³	1915		
	SABS 1200D					
2.4	8.3.2 a) PSA 4	Excavate in all materials and use for embankment or backfill or dispose as ordered				
		i) Cut or borrow to fill from site and surrounds and used in embankment compacted in layers not greater than 300mm thick by six passes of a 5 sided impact roller of mass 10t	m³	100		
		ii) Construct top 300mm of formation compacted to 93% MAASHTO density using conventional smooth wheeled vibratory rollers	m³	2915		
		iii) Cut to stockpile from within site boundaries selected fill material for reuse in layerworks	m³	325		
		iv) Undercut unsuitable material and dispose of offsite to spoil (Prov)	m³	10		
2.5	8.3.4	Procure from commercial/contractors sources G9 material	m³	185		
2.6	8.3.9 PSA 4	Extra over item 1.4, 1.13, 1.14 and 1.15 for restricted backfill or filling and compacting against structures	m³	50		
2.7	8.3.3	Rip and recompact existing insitu material 150mm deep to 93% Mod AASHTO at optimum moisture content	m³	1512		
2.8	8.3.8.1	Excavate by hand in soft material to expose existing services	m³	5		
2.9	8.3.10	Topsoiling 75 mm thick with material to banks and islands from stockpile	m²	280		
2.10	8.3.11	Grassing - supply and plant kikuyu runners	m²	280		
2.11		Remove and grub large trees and tree stumps of girth: a) Over 1m up to and including 2m	No.	1		
		WEARING COURSE FOR ENTRANCE ROAD AND TRUCK STAGING YARD				
	SABS 1200DM	**SUBGRADE (ROADS)**				
2.13	8.3.3	Construct G7 subbase layer up to 150mm thick compacted to 95% MAASHTO density with material from commercial sources	m³	435		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
2.14	8.3.3	Construct G7 subbase layer up to 150mm thick compacted to 95% MAASHTO density with material from stockpile	m³	200		
	SABS 1200MF	**BASE**				
2.15	8.3.3	Construct wearing course layer as per Colto specification up to 150mm thick compacted to 95% MAASHTO density with material from commercial sources	m³	635		
		LAYERWORKS FOR WEIGHBRIDE ROAD, RAMP AND CANE OFFLOADING AREA				
	SABS 1200DM	**SUBGRADE (ROADS)**				
2.16		Supply, place and compact 2 x 300mm thick Dump Rock layers (first crush) from Commercial Source (using padfoot roller min. 5 passes with no vibration)	m³	172		
2.17	PSA4	Supply and lay A6 Bidim (or similar approved) (Rate to include for suppliers overlap)	m²	572		
2.18	PSA4	Supply and lay 'Macaferri Flexmesh 3.9mm transverse rod diameter laid at right angles to the 'Macaferri Roadmesh' (rate to include for suppliers overlap)	m²	572		
2.19	8.3.3	Construct G7 subbase layer up to 150mm thick compacted to 95% MAASHTO density with material from commercial sources	m³	275		
	SABS 1200ME	**SUBBASE**				
2.20	8.3.3	Construct G5 layer up to 150mm thick compacted to 95% MAASHTO density with material from commercial sources	m³	122		
	SABS 1200 MF	**BASE**				
2.21	8.3.3	Construct wearing course layer as per Colto specification up to 150mm thick compacted to 95% MAASHTO density with material from commercial sources	m³	275		
2.22	8.3.3	Construct C3 basecourse layer with materials from a comercial source : i) 150mm thick supply and placement	m³	122		
2.23	8.3.5	Process by means of : a) stabilisation	m³	122		
2.24	8.3.8	Stabilising Agent: a) Portland Cement	t	7		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
	SABS 1200G	**CONCRETE (Structural)**				
2.25	8.4.3	Construct 35MPa strength concrete surfacing using 19mm aggregate (flexural strength of 4.2MPa) for:				
		i) 150 mm thick slab	m^3	122		
		ii) Edge restraint to slab	m^3	7		
2.26	8.4.4	Wood float finish to concrete hard stand	m^2	820		
	8.2	**SCHEDULED FORMWORK**				
2.27		Rough formwork to panels (up to 200mm incl. on radii)	m^2	148		
		JOINTS				
2.28	8.5	Construct joints complete as per detail on Dwg. No. 10969-001-002-RLA-0001				
		i) Construction Joints (CJ) complete (rate to include for bond breaker applied prior to second pour)	m	75		
		ii) Isolation Joints (IJ) complete	m	25		
		iii) Saw Cut Joints (SJ) complete	m	270		
		REINFORCEMENT				
2.29	8.3.2	Ref 395 weldmesh (Rate to include for spacers and stirrups to support mesh)	m^2	475		
	SABS 1200MM	ANCILLARY ROADWORKS				
2.30	8.2.1	a) Supply and install galvanised guardrails on wooden posts complete	m	50		
2.31	8.2.3	End wings	No	4		
		ROAD SIGNS				
2.32	8.3.1 & 8.3.2	Road signs with retroflective materials background, symbols, characters, legends and borders constructed from aluminium sheet 2,0mm thick up to area of 2.0m^2	m^2	4		
2.33	8.3.3	Strength group B timber posts				
		i) 100mm diameter	m	30		
2.34	8.3.4	Excavating, concreting and backfilling of sign supports	m^3	10		
	8.4	**ROAD MARKINGS**				
2.35	8.1.1c & 8.4.4	Non-reflectorised white paint applied at 0,42 litre/m^2				
		i) white/yellow character and symbols	m^2	1		
		ii) yellow island hatching	m^2	5		
		iii) 100mm white lines	m	25		
		iv) 100mm yellow lines	m	25		
		v) 200mm white lines	m	25		
		vi) 300mm white lines	m	25		
2.36		Supply and install new 2m galvanised and PVC coated diamond mesh fencing with concrete posts and razer flat rap to match existing	m^2	700		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
2.2		**CABLE DUCTING**				
		COMMUNICATIONS				
	SABS 1200C & PSC 8.2.2	**Site Clearance and Demolition Works**				
2.2.1		Provide all labour and equipment to remove existing cables, cable ducts and junction manholes once disconnected	m	20		
	SABS 1200DB	**Earthworks (Pipe Trenches)**				
2.2.2	8.2.2	Excavation in all materials for trenches, backfill, compact and dispose of surplus material for pipes up to 160mm dia. for depths Over up to and Including a) 1,0m 1,5m to invert b) 1,0m 2,0m to invert	 m m	 5 5		
		ELECTRICAL				
	SABS 1200DB	**Earthworks (Pipe Trenches)**				
2.2.3	8.3.2	Excavate in all materials for trenches, backfill, compact and dispose of surplus material for pipes up to 110mm dia. for depths Over up to and Including a) 0,0m 1,0m to invert b) 1,0m 2,0m to invert	 m m	 455 5		
	SABS 1200LC & PSLC	**CABLE DUCTS (Communications and Electrical)**				
2.2.4	8.2.5(b)	Supply , lay and bed including draw wire and end caps the following (Refer to Drg. No. 1101/77/3013): a) 110 mm dia. CL9 uPVC b) 160 mm dia. CL9 uPVC c) 110 mm dia. CL9 uPVC 90 deg. bends to light mast bases	 m m No.	 315 10 5		
		MANHOLES				
2.2.5	8.2.7	Provide all materials, plant and labour to construct cable duct manholes / drawpits complete as detailed on Drg. No. 10969-001-002-RLA-0001	No.	12		
		CONCRETE ENCASING (PROV.)				
2.2.6	8.2.7	Provide all materials, plant and labour to concrete encase the cable ducts	m^3	10		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
2.3		**PILING**				
2.3.1		Provide piling guarantee and insurance	sum	1		
2.3.2		Bond Cost - Performance	sum	1		
2.3.3		Bond Cost - Surety	sum	1		
2.3.4		Transport and establish on site all necessary plant for the execution of the work and removal on completion	sum	1		
2.3.5		Standing time for piling rig and crew (provisional)	hour	10		
2.3.6		Prepare and submit professional report based on sonic impact frequency response tests	no	1		
2.3.7		Undertake sonic impact frequency response tests on site. Sum all inclusive of labour, transport, accommodation etc.	no	10		
2.3.8		Transport and establish on site all necessary plant for DPSH testing of insitu soils and removal on completion	sum	1		
2.3.9		Design pile based on DPSH information, undertaken by a professional pile designer.	sum	1		
		600 kN Piles Weighbridge				
2.3.10		Set up plant at pile position	no	10		
2.3.11		Manufacture, reinforce, supply, deliver and drive and joint piles complete to carry 600 kN vertical load and 50 kN horizontal load	m	150		
2.3.12		Trim piles to cut off level, expose rebar and remove rubble from site. Allow 1m of trim per pile	no	10		
		450 kN Piles Weighbridge				
2.3.13		Set up plant at pile position	no	16		
2.3.14		Manufacture, reinforce, supply, deliver and drive and joint piles complete to carry 450 kN vertical load and 50 kN horizontal load	m	240		
2.3.15		Extra over for raking piles 1:10	m	40		
2.3.16		Trim piles to cut off level, expose rebar and remove rubble from site. Allow 1m of trim per pile	no	16		
		80 kN Tension Piles Hilo Loader				
2.3.17		Set up plant at pile position	no	6		
2.3.18		Manufacture, reinforce, supply, deliver and drive and joint piles complete to carry 80 kN in vertical tension and 50 kN horizontal load	m	90		
2.3.19		Trim piles to cut off level, expose rebar and remove rubble from site. Allow 1m of trim per pile	no	6		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		250 kN Piles Hilo Loader				
2.3.20		Set up plant at pile position	no	8		
2.3.21		Manufacture, reinforce, supply, deliver and drive and joint piles complete to carry 250 kN vertical load and 50 kN horizontal load	m	120		
2.3.22		Trim piles to cut off level, expose rebar and remove rubble from site. Allow 1m of trim per pile	no	8		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
2.4		**BILL NO**				
		WEIGHBRIDGES FOUNDATIONS AND STEELWORK **EARTHWORKS**				
2.4.1		Excavate and backfill in soft material not exceeding 2.0m deep	m^3	200		
2.4.2		Rip, trim and recompact bottom layer of foundation excavations to 95% MAASHTO to depth of 300mm	m^2	250		
2.4.3		Import G6 material as fill compacted in 150 mm layers to 98% MOD AASHTO	m^3	73		
2.4.4		Import G6 material as working platform layer for piling rig, compacted in 150 mm layers to 98% MOD AASHTO	m^3	38		
2.4.5		Cart away and dispose off site surplus material within 3 kms	m^3	120		
		FORMWORK				
		Rough formwork				
2.4.6		To sides of ramps including pile caps and ground beams	m^2	66		
2.4.7		To sides of pile caps 750mm deep	m^2	30		
2.4.8		To sides of ground beams	m^2	34		
		Smooth formwork				
2.4.9		To sides of 600x600 stub columns	m^2	23		
2.4.10		Smooth narrow widths 250mm wide to sides of foundations	m	10		
2.4.11		Smooth narrow widths to sides of exposed ramp and slab	m	56		
		REINFORCEMENT				
		High tensile steel bars - All Diameters				
2.4.12		In pilecaps and concrete at ground floor level	kg	17000		
2.4.13		Mesh ref 395	m^2	88		
		CONCRETE (structural)				
		Blinding 15 MPa/19mm to				
2.4.14		Pile caps and bases	m^2	215		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		Strength Concrete 30 MPa/19mm				
2.4.15		Pile caps, floor slabs ,bases and ramps	m^3	140		
2.4.16		Mass concrete stair	m^3	1		
2.4.17		Screed to manholes	m^3	1		
		Unformed Surface Finishes				
2.4.18		Steel Float Finish	m^2	38		
2.4.19		Wood Float Finish	m^2	200		
		Jointing				
2.4.20		20mm wide isolation joint with 20mm thick approved compressible joint filler complete with 12 x 12mm tear off strip and polysulphide sealant.	m	10		
		BOLTS AND ANCHORS				
		Supply, set in place bolts, etc				
2.4.21		Supply and install M20 250mm long Hilti Hit RE 500 chemical Anchors to guardrail post	No	72		
		MISCELLANEOUS				
2.4.22		Supply and install 70x70x8 angles with fishtail lugs at 500 centres, HDG to SANS specifications	kg	120		
2.4.23		Supply and install galvanised guardrails with all necessary hardware to be fixed to steel posts at 3000 centres	m	30		
2.4.24		Supply and install galvanised guardrails end wings	No	8		
2.4.25		Supply and install galvanised 203x203x46UC Guardrail post 1250mm long with 450x450x16 Thk Side Base plate	No	16		
		WEIGHBRIDGE & ACCESSORIES				
2.4.26		Supply Install propriety Weighbridge (C1W) load, cells, cabling, junction boxes, Camera's, hardware and software and commission. As per 10969-001-2040-R-0001	No	2		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BILL NO 4				
2.5		**HILO OFFLOADER FOUNDATIONS**				
		FORMWORK				
		Rough formwork				
2.5.1		To sides of caps and ground beams	m^2	33		
		Smooth formwork				
2.5.2		Smooth narrow widths to sides of exposed ramp and slab	m	25		
		REINFORCEMENT				
		High tensile steel bars - All Diameters				
2.5.3		In pilecaps and concrete at ground floor level	kg	2350		
		CONCRETE (structural)				
		Blinding 15 MPa/19mm to				
2.5.4		Pile caps and bases	m^2	13		
		Strength Concrete 30 MPa/19mm				
2.5.5		Pile caps, floor slabs ,bases and ramps	m^3	17		
		Unformed Surface Finishes				
2.5.6		Wood Float Finish	m^2	13		
		ANCHOR BOLTS				
2.5.7		M50 Holding down bolt 1500mm long with and including two nuts, washers and 110 x 110 x 14mm thick plate welded to bolts, including bending, threading and embedment into concrete	No	4		
2.5.8		M50 Holding down bolt 1000mm long with and including two nuts, washers and 110 x 110 x 14mm thick plate welded to bolts, including bending, threading and embedment into concrete	No	8		
		SUPPLY & INSTALL OF HILO-UNLOADER (SPILLER)				
2.5.9		Supply and Install Hilo Installation (C1Hi) as per 10969-001-2040-R-0006 (Exc 4.13 below)	SUM	1		
2.5.10		Design, Supply and Install hydraulic power pack for the Hilo Unloader	Prov Sum	1	R 50,000.00	
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
2.6		**BILL NO 5**				
		SPILLER WALL STEELWORK, FOUNDATIONS AND LOADING AREA				
2.6.1		Excavate and backfill in soft material not exceeding 0.6m deep	m^3	50		
2.6.2		Cart away and dispose off site surplus material within 3 kms	m^3	50		
		FORMWORK				
		Smooth formwork				
2.6.3		To sides of Slabs and Foundations	m^2	16		
		REINFORCEMENT				
		High tensile steel bars - All Diameters				
2.6.4		In Spiller Wall Foundation	kg	2700		
		CONCRETE (structural)				
		Blinding 15 MPa/19mm to				
2.6.5		Spiller wall foundation	m^2	45		
		Strength Concrete 30 MPa/19mm				
2.6.7		Spiller Wall Foundation 15m x 3m x0.4m deep	m^3	18		
		Unformed Surface Finishes				
2.6.8		Wood Float Finish	m^2	340		
		STRUCTURAL STEEL				
		Bolted columns and beams with flat base, cap, bearer and connection plates				
2.6.9		254 x 254 x 76kg/m UC Vert Column (9 x 3.7m Lengths)	m	33.102		
2.6.10		254 x 254 x 76kg/m UC Sloping Column (9 x 4.2m Lengths)	m	37.8		
2.6.11		254 x 254 x 76kg/m UC Beams (16 X 1.59m Lengths)	m	16		
2.6.12		90 x 90 x 10 EA Bracing Beams (32 X 1.59m Lengths)	m	50.8		
		BOLTS AND ANCHORS				
		Supply, set in place bolts, etc				
2.6.13		Hot dipped Galvanised High tensile M16 bolts (class 8.8) with Nots and Washers	No	118		
2.6.14		Supply and install M20 250mm long Hilti Hit RE 500 chemical Anchors	No	72		
		MISCELLANEOUS				
2.6.15		150 x 150 Hardwood Beam fixed to steel frame	m	12.5		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
3		**BILL NO 3** **CANTEEN AND ABLUTIONS**				
		FORMWORK				
		Smooth formwork				
3.1		To Mezzanine Slab	m²	10		
		REINFORCEMENT				
		High Tensile steel bars - All diameters				
3.2		Mezzananine slab	kg	350		
		CONCRETE				
		Strength Concrete 30 MPa / 19mm				
3.3		To 200mm thick mezzanine slab	m^3	2		
		UNFORMED FINISHES				
		Wood float finish				
3.4		To floor slab	m²	10		
		STRUCTURAL STEEL				
3.5		Bolted and welded Galvanised steel steel stair treads and stringers and handrails complete including bolts to steel and concrete, connection plates	kg	350		
3.6		Cutting back roof steel cantilever, disposal of a steel and making good	m²	120		
3.7		Hot Dipped Galvanised 150x75x20x2.5 CFLC	m	278		
3.8		Hot Dipped Galvanised Bracing 60x60x6EA	m	84		
3.9		300 long 150x150 EA bolted to beam and chem anchored into brickwork with 2 x Hilti HIT RE 500 M16 Chem Anchors	No	4		
3.1		Grind smooth and make good flame cut 254x146UB column bottom and treat with Cold Galv	No	8		
		ROOF				
3.11		Remove and dispose of existing asbestos roof sheeting	m²	120		
3.12		Supply and install 0.8 chromodeck IBR sheeting including all fixings	m²	310		
3.13		Flashing 462mm girth to match "IBR 686" roof sheeting as per manufactures specification and detail complete	m	52		
3.14		Supply and install new 150x100 zinculume rolled gutters	m	37		
3.15		Supply and install new Downpipes	No	4		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
3.2		**LIGHTING & SUNDRY ITEMS**				
		Price shall be inclusive ccg terminal box, bolts, clips, 5a plugs and socket outlets, etc. All external lights shall be terminated into the ccg box. The installation shall be done in accordance with the lighting manufacturers detail design. All light fittings, switches etc shall be labelled in accordance with the sans regulations. All emergency fittings are to have integral, self contained, maintained battery back-up of 50% of lumen output for 1 hour				
3.2.1		Type a: beka vapourline 2x58w t5 ip65 luminaire or similar approved complete with mounting accessories	ea	13.00		
3.2.2		Type ae: beka vapourline 2x58w t5 ip65 luminaire luminaire or similar approved emergency version complete with mounting accessories	ea	3.00		
3.2.3		Type b: 36w cfl bulkhead ip65 complete with mounting accessories for trunking	ea	17.00		
3.2.4		Emergency exit light led and battery back-up with 1 x 8w t5 lamp & charging led indicator & electronic control gear - maintained operation ni cad battery backup for 2,6 hrs at 40% light output surface / wall mounted	ea	2.00		
3.2.5		Lighting Switches - c/w wall boxes - 1 lever 2 Way	ea	6.00		
3.2.6		Lighting Switches - c/w wall boxes - 1 Lever 1 Way	ea	3		
3.2.7		Day Light Switch / Photo-Electric Cell	ea	1.00		
		SMALL POWER				
3.2.8		100x100 wall box for - single Socket outlet	ea	7.00		
3.2.9		100x150 wall box for - Switch outlet	ea	9.00		
3.2.10		16A double switched socket outlet c/w wall boxes	ea	2.00		
3.2.11		16A single switched socket outlet	ea	7.00		
3.2.12		Surface mounted IP65 32A Double Pole Isolator - Roller Shutter Doors	ea	4.00		
3.2.13		**DB-WORKSHOP i**ncluding all accessories as per drawings	Sum	1.00		
3.2.14		60A 1phase; 5kA MCB curve C installed in substation or nearby electrical distribution kiosk including all mouninting and termination accessories.	Sum	1.00		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		CONDUCTORS				
		600/1000V grade PVC housewire installed stranded copper conductor drawn in conduits or wireways				
3.2.15		2.5mm²	m	400		
3.2.16		4mm²	m	400		
3.2.17		6mm²	m	1		Rate only
		Earth conductor drawn in conduits or wireways				
3.2.18		2.5 mm² bare				
3.2.19		Supply	m	1		Rate only
3.2.20		Install	m	1		Rate only
3.2.21		2.5mm² insulated				
3.2.22		Supply	m	800		
3.2.23		Install	m	800		
3.2.24		4mm² insulated				
3.2.25		Supply	m	1		Rate only
3.2.26		Install	m	1		Rate only
3.2.27		6mm² insulated				
3.2.28		Supply	m	1		Rate only
3.2.29		Install	m	1		Rate only
3.2.30		10 mm² insulated				
3.2.31		Supply	m	1		Rate only
3.2.32		Install	m	1		Rate only
		Earth conductor drawn in conduits or wireways				
		CABLES [*cable lengths are estimated - Claims to be based on actual cable length installed by contractor]*				
		Cable installation Incl U-clamps, tag numbers and cable straps. Supply deliver to site and store 1000/600 volt Cu / PVC / SWA/PVC/ECC cables. Install, rack, strap and testing of cables as per specification including clamps, ties and cable numbering system. Rates to include for wastage. Contractor will only be reimbursed for installed cable measured on site between terminations. Cable bonding of all Earth Continuity Conductors from the incoming and outgoing cables will be properly crimped into cable lugs and bolted to their respective earth bars.				
		4 mm² 2c 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.33		Supply and delivery	m	1		Rate only
3.2.34		Installation	m	1		Rate only
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		4 mm² 4c Cable 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.35		Supply and delivery	m	1		Rate only
3.2.36		Installation	m	1		Rate only
		6 mm² 2c 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.37		Supply and delivery	m	1		Rate only
3.2.38		Installation	m	1		Rate only
		6 mm² 4c 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.39		Supply and delivery	m	1		Rate only
3.2.40		Installation	m	1		Rate only
		10 mm² 4c 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.41		Supply and delivery	m	1		Rate only
3.2.42		Installation	m	1		Rate only
		16 mm² 4c 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.43		Supply and delivery	m	1		Rate only
3.2.44		Installation	m	1		Rate only
		TERMINATIONS				
		Cable terminations & Joints - Incl glands, cable numbers, wire numbers, lugs. For PVC/SWA/PVC/ECC cables, shall include supply installation and testing of the IP 65 glands with corrosion guard, making -off the cable, gland plate, switchgear or appliance and final connection of cable tails into board or terminals.				
		4 mm² 2c 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.45		Supply and delivery	No.	1		Rate only
3.2.46		Installation	No.	1		Rate only
		4 mm² 4c 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.47		Supply and delivery	No.	1		Rate only
3.2.48		Installation	No.	1		Rate only
		6 mm² 2c 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.49		Supply and delivery	No.	1		Rate only
3.2.50		Installation	No.	1		Rate only
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		6 mm² 4c 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.51		Supply and delivery	No.	1		Rate only
3.2.52		Installation	No.	1		Rate only
		10 mm² 4c 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.53		Supply and delivery	No.	1		Rate only
3.2.54		Installation	No.	1		Rate only
		16 mm² 4c 1000/600 volt Cu / PVC / SWA+ECC/PVC cable				
3.2.57		Supply and delivery	No.	1		Rate only
3.2.58		Installation	No.	1		Rate only
		TRUNKING, SLEEVES AND CONDUITS				
3.2.59		20 mm Diameter				
3.2.60		Supply and delivery	m	400		
3.2.61		Install	m	400		
3.2.62		25 mm Diameter				
3.2.63		Supply and delivery	m	50		
3.2.64		Install	m	50		
		32 mm Diameter				
3.2.65		Supply and delivery	m	10		
3.2.66		Install	m	10		
		50mm round conduit box as specified placed in position for casting in concrete, building or chasing into brickwork or surface mounting.				
3.2.67		Supply and delivery	No.	50		
3.2.68		Install	No.	50		
		100 x 50 x 50 mm wall box as specified placed in positon for casting in concrete, building or chasing into brickwork.				
3.2.69		Supply and delivery	No.	5		
3.2.70		Install	No.	5		
		100 x 100 x 50 mm wall box as specified placed in positon for casting in concrete, building or chasing into brickwork.				
3.2.71		Supply and delivery	No.	5		
3.2.72		Install	No.	5		
3.2.73		Blank cover plate for 50 mm round box with metal screws				
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
3.2.74		Supply	No.	5		
3.2.75		Install	No.	5		
		Blank cover plate for 50 x 100 mm box with metal screws				
3.2.76		Supply	No.	1		Rate only
3.2.77		Install	No.	1		Rate only
		Blank cover plate for 100 x 100 mm box with metal screws				
3.2.78		Supply	No.	1		Rate only
3.2.79		Install	No.	1		Rate only
		EARTHING SYSTEM				
3.2.80		Test and Confirm that the existing Earthing is sufficient and in accordance with SANS 10142-2	Sum	1		
		BONDING				
3.2.81		Bond the proposed water main to the adjacent down conductor. All water pipes, hand basins, sinks, baths, aluminium gutters, aluminium roof sheeting and rain water pipes shall be bonded.	Sum	1		
		EARTHING AND LIGHTNING PROTECTION SYSTEM				
		70 mm² insulated stranded copper down conductor including all fixing accessories.				
3.2.82		Supply and delivery	m	Rate only		
3.2.83		Install	m	Rate only		
		70 mm² bare stranded copper including all fixing accessories.				
3.2.84		Supply and delivery	m	Rate only		
3.2.85		Install	m	Rate only		
		70 mm² insulated stranded copper terminations i.e. tinned lugs.				
3.2.86		Supply and delivery	No.	Rate only		
3.2.87		Install	No.	Rate only		
		Bi- metallic bonded test joint between aluminium conductor and copper conductor including connections.				
3.2.88		Supply and delivery	No.	Rate only		
3.2.89		Install	No.	Rate only		
		Caternary earth bonding clamp/s				
3.2.90		Supply and delivery	No.	Rate only		
3.2.91		Install	No.	Rate only		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		Flush mounted S15 Duo weatherproof york box test complete with PVC sliding lid and stainless steel screws (mounted at 300mm Above final floor ground level)				
3.2.92		Supply and delivery	No.	Rate only		
3.2.93		Install	No.	Rate only		
		1.8m [min] x 16mm diameter solid copper earth electrodes driven into the ground, complete with brass coupling between rods (Bearing Approved Standard Mark)				
3.2.94		Supply and deliver	No.	Rate only		
3.2.95		Install	No.	Rate only		
		50 mm² Aluminium roof conductor installed on roof including all fixing accessories				
3.2.96		Supply and delivery	m	Rate only		
3.2.97		Install	m	Rate only		
		Brass ferrules to steel reinforcing				
3.2.97		Supply and deliver	No.	Rate only		
3.2.98		Install	No.	Rate only		
		25mm bosal conduit including fittings to complete the installation				
3.2.98		Supply and delivery	m	Rate only		
3.2.99		Install	m	Rate only		
		GENERAL				
3.2.100		Recessed mounted Telephone and Data points at 300mm AFFL including all accessories	ea	Rate only		
		TESTING & COMMISSIONING				
3.2.100		Test and commission the complete installation including Telkom & Data DB, Electrical DB's, Earthing and Lightning protection, airconditioning system, extraction system, the handing in of all test results (Certificates Of Compliance) to the Engineer to required standards and specification	Sum	1		
3.2.101		As Built Documention to client requirements and training including manuals [min 4 personnel]	Sum	1		
3.2.102		The contractor shall allow for all items not specifically mentioned above in order to provide a complete working solution as per the specifications with all required documents like manuals where necessary	Sum	1		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
3.3		**SEWER RETICULATION**				
		Pipes & Fittings				
		All fittings, rodding eyes, connections, bends, gulleys, vents, vent stacks, vent pipes, traps, etc. shall be supplied in the pipes price.				
3.3.1		50 dia uPVC pipe class 9 - in cavities, walls, underslung and in trenches	m	35		
3.3.2		110 dia uPVC Class 9 (UG-pipe) - in cavities, walls, underslung and in trenches	m	92		
3.3.3		110 dia uPVC Class 9 SV-pipe - in cavities, walls, underslung and in trenches	m	15		
		DOMESTIC WATER SUPPLY				
		Pipes to SANS 460. All fittings and ancillary equipment such as Tees, elbows, bends, reducers, couplings, fixing into postion, brackets, valves and insulation where applicable shall be included in the piping prices				
3.3.4		15 mm Copper Pipe Class 2	m	57		
3.3.5		22 mm Copper Pipe Class 2	m	120		
3.3.6		28 mm Copper pipe Class 2	m	55		
		APPLIANCES AND FIXTURES				
		All fittings and ancillary equipment such as Tees, elbows, bends, reducers, couplings, fixing into postion, brackets, and insulation where applicable shall be included in the prices				
3.3.7		400 liter geyser, complete with Valve, drain cork and vacumme breakers	No	1		
3.3.8		7.2 kW heat pump	No	1		
3.3.9		Shower Doors	No.	3		
3.3.10		Wash Hand Basin	No.	5		
3.3.11		Supply and install Cobra basin mixers, or similar approved	No.	5		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
3.3.12		Urinal	No.	1		
3.3.13		supply and install, junior flush master, complete	No.	1		
3.3.14		Vaal Toilet complete, including seats	No.	4		
3.3.15		50mm Brass, shower Traps	No.	3		
3.3.16		Deavy duty shower base, complete with sealing and leveling into final position	No.	3		
3.3.17		Supply and install shower mixers including standard shower arm and shower rose	No.	3		
3.3.18		Supply and install 15m angle valves	No.	14		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
3.4		**SECTION 3: SEWER GRAVITY MAIN**				
		EARTHWORKS				
	SABS 1200DB	Site Clearance				
3.4.1	8.3.1(a)	Clear vegetation, grass, shrubs, etc. and trees of girth up to 1m and remove, stockpile, maintain/ preserve and reinstate topsoil (150mm deep) shrubs, trees and grass along route of sewers	m	220		
		Excavation				
3.4.2	8.3.2(a) PSDB 1	Excavate in all materials **by hand** for trenches, backfill, compact and dispose of surplus material, for pipes up to 250mm in diameter for depth: • Rates to include for tunnelling under fences and trees • Rates to include shoring where required by regulation • Rates to include for crossing and adjoining services with due care and attention • Rates to include supporting/bracing of electrical and telephone poles where required • Rate to include careful removal of block paving and storage until reuse				
		Over Up to and including				
		a) 0,00 1,25m	m	40		
		b) 1,25 1,50m	m	45		
		c) 1,50 2,00m	m	5		
		d) 2,00 2,50m	m	5		Rate Only
		e) 2,50 3,00m	m	5		Rate Only
3.4.3	8.3.2(a) PSDB 1	Excavate in all materials **by machin**e for trenches, backfill, compact and dispose of surplus material for pipes up to 250mm in diameter for depths:				
		Over Up to and including				
		a) 0,00 1,25m	m	25		
		b) 1,25 1,50m	m	20		
		c) 1,50 2,00m	m	25		
		d) 2,00 2,50m	m	10		
		e) 2,50 3,00m	m	10		
		f) 3,00 3,50m	m	5		
		g) 3,50 4,00m	m	5		Rate only
		h) 4,00 4,50m	m	5		Rate only
		i) 4,50 5,00m	m	5		Rate only
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
3.4.4	9/3/2(b)	Extra over item 3.3 and 3.4 for excavation in intermediate material	m³	25		
3.4.5	8.3.2(c)	Excavate unsuitable material from trench bottom and dispose of it (to spoil) (Prov.)	m³	10		
3.4.6	PSDB 14	Hand excavate and backfill in all material to prove existing services to a maximum depth of 1,5m	m³	25		
		EXCAVATION ANCILLARIES				
3.4.7	SABS 1200LB 8.2.1	Provision of bedding from trench excavation of:				
		a) Selected granular material	m³	20		
		b) Selected fill material	m³	20		
3.4.8	8.2.2.3	Provision from commercial or off-site sources where ordered by the Engineer (Prov.)				
		a) Selected granular material	m³	40		
		b) Selected fill material	m³	15		
		c) 10mm crushed stone (Prov.)	m³	10		
		d) Supply and lay A2 type bidim in trench 0,8m wide	m	50		
3.4.9	SABS 1200DB 8.3.3.3	Compaction in road reserves compacted to 95% MOD AASHTO max. density (only subjected to traffic loading)	m³	10		
3.4.1	8.3.6.1	Reinstate road surfaces complete with all courses. (Rate to include reinstatement of kerbing and road markings)				
		a) 150mm thick G5 subbase and 150mm thick G2 base compacted to 95% and 100% MOD AASHTO max. density respectively	m²	12		
		b) MC30 cut back bitumen prime applied at a rate of 0.7 litre/sq.m	m²	12		
		c) 30mm thick asphalt carpet	m²	12		
		d) block paving (reuse existing)	m²	12		
	SABS 1200LD	PIPEWORK				
3.4.11	8.2.1	Supply, bed, lay, joint and air test heavy duty solid wall sewer pipe - uPVC				
		a) 160 mm diameter	m	220		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
	SABS 1200LD	MANHOLES				
3.4.12	8.2.3	Supply and construct 1m diameter standard precast concrete manholes complete with light duty precast concrete cover and frame to invert: Over Up to and including				
		a) 0,00 1,25m	No.	1		
		b) 1,25 1,50m	No.	2		
		c) 1,50 2,00m	No.	2		
		d) 2,00 2,5m	No.	1		
		c) 2,50 3,00m	No.	1		Rate only
		d) 3,00 3,5m	No.	1		Rate only
3.4.13	PSLD 19 8.2.4	Extra over Item 3.12 for :				
		a) Heavy duty concrete cover and frame	No.	3		
		b) Additional benching for Ramp manhole (over 500mm and up to 1000mm)	No.	1		
		c) Type 2A solid cast iron top manhole cover and frame	No.	2		
		MISCELLANEOUS				
3.4.14		Tie into existing manhole (allow for breaking in, benching and dealing with live sewer)	No.	1		
3.4.15		Suppy and install 315 PE 100 HDPE (PN 10) sleeve for the 160mmØ sewer pipe	m	12		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
3.5		**SECTION 4: WATER MAIN**				
		EARTHWORKS				
	SABS 1200C	**Site Clearance**				
3.5.1	8.2.1	a) Clear and grub vegetation and trees of girth up to 1m and remove, stockpile and reinstate topsoil (150mm deep) along route of pipeline	m	220		
3.5.2	8.2.6	Remove and reinstate existing fences	m	20		
	SABS 1200DB	Excavation				
		Excavate **by hand** in all materials for:				
3.5..3	8.3.2 (a) PSDB 1	Trenches, backfill, compact and dispose of surplus/unsuitable material for pipes up to and including 75mm dia. For depths • Rates to include for tunnelling under fences and trees • Rates to include shoring where required by regulation • Rates to include for crossing and adjoining services with due care and attention • Rates to include for supporting/bracing of electrical and telephone poles where required • Rates to include careful removal of block paving and storage until reuse				
		Over Up to and including				
		a) 0,00 1,25	m	170		
		b) 1,25 1,5	m	50		
3.5..4	8.3.2(b)	Extra over Item 4.4 and 4.5 for excavation in intermediate material (Prov.)	m³	5		
3.5..5	8.3.2 (c)	Excavate unsuitable material from trench bottom and dispose of it (Prov.)	m³	5		
		Excavation Ancillaries				
3.5..6	SABS 1200LB 8.2.1	Provision of bedding from trench excavations				
		a) Selected granular material	m³	20		
		b) Selected fill material	m³	20		
3.5..7	8.2.2.3	Provision from commercial sources or off site, where ordered by the Engineer (Prov)				
		a) Selected granular material	m³	40		
		b) Selected fill materials	m³	15		
3.5..8	8.2.4	Concrete encasement to pipes in 15MPa concrete as directed by Engineer (Prov.)	m³	5		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
3.5..9	SABS 1200DB 8.3.3.3	Compaction in road reserves compacted to 95% MOD AASHTO to maximum density (only subjected to traffic loading)	m³	10		
3.5..1	8.3.6.1	Reinstate road surfaces complete with all courses:				
		a) 150mm thick G5 sub-base and 150mm thick G2 base compacted to 95% and 100% MOD AASHTO maximum density respectively	m²	12		
		b) MC30 cut back bitumen prime applied at a rate of 0.7 litre sq.m	m²	12		
		c) 30mm thick asphalt carpet	m²	12		
	SABS 1200L 8.2.1	Supply, deliver, handle, lay, bed, joint, test and disinfect in accordance with PSL HDPE pipe • Rates to include for laying in sleeves where required				
3.5.11		Class 12:				
		a) 75mm diameter	m	220		
		b) 50mm diameter	m	10		
		Supply, deliver, handle, lay, bed, joint, uPVC pipe for sleeves				
3.5.12		Class 16:				
		a) 250mm diameter uPVC	m	12		
	SABS 1200L	Specials and Fittings for HDPE Pipelines (All PN 16 Class)				
	8.2.2	Supply, deliver, lay, bed, joint, test and disinfect. Extra over Item 4.14				
3.5.13		**Female Adaptors**				
		a) 90mm diameter x 3"	No.	1		
		b) 75mm diameter x 2"	No.	1		
		c) 50mm diameter x 2"	No.	1		
		d) 50mm diameter x 1.5"	No.	1		
		e) 32mm diameter x 1"	No.	1		
3.5.14		**Male Adaptors**				
		a) 90mm diameter x 3"	No.	1		
		b) 75mm diameter x 3"	No.	1		
		c) 50mm diameter x 2"	No.	1		
		d) 32mm diameter x 1.5"	No.	1		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
3.5.15		**Equal Tees**				
		a) 90mm diameter	No.	1		
		b) 75mm diameter	No.	1		
		c) 50mm diameter	No.	1		
3.5.16		**Reducing Tees**				
		a) 90 x 75mm diameter	No.	1		
		b) 75 x 50mm diameter	No.	1		
		c) 50 x 32mm diameter	No.	1		
3.5.17		**Straight Couplings**				
		a) 90mm diameter	No.	2		
		b) 75mm diameter	No.	2		
		c) 50mm diameter	No.	2		
		d) 32mm diameter	No.	2		
3.5.18		**Reducing Couplings**				
		a) 90 x 75mm diameter	No.	1		
		b) 75 x 50mm diameter	No.	1		
		c) 50 x 32mm diameter	No.	1		
3.5.19		**Flanged Adaptor** (Include for "Denso-wrapping" bolted connection in accordance with PSL16)				
		a) 75 x 80mm diameter	No.	1		
		b) 75 x 75mm diameter	No.	1		
		c) 50 x 50mm diameter	No.	1		
3.5.2		**End Caps**				
		a) 90mm diameter	No.	2		
		b) 75mm diameter	No.	1		
		c) 50mm diameter	No.	1		
3.5.21		**Bends - 90 degree**				
		a) 90mm diameter	No.	2		
		b) 75mm diameter	No.	1		
		c) 50mm diameter	No.	1		
3.5.22		**Bends - 45 degree**				
		a) 90mm diameter	No.	2		
		b) 75mm diameter	No.	1		
		c) 50mm diameter	No.	1		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
3.5.23		**Saddles**				
		Clamp Saddles with reinforced ring and flat gasket				
		a) 90 x 1"	No.	1		
		b) 75 x 1"	No.	1		
		c) 50 x 1"	No.	1		
		d) 50 x ½"	No.	1		
	8.2.2	**STEEL PIPES AND FITTINGS**				
		Unless otherwise specified, all steel pipes and specials in this section shall be Grade B SABS 719, with a wall thickness of 4,5mm. All pipes and fittings to have an internal and external coating of 'Rilsan' - rates to include for 'Denso Wrapping' buried bolted connections to specifications flanged to Table 1000/3 SABS 1123 unless otherwise specified				
3.5.25		**TEES**				
		a) 110 x 80mm dia steel reducing tee flanged all ends	No.	1		
3.5.26		**REDUCERS**				
		a) 110 x 80mm dia steel reducer F.B.E	No.	1		
3.5.27		**COUPLINGS**				
		a) 110mm dia. 'Maxifit' VJ couplings OSA	No.	2		
3.5.28		**FLANGE ADAPTORS**				
		a) 110mm dia. SG iron flange adaptor	No.	2		
		b) 90mm dia. SG iron flange adaptor	No.	2		
		VALVE INSTALLATIONS				
3.5.29	8.2.3	Supply and install resilient seal gate valve with cap top as detailed on Drg. No. 10969-001-002-GSD-0002				
		a) 80mm dia. Class 10 (flanged)	No.	1		
		Isolating Valve Chamber				
3.5.30	8.2.13	Supply all materials and construct isolating valve chamber complete as detailed on Drg. No. 10969-001-002-GSD-0002 including covers, support blocks, locking bar, marker post, etc. Over Up to and including a) 0,00 1,25m	No.	1		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
	SABS 1200L 8.2.11	ANCHOR/THRUST BLOCKS Construct anchor/thrust blocks to Drg. 10206/1/12				
3.5.31		For tees and 90 degree bends:				
		a) 110mm diameter	No.	2		
3.5.32		For 45 degree and lesser bends:				
		b) 110mm diameter	No.	2		
3.5.33		Supply materials and construct a 15mm stand tap at the 10969/1/xxxx. Rate to include for connection from the new watermain.	No.	1		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		SECTION 6: DAYWORKS				
3.6.1		**LABOUR**				
		a) Foreman	hour	16		
		b) Skilled	hour	16		
		c) Semi-skilled	hour	16		
		d) Unskilled	hour	16		
3.6.2		**PLANT (LARGE)**				
		a) TLB - 50kW	hour	10		
		b) TLB (4x4) - 56kW	hour	10		
		c) Tip Truck - 6m³	hour	10		
		d) Tip Truck (double diff) 10m³	hour	10		
		e) Flat truck with crane	hour	20		
3.6.3		**OTHERS (Contractor to specify):**				
		a) …….	hour	- - -		
		b) ……..	hour	- - -		
		c) ……..	hour	- - -		
3.6.4		**PLANT (SMALL)**				
		a) Pedestrian vibrating roller (Bomag 60 or similar)	hour	10		
		b) Pneumatic breakers/jack hammers	hour	10		
		c) Plate compactor	hour	10		
		d) Concrete cutting saw	hour	10		
		e) Water pump - 4"	hour	10		
		f) Compressors (250 CFM or similar)	hour	10		
		g) Generator	hour	25		
		h) 15 ton jib crane	hour	5		
		i) Water pump - 5000l/hour capacity to dewater	hour	8		
		j) 10m² working scaffold 3m high	hours	10		
3.6.5		**OTHERS (CONTRACTOR TO SPECIFY)**				
		a) …Vandex sealant	Sum	1		
		b) ……	hour	- - -		
		c) ……	hour	- - -		
		d) ……..	hour	- - -		
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
3.7		**Generator Roof Structure**				
		FORMWORK				
		Rough formwork				
3.7.1		Steel Roof Bases	m²	4.8		
3.7.2		800x250mm Strip footings	m²	10		
		REINFORCEMENT				
		High Tensile steel bars - All diameters				
3.7.3		Foundation Base 1m x 1m x 300mm thick	kg	180		
3.7.4		800x250mm Strip footings	kg	480		
		CONCRETE **Strength Concrete 30 MPa / 19mm**				
3.7.5		Foundation Base 1m x 1m x 300mm thick	m^3	1.2		
3.7.6		Reinstate Surfacebed 200mm Thick	m^3	3.2		
3.7.7		800x250mm Strip footings	m^3	3.2		
		UNFORMED FINISHES				
		Wood float finish				
3.7.8		Surfacebed	m²	16		
3.7.9		Foundation Base	m²	17		
		STRUCTURAL STEEL				
3.7.10		Hot Dipped Galvanised 150x75x20x2.5 CFLC	m	14		
3.7.11		Hot Dipped Galvanised Bracing 60x60x6EA	m	18		
3.7.12		Hot Dipped Galvanised 180IPE column and beams with connection plates	kg	330		
		ROOF				
3.7.13		Supply and install 0.8 chromodeck IBR sheeting including all fixings	m²	21		
3.7.14		Flashing 462mm girth to match "IBR 686" roof sheeting as per manufactures specification and detail complete	m	20		
3.7.15		Supply and install new 150x100 zinculume rolled gutters	m	7		
3.7.16		Supply and install new Downpipes	No	2		
		BRICKWORK				
3.7.17		230mm clay brick wall, plastered and painted both sides	m²	54		
		DOORS AND WINDOWS				
3.7.18		2.5m x 2.5m steel doors to later specification	Prov Sum	1	R 10,000.00	R 10,000.00
		Total Carried Forward to Summary				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
3.8		**PRELIMINARY AND GENERAL**				
		Establishment of facilities on site:				
		Facilities for the Contractor				
3.8.1		Office, storage shed, fencing, etc	Item	1		
3.8.2		Ablution and latrine facilities	Item	1		
3.8.3		Water supplies, electric power and communications, dealing with water and access	Item	1		
3.8.4		Tools and equipment	Item	1		
3.8.5		Remove all site establishment on completion including equipment store	Item	1		
		General Safety, Safety Plan, Monitoring and Review				
3.8.6		The sum shall include all costs necessary in complying with the Occupational Health and Safety Act (1998 as amended) and the Construction Regulation 2014 and the eThekwini Health and Safety requirements	Item	1		
3.8.7		Compliance with Environmental Management Plan (Note: Access plan to be developed in conjunction with the ECO and allowed for in rates)	Item	1		
		REMOVAL OF EXISTING WORK				
		Demolishing and removing				
3.8.5		Cleaning of building from all, vegetation, rubbish, dilapidated building materials, etc to site located by contractor	Item	1		
		Break down and remove masonry				
3.8.6		230mm Brick walls	m²	40		
		Hack up/off and remove granolithic, screeds or plaster from concrete or masonry and prepare surfaces for new screeds or plaster				
3.8.7		30mm Screeds from floors	m²	200		
		PREPARATORY WORK TO EXISTING SURFACES				
		MASONRY				
		SUPPLEMENTARY PREAMBLES				
		BRICKWORK				
		Hollow walls				
		Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course and above lintels of the external skin open as a weep hole				
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		Lintels Lintels shall bear at least 250mm onto adjacent walling. Where such bearing cannot be obtained due to the proximity of adjacent openings the lintel shall be continuous **Pointing** Descriptions of recessed pointing to fair face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc **FACE BRICKWORK** **General** Bricks shall be ordered timeously to obtain uniformity in size and colour **Pointing** Descriptions of recessed pointing to face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc **SAMPLES** Samples of all masonry building units, except those for walls described as "load bearing", shall consist of a minimum of 6 units. Samples of building units to be used in walls described as "load bearing" shall consist of 30 units from every 30 000 units delivered to site **MISCELLANEOUS** **BRICKWORK** **SUPERSTRUCTURE** **Brickwork of common clay bricks**				
3.8.8		110mm Walls	m²	15		
3.8.9		230mm Walls	m²	76		
		BRICKWORK SUNDRIES **Galvinized brickwork reinforcement**				
3.8.10		75mm Wide reinforcement built in horizontally	m	50		
3.8.11		150mm Wide reinforcement built in horizontally	m	18		
		Prestressed concrete fabricated lintels				
3.8.12		110 x 70mm Lintels in lengths not exceeding 3m	m	1.2		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		FACE BRICKWORK				
		Facebricks to match existing red brick, pointed with recessed vertical and horizontal joints				
3.8.13		Extra over brickwork for face brickwork	m2	20		
		CARPENTRY AND JOINERY				
		DOORS, ETC				
		Semi-solid flush doors hung to aluminium frames suitable for partitions				
3.8.14		40mm Door 0.9 x 2.4m high (D2)	No	1		
		Semi-solid Meranti double swing doors hung to timber frames				
3.8.15		40mm Door 0.9 x 2.1m high (D4)	No	1		
		Semi - Solid flush doors with aluminium louvre hung to timber frames				
3.8.16		40mm Door 0.9 x 2.1m high (D5)	No	3		
		Semi - Solid flush doors hung to timber frames				
3.8.17		40mm Door 0.765 x 2.1m high (D6)	No	4		
		Solid flush Meranti doors hung to timber frames				
3.8.18		40mm Door 0.9 x 2.1m high (D7)	No	1		
		CEILINGS, PARTITIONS AND ACCESS FLOORING For preambles see "Model Preambles for Trades"				
		SUPPLEMENTARY PREAMBLES				
		Descriptions				
		Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to masonry or concrete				
		Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted", the bolts are measured elsewhere				
		Sub-grids				
		Sub-grids for suspended ceilings shall be deemed to include for the design, supply and erecting of a stable horizontal gridwork of galvanised steel "Burgess" channels at centres suitable to carry the ceilings and for positive fixing thereof to structural steel members at not exceeding 5.00m centres and exceeding 3m and not exceeding 4m below the steel members				
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		Proprietary suspended ceilings Hangers, suspension grids, "lay-in" panels, etc are to be in accordance with the manufacturers' recommendations Electrical light fittings, diffusers, panels etc are generally "lay-in" units of the same dimensions as the suspension grid described and allowance must be made in the rates accordingly for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof) **Flush plastered gypsum plasterboard suspended ceilings** Ceilings shall comprise screw-up galvanised steel suspension grid consisting of main tees at 1.20m centres, cross tees at centres to suit the thickness of the boards and covered as described with plasterboard screwed to grid with 25mm "Drywall" screws at maximum 220mm centres. Boards shall be butt jointed and finished with tape and jointing compound and the whole finished with gypsum plaster trowelled to a smooth polished surface to the thickness recommended by the manufacturer The grid shall be suspended by means of galvanised steel angle hangers at suitable centres, securely shot pinned or screwed to concrete, steel or wood **"Saint-Gobain GypRoc" partition systems** "GypWall" drywall partitioning shall comprise of 63.5mm galvanised steel top and bottom tracks with 63.5mm galvanised steel vertical studs at maximum 600mm centres, friction fitted or pop riveted to the top and bottom tracks with similar additional vertical studs as necessary at abutments, ends, etc and covered as described with taper edged "Rhino" board screwed to studding with 25mm "Drywall" screws at maximum 220mm centres. Boards are to be butt jointed and taped and jointed all in accordance with the manufacturer's instructions. Intersections and abutments are measured separately and descriptions shall be deemed to include any additional studs, corner beads, jointing compound, tape, etc Note: Wall paper and/or paint and varnish finishes are measured elsewhere **12.5mm "Saint Gobain Gyproc" Standard skimmed Rhynoboard ceiling system, including necessary hangers, holding down clips, etc**				
3.8.19		Horizontal ceilings suspended exceeding 1m below wall plates	m^2	40		
3.8.20		Circular cutting	m	12		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
3.8.21		**OFFICE PARTITIONS** **"Siant -Gobain" Gyproc Classic walll system with one layer of 12.5mm boards on both sides** Partitions 2.90m high with bottom track nailed and top track fitted with standard aluminium channel cappings including aluminium door frame and fixed to suspended ceiling tees **IRONMONGRY, FENESTRY, ETC** **SUPPLEMENTARY PREAMBLES** **Fixing** Ironmongery shall be deemed to include for fixing to wood, metal, masonry or concrete with stainless steel screws or bolts, including drilling and fibre, plastic or metal plugs where applicable **Descriptions** Descriptions of bolts shall be deemed to include nuts and washers. Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in masonry or concrete Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described **Finishes to ironmongery** Where applicable finishes to ironmongery are indicated in accordance with the following list: BS Satin bronze lacqueredCH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Brass PL Polished brass PT Epoxy coated SD SandedSS Stainless steel **Aluminium windows, doors, etc** The work includes for the supply, setting up, fixing in position of windows, doors, etc to masonry or concrete, ironmongery, "Jaycomastic" sealant all round on both sides and for glazing as described	m	20		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		IRONMONGERY				
		Take delivery, store, etc and fix				
3.8.22		100mm Hinge	No	22		
3.8.23		Barrel bolt with keep fixed to metal	No	2		
3.8.24		Mortice indicator bolt with keep fixed to metal	No	5		
3.8.25		Mortice lockset	No	5		
3.8.26		Rebated mortice lockset	No	2		
3.8.27		Escutcheon	No	12		
3.8.28		Pair of approximately 200mm lever door handles fixed back to back	No	7		
3.8.29		Door closer with bracket	No	5		
3.8.30		200 x 400mm Stainless steel push plate	No	5		
		ALUMINIUM WINDOWS, DOORS, SHOPFRONTS, ETC				
		charcoal powder coated Wispeco Casement 38 aluminium windows glazed in Intruderprufe Low E glass and in accordance SABS NBR0400 and plugged to brickwork or concrete				
3.8.31		Window size1.2 x 1.5m high	No	5		
3.8.32		Window size 2.4 x 1.5m high	No	1		
3.8.33		Window size 0.6 x 0.6m high	No	1		
3.8.34		Window size 1.8 x 0.6m high	No	2		
3.8.35		Window size 2.4 x 1.5m high	No	1		
		PLASTER				
		Finish				
		Internal plaster shall be finished with a steel trowel and external plaster with a wooden float				
		SPECIALIST PLASTER TYPE COATINGS				
		All specialist plaster type wall and floor coatings are to be executed in strict accordance with the manufacturer's instructions by an approved applicator				
		INTERNAL PLASTER				
		Cement plaster class II on masonry				
3.8.36		Walls	m²	540		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		SPECIALIST PLASTER TYPE FLOOR COATINGS				
		Clear epoxy flooring				
3.8.37		Minimum 5mm thick on floors and landings	m²	220		
		WALL TILING				
		Ceramic tiles fixed with adhesive to screeds (screeds elsewhere) on				
3.8.38		Walls	m²	105		
3.8.39		Narrow widths	m²	8		
		PLUMBING AND DRAINAGE				
		Stainless steel basins, sinks, wash troughs, urinals, etc				
		Stainless steel for economy basins, domestic sinks, worktops and wash troughs shall be type 430 (17/0)				
		Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be type 304 (18/8)				
		Flush pans				
		Flush pans shall have straight or side outlets and "P" or "S" traps as necessary				
		Geyser installations				
		Geyser installations shall comply with SANS 10254				
		General				
		Descriptions of washdown pans, slop hoppers, grease traps, septic tanks, etc shall be deemed to include for joints to soil pipes (pan connectors measured separately)				
		Descriptions of all sanitary fittings shall be deemed to include for silicone sealant pointing between the fittings and finished wall surfaces				
		SANITARY FITTINGS				
		"Geberit"				
3.8.40		iCon wall hung WC including metal hinges	No	4		
3.8.41		Kombifix element for wall hung WC 109cm with sigma concealed cistern 8cm	No	4		
3.8.42		Actuator plate "Mambo" for stop and go flush	No	4		
3.8.43		iCon washbasin for cabinet B60cm	No	4		
3.8.44		Urinal preda with integrated control, mains operation	No	1		
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		TAPS, VALVES, ETC				
		"Cobra Watertech"				
3.8.45		15mm 832/350F Angle valve with 350mm flexible hose connector	No	6		
3.8.46		15mm 139CP "Carina" undertile stoptap	No	6		
3.8.47		15mm 902CP "Focus" single taphole basin mixer with plug, chain, basin waste, mounting kit, angle valves and flexible inlets	No	6		
3.8.48		15mm 3351CP "Stella" wall type bath/shower diverter mixer with AP8.330W "Harlequin" handshower, wall bracket, hose and hose adaptor	No	3		
3.8.49		15mm 028CP Overhead shower arm	No	3		
3.8.50		15mm 077CP Shower rose	No	3		
3.8.51		32mm FM1.100CP "Flushmaster" exposed back entry toilet flushvalve	No	5		
		WASTE UNIONS, ETC				
		"Cobra Watertech"				
3.8.52		32mm 301CP basin waste union	No	6		
		TRAPS, ETC				
		"Geberit"				
3.8.53		Bottle trap with dip tube for washbasin (151.034.21.1)	No	6		
		"Flexitrap" rubber				
3.8.54		32mm Plain "P" or "S" trap	No	4		
		"Cobra Watertech"				
3.8.55		75mm VA3.113CP urinal domical grating	No	2		
3.8.56		32mm 345/40CP bottle trap	No	2		
		"Serra" stainless steel				
3.8.57		TR2 SD1310 toilet roll holder, plugged	No	5		
3.8.58		SD1127 wall bin, plugged	No	3		
3.8.59		SD1226 soap dispenser, plugged	No	4		
		PAINTWORK				
		For preambles see "Model Preambles for Trades"				
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		SUPPLEMENTARY PREAMBLES Descriptions of paintwork shall be deemed to include for all cutting in **PREPARATORY WORK TO EXISTING SURFACES** **Plaster or concrete surfaces** Surfaces shall be thoroughly cleaned down by high pressure water jet and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed. All existing walls to be made good where damaged by removals, furniture, etc, and all screw and nail holes and cracks shall be opened, primed with plaster primer, filled with a suitable filler and finished smooth Surfaces shall be thoroughly rubbed and cleaned down by means of grit blasting or wire brushing. Blistered or peeling paint, including all traces of corrosion, shall be completely removed down to bare metal **Previously painted wood surfaces** Surfaces shall be thoroughly cleaned down by scraping and sanding all loose and flaking paint. All dust and surface contamination are to be removed by wiping down. All exposed nail heads are to be punched in and primed with one coat metal primer. Holes, cracks and crevices shall be primed with wood primer, filled with wood stopping and finished smooth **Previously varnished/natural wood surfaces** Surfaces shall be thoroughly cleaned down with existing coatings removed by sanding and/or using paint remover. All residual paint remover and surface contamination are to be removed by washing down, allowed to dry and sandpapered to a uniformed surface. All exposed nail heads are to be punched in and primed with one coat metal primer. Holes, cracks and crevices shall be treated with woodcare pretreatment, filled with wood stopping and finished smooth **PAINT SPECIFICATIONS** All painting shall be done in accordance with "Plascon" specifications unless otherwise specified **COLOURS** Unless otherwise described paintwork on ceilings shall be deemed to be in the "White" colour group and paintwork on all other components shall be deemed to be in the "Pastel" colour group in accordance with the Natural Colour System (NCS) adopted by the SA National Standards				
		Total carried forward				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		Total brought forward				
		PAINTWORK, ETC TO NEW SURFACES ON				
		SMOOTH PLASTER OR CONCRETE SURFACES WITH				
		One coat alkali resistant plaster primer and universal undercoat and two coats double velvet (DC21-62) Ravine paint on				
3.8.60		Walls	m²	550		
		PLASTER BOARD SURFACES WITH				
		One coat alkali resistant plaster primer and two coats superior matt acrylic paint on				
3.8.61		Partitions ("White" colour group)	m²	20		
		PAINTWORK, ETC TO EXISTING SURFACES ON				
		SMOOTH PLASTER OR CONCRETE SURFACES WITH				
		One coat alkali resistant plaster primer and universal undercoat and two coats double velvet (Y5-E2-3) Amazon mist paint on work in sound condition on				
3.8.62		Walls	m²	10		
		GLAZING				
		GLASS TOPS, SHELVES, DOORS, MIRRORS, ETC				
		5mm "Images" silver mirrors with polished edges holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in walls				
3.8.63		Mirror 0.60 x 0.95m high with four screws	No	6		
		Total Carried Forward to Summary				

ITEM	DESCRIPTION	LABOUR		UNIT	MATERIAL			MATERIAL & LABOUR TOTAL
		LABOUR UNIT RATE	TOTAL LABOUR COST		ESTIMATED QUANTITY	UNIT RATE	TOTAL MATERIAL COST	
1	**LV Power Distribution**							
1.1	**Main Power Distribution Board and Hilo Spiller MCC** The supply of the distribution boards shall include all equipment, accessories, and internal wiring as specified on the single line diagram in accordance with the specification, handling, profit and delivery. The installation shall include the installation, connection, earthing and conduit terminations but excluding cable terminations.							
1.1.1	Design, supply and delivery to site of the Main Power Distribution Board and Hilo Spiller MCC			Sum	1			
1.1.2	Rigging and floor mount installation of the Main Power Distribution Board and Hilo Spiller MCC into position in the Electrical Room			Sum	1			
1.1.3	*Incomer cable* Supply deliver to site and store 1000/600 volt Cu / PVC / SWA/PVC cables. Install, rack, strap and testing of cables as per specification including clamps, ties and cable numbering system. Rates to include for wastage. Contractor will only be reimbursed for installed cable measured on site between terminations. Cable bonding of all Earth Continuity Conductors from the incoming and outgoing cables will be properly crimped into cable lugs and bolted to their respective earth bars. Cable lengths are remeasurable.							
1.1.3.1	Supply and Install 95mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Power) from Change Over panel to MCC For PVC/SWA/PVC cables, shall include supply installation and testing of the IP 65 glands with corrosion guard, making -off the cable, gland plate, switchgear or appliance and final connection of cable tails into board or terminals.			m	5			
1.1.3.2	Supply and Install 95mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.4	*110 kW Hilo Spiller Hoist*							
1.1.4.1	Supply and Install 50mm² 3C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Power)			m	50			
1.1.4.2	Supply and Install 50mm² 3C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.4.3	Supply and Install 1.5mm² 7C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Control Panel)			m	50			
1.1.4.4	Supply and Install 1.5mm² 7C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.4.5	Supply and Install 1.5mm² 2C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Thermistor)			m	50			
1.1.4.6	Supply and Install 1.5mm² 2C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.4.7	Supply and Install 1.5mm² 2C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Heater)			m	50			
	Total carried forward							

ITEM	DESCRIPTION	LABOUR		UNIT	MATERIAL			MATERIAL & LABOUR TOTAL
		LABOUR UNIT RATE	TOTAL LABOUR COST		ESTIMATED QUANTITY	UNIT RATE	TOTAL MATERIAL COST	
	Total brought forward							
1.1.4.8	Supply and Install 1.5mm² 2C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.5	*5.5 kW Spiller Retract*							
1.1.5.1	Supply and Install 2.5mm² 3C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Power)			m	50			
1.1.5.2	Supply and Install 2.5mm² 3C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.5.3	Supply and Install 1.5mm² 7C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Control Panel)			m	50			
1.1.5.4	Supply and Install 1.5mm² 7C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.6	*5.5 kW Spiller Clamp*							
1.1.6.1	Supply and Install 2.5mm² 3C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Power)			m	50			
1.1.6.2	Supply and Install 2.5mm² 3C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.6.3	Supply and Install 1.5mm² 7C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Control Panel)			m	50			
1.1.6.4	Supply and Install 1.5mm² 7C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.7	*5.5 kW Spiller Hoist Brake*							
1.1.7.1	Supply and Install 2.5mm² 3C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Power)			m	50			
1.1.7.2	Supply and Install 2.5mm² 3C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.7.3	Supply and Install 1.5mm² 7C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Control Panel)			m	50			
1.1.7.4	Supply and Install 1.5mm² 7C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.8	*Building DB supply cabling*							
1.1.8.1	Supply and Install 35mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Power) from PDB & MCC to Building DB			m	5			
1.1.8.2	Supply and Install 35mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.8.3	Supply and install 16mm² 1C Green and Yellow PVC earth cable from MCC earth bar to Building DB			m	5			
1.1.8.4	Supply and install 16mm² 1C Green and Yellow PVC earth cable termination			ea	2			
	Total carried forward							

ITEM	DESCRIPTION	LABOUR		UNIT	MATERIAL			MATERIAL & LABOUR TOTAL
		LABOUR UNIT RATE	TOTAL LABOUR COST		ESTIMATED QUANTITY	UNIT RATE	TOTAL MATERIAL COST	
	Total brought forward							
1.1.9	*Weighbridge Control System DB supply cabling*							
1.1.9.1	Supply and Install 35mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Power) from PDB & MCC to Weighbridge Control System DB			m	10			
1.1.9.2	Supply and Install 35mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.9.3	Supply and install 16mm² 1C Green and Yellow PVC earth cable from MCC earth bar to Weighbridge Control System DB			m	10			
1.1.9.4	Supply and install 16mm² 1C Green and Yellow PVC earth cable termination			ea	2			
1.1.10	*Diesel Generator Control Panel & Auxiliaries supply cabling*							
1.1.10.1	Supply and Install 35mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Power) from PDB & MCC to Diesel Generator CP			m	20			
1.1.10.2	Supply and Install 35mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.1.10.3	Supply and install 16mm² 1C Green and Yellow PVC earth cable from MCC earth bar to Diesel Generator CP			m	20			
1.1.10.4	Supply and install 16mm² 1C Green and Yellow PVC earth cable termination			ea	2			
1.2	**Standby Diesel Generator**							
1.2.1	Design, supply and delivery to site of the Diesel Generator, auxiliaries and Generator Control Panel			Sum	1			
1.2.2	Rigging and installation of the Diesel Generator, auxiliaries and Generator Control Panel into position on the concrete base provided by others;			Sum	1			
1.2.3	Supply and installation of all cable racking, cabling, earthing and terminations between the Diesel Generator, auxiliaries, Generator Control Panel;			Sum	1			
1.3	**Change Over Panel**							
1.3.1	Design, supply and delivery to site of the Change Over panel			Sum	1			
1.3.2	Rigging and wall mount installation of the Change Over panel in the Electrical Room			Sum	1			
1.3.1	*Eskom incomer cable*							
1.3.1.1	Supply and Install 95mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Power) from Eskom Supply to Change Over panel in cable trench/route provided by others			m	200			
1.3.1.2	Supply and Install 95mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.3.1.3	Supply and install 50mm² 1C Green and Yellow PVC earth cable from Eskom supply earth bar to MCC earth bar			m	200			
1.3.1.4	Supply and install 50mm² 1C Green and Yellow PVC earth cable termination			ea	2			
	Total carried forward							

ITEM	DESCRIPTION	LABOUR		UNIT	MATERIAL			MATERIAL & LABOUR TOTAL
		LABOUR UNIT RATE	TOTAL LABOUR COST		ESTIMATED QUANTITY	UNIT RATE	TOTAL MATERIAL COST	
	Total brought forward							
1.3.2	*DG incomer cable*							
1.3.2.1	Supply and Install 95mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Power) from DG to Change Over panel in cable trench/route provided by others			m	20			
1.3.2.2	Supply and Install 95mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.3.2.3	Supply and install 50mm² 1C Green and Yellow PVC earth cable from DG earth bar to MCC earth bar			m	20			
1.3.2.4	Supply and install 50mm² 1C Green and Yellow PVC earth cable termination			ea	2			
1.3.3	*DG control and status signals*							
1.3.3.1	Supply and Install 1.5mm² 7C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Control Panel)			m	20			
1.3.3.2	Supply and Install 1.5mm² 7C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	2			
1.4	**High Masts** Supply and installation of 25m galvanised mild steel scissors high mast inclusive of all templates holding down bolts, bracket to support 6 x 400W HPS Floodlights base mounting, all accessories, counterweights, reinforced concrete base, bolt cagesplitter box and controls in base, photocell,internal wiring, trailing cable,handling and delivery as specified. Feeder cable measured elsewhere.							
1.4.1	Design, supply and delivery to site of the High Masts including mast, cabling, luminaires and local mast mounted DB The installation shall include for the use of all plant and cranes required to install mast as well as all mounting accessories, 60MPa grouting, 4 nuts and 2 washers per bolt in accordance with supplier's specifications.			ea	3			
1.4.2	Rigging and installation of the High Masts into position on the concrete base provided by others			ea	3			
1.4.3	*High Mast supply cabling*							
1.4.3.1	Supply and Install 25mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Power) from PDB & MCC to High Mast DB's in cable trench/route provided by others			m	200			
1.4.3.2	Supply and Install 25mm² 4C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	6			
1.4.3.3	Supply and install 16mm² 1C Green and Yellow PVC earth cable from MCC earth bar to High Mast DB's			m	200			
1.4.3.4	Supply and install 16mm² 1C Green and Yellow PVC earth cable termination			ea	6			
	Total carried forward							

ITEM	DESCRIPTION	LABOUR		UNIT	MATERIAL			MATERIAL & LABOUR TOTAL
		LABOUR UNIT RATE	TOTAL LABOUR COST		ESTIMATED QUANTITY	UNIT RATE	TOTAL MATERIAL COST	
	Total brought forward							
1.5	**Hilo Unloader (Spiller)**							
1.5.1	Installation of the Control Panel on the Hilo Spiller			Sum	1			
1.5.2	Design and construct a new control panel			Prov Sum	1	R 150,000.00		
1.6.2	*Hilo Spiller local equipment control and status signals*							
1.6.2.1	Supply and Install 1.5mm² 3C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable (Limit switches and actuators)			m	60			
1.6.2.2	Supply and Install 1.5mm² 3C Cu 600/1000 V PVC/PVC/SWA/PVC + ECC cable termination			ea	12			
2	**EARTHING & LIGHTNING PROTECTION SYSTEM**							
2.1	Allow for the execution of a soil resistivity survey and for the preparation of drawings to be used for earthing and protection against lightning and "As Built Drawings " (This installation must be undertaken by a specialist Sub-contractor)							
2.2	*In Weighbridge*							
2.2.1	Supply and install 70mm2 earth wire ring buried at 800mm depth			m	90			
2.2.2	Supply and install 16 mm dia. 1500 mm long earth electrodes driven into ground including connections.			ea	4			
2.3	*Out Weighbridge*							
2.3.1	Supply and install 70mm2 earth wire ring buried at 800mm depth			m	90			
2.3.2	Supply and install 16 mm dia. 1500 mm long earth electrodes driven into ground including connections.			ea	4			
2.4	*Hilo Unloader (Spiller)*							
2.4.1	Steel structure lightning protection system including air terminal, down conductor, earth terminal, earth spikes, joints etc. as required.			Sum	1			
2.5	*High Masts*							
2.5.1	High mast lightning protection system including air terminal, down conductor, earth terminal, earth spikes, joints etc. as required.			Sum	4			
3	**Cable Racking and Supports**							
	Supply and install heavy duty galvanised cable ladder system inclusive of all items such as steel brackets, supports, steel rawl bolts, bonding straps etc. required to install in accordance with manufacturers specification. Cable Ladder to be PW75 or similar							
3.1	100mm Wide Cable Ladder (Straight)			m	100			
3.2	100mm Wide Cable Ladder (horizontal bends)			ea	5			
3.3	100mm Wide Cable Ladder (Internal Rise)			ea	10			
3.4	100mm Wide Cable Ladder (External Rise)			ea	10			
	Total carried forward							

ITEM	DESCRIPTION	LABOUR		UNIT	MATERIAL			MATERIAL & LABOUR TOTAL
		LABOUR UNIT RATE	TOTAL LABOUR COST		ESTIMATED QUANTITY	UNIT RATE	TOTAL MATERIAL COST	
	Total brought forward							
3.20	40x40x5mm Galvanised Angle Iron			m	50			
3.21	25mm Galvanised Conduit. Price incluve of mounting material and fittings			m	30			
4	**Fire protection of cables and cable entries into buildings**							
4.1	Sealing off of all cable openings in the Electrical Room, floor entries etc. with pyro-coating flame proof seal and/or flame retardent expanding foam. Sealing off to be done by an certified installer.			Sum	1			
4.2	Application of intumescent paint to all cables entering/exiting Electrical Room - to be applied 1m on either side of cable opening through the wall			Sum	1			
5	**CONSTRUCTION RECORD DRAWINGS**							
5.1	Allow for the marking up of prints of the entire installation for the production of construction drawing records. The Engineer shall produce the final drawings.			Sum	1			
6	**ATTENDANCE**							
6.1	Provide attendance to Supply Authority Staff and other Contractors during Construction.			Sum	1			
7	**SIGNS & LABELS**							
7.1	Supply and install all power, lighting, and earthing signs and labels as specified and in accordance with all OHS Act requirements as well as per Supply Authority requirements.			Sum	1			
8	**TESTING & COMMISSIONING**							
8.1	Test and commission the complete installation + Compliance Certificates, test results and quality documentation.			Sum	1			
8.2	Post commissioning site visits			Sum	1			
8.3	Focusing of floodlights at night			Sum	1			
9	**OPERATION MANUALS**							
9.1	Supply as per project Specification (3 sets)			Sum	1			
	Total Carried Forward to Summary							