

Item No.	Description	Quantity	Rate	Amount
1/2	<p><u>SECTION 1</u></p> <p>BILL No.1</p> <p><u>PRELIMINARIES</u></p> <p>For Preambles refer to the ASAQs "Model Preambles to All Trades", 2008 Edition</p> <p>Supplementary preambles are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles shall take precedence over the provisions of the said Model Preambles over the provisions of the said Model Preambles</p> <p>The contractor's prices for all items throughout these bills of quantities must take account of and include for all of the obligations, requirements and specifications given in the said Model Preambles and in any supplementary preambles</p> <p><u>PRICING OF PRELIMINARIES</u></p> <p><u>SECTION A - PRINCIPAL BUILDING AGREEMENT</u></p> <p><u>Definitions (A1)</u></p>			
1.1	<p>Allow for Site Establishment, etc</p> <p>F:..... V:.....</p> <p>T:.....</p>	Item		
1.2	<p>Objective and preparations (A2 - A14)</p> <p>Sites Supervision</p> <p>F:..... V:.....</p> <p>T:.....</p>	Item		
1.3	<p>Site security and protection</p> <p>F:..... V:.....</p> <p>T:.....</p>			
1.4	<p>Allow for training locals on various trade</p> <p>F:..... V:.....</p> <p>T:.....</p>	Item		
1.5	<p>Insurances and guarantees</p> <p>F:..... V:.....</p> <p>T:.....</p>	Item		
Total Carried Forward				

Section No. 1

Bill No. 1 : Preliminaries

C19. 1

Item No.	Description	Quantity	Rate	Amount
Brought Forward				
1.6	Contractor's site representative F:..... V:..... T:.....	Item		
1.7	Compliance with laws and regulations F:..... V:..... T:.....	Item		
1.8	Plant, equipment and tools F:..... V:..... T:.....	Item		
1.9	Occupational Health and Safety F:..... V:..... T:.....	Item		
1.10	Temporary works and plant F:..... V:..... T:.....	Item		
1.11	Preparation for and execution of the works F:..... V:..... T:.....	Item		
1.12	Site and access F:..... V:..... T:.....			
1.13	Site demobilisation	Item		
Total Carried Forward To Summary			R	

Section No. 1

Bill No. 1 : Preliminaries

C19. 2

Item No.	Description	Quantity	Rate	Amount
2/1	SECTION 2 - SITEWORKS <u>BILL No. 1</u> <u>EARTHWORKS (PROVISIONAL)</u> <u>SUPPLEMENTARY PREAMBLES</u> Nature of ground Use "assumed to be" if no trial holes, soils investigations, etc have been carried out - discuss with engineer. Use "Trial holes indicate that" where the ground has been investigated by means of trial holes Carting away of excavated material Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site For Preambles refer to the ASAQS "Model Preambles to All Trades", 2008 Edition SITE CLEARANCE ETC <u>User Note:</u> Where the value is of significance, the removal of hedges etc shall be given separately in meters or in number <u>Site clearance</u>			
1.1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc. including removal from site m ²	4 600		
	<u>REMOVAL OF TREES ETC</u> <u>Taking out and removing, grubbing up roots and filling in holes</u>			
1.2	Hedges 500mm high and remove from site No.	2		
1.3	Tree stump exceeding up to and not exceeding 1000mm girth No.	1		
	<u>BULK EXCAVATION, FILLING, ETC</u> <u>Open face excavation in earth over sloping site</u>			
1.4	Open face excavation to reduce levels m ³	9 000		
	<u>Extra over bulk excavation in earth for excavation in</u>			
1.5	Intermediate excavation m ³	2 000		
1.6	Hard rock m ³	1 000		
1.7	Boulder Class A m ³	50		
1.8	Boulder Class B m ³	20		
Total Carried Forward				

Section No. 2

Bill No. 1 : Earthworks

C19. 3

Item No.	Description	Quantity	Rate	Amount
Brought Forward				
	<u>Extra over all excavations for carting away</u>			
1.9	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m ³ 1 000		
	<u>Keeping excavations free of water</u>			
1.10	Keeping excavations free of all water other than subterranean water	Item		
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site including haulage approximately 50m from perimeter of excavations or stock piles compacted to 98% Mod AASHTO density</u>			
1.11	Over site to form platforms	m ³ 10 000		
	<u>Earth filling of G6 material supplied by the contractor compacted to 98% Mod AASHTO density</u>			
1.12	Over site and to form platforms	m ³ 500		
1.13	Behind retaining walls	m ³ 500		
	<u>Compaction of surfaces</u>			
1.14	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m ² 1 080		
	<u>Prescribed density tests on filling</u>			
1.15	"Modified AASHTO Density" test	No. 35		
Total Carried Forward To Summary			R	

Section No. 2

Bill No. 1 : Earthworks

C19. 4

Item No.	Description	Quantity	Rate	Amount
2/2	SECTION 2 <u>BILL No. 2</u> <u>SITE DRAINAGE</u> <u>Subsoil Drainage</u> <p>Descriptions for pipes below ground shall be deemed to include excavations, backfilling, compaction and carting away of surplus material from site.</p> <u>Composite subsoil drainage systems:</u>			
2.1	Geocomposite pre-manufactured drainage system (Kaytech Flo-Drain) with Flownet drainage core (i) Flodrain A2 (30m x 500mm) (ii) Flodrain A2 (30m x 750mm) (ii) Flodrain A2 (30m x 1000mm) (iv) Flodrain A2 (30m x 2000mm) (v) GeoPipe (6m x 100mm) M100 meshcore HDPE drainage pipe	m m m m m	400 60 150 90 700	
2.2	Extra over for 110mm capped end	No.	5	
2.3	Extra over for 110mm T-piece	No.	20	
	<u>Open Channel Concrete Drains</u> <u>Earthworks</u>			
2.4	Reduce levels in earth not exceeding 1m deep	m ³	10	
2.5	Extra over all excavations for loading, carting and dumping surplus excavated material within site	m ³	10	
2.6	25MPa/19mm Reinforced concrete in panels cast against compacted earth laid to falls and currents	m ³	10	
2.7	Finishing to top surfaces of concrete with smooth wood float (Class FM2) to channels to falls and currents	m ²	50	
	<u>Reinforcement</u>			
2.8	Type Ref. 193 fabric reinforcement in concre channels	kg	100	
Total Carried Forward To Summary			R	

Item No.	Description	Quantity	Rate	Amount
2/3	<p><u>BILL No. 3</u></p> <p><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></p> <p><u>PREAMBLES</u></p> <p>For Premables refer to the ASAQs "Model Premables to All Trades", 2008 Edition</p> <p><u>SUPPLEMENTARY PREMABLES</u></p> <p><u>Cost of tests</u></p> <p>The cost of making, storing and testing of concrete test cubes as required under clause 7 "Test" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing cost and for submitting reports on the tests to the architects. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the architect.</p> <p><u>Formwork</u></p> <p>Description of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before reuse</p> <p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself</p> <p>Formworks to soffits of solid slabs, etc shall be deemed to be slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to sides of bases, pile caps, ground beams, etc, will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will be not included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in earthworks</p> <p><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></p> <p><u>10MPa/19mm concrete</u></p>			
3.1	<p>Surface blinding under footings and bases</p>	m ³	14	
	<p><u>REINFORCED CONCRETE</u></p> <p><u>25MPa/19mm concrete</u></p>			
	Ramps	m ³	6	
	Surface Beds cast in panel on waterproofing	m ³	Rate Only	
Total Carried Forward				

Item No.	Description	Quantity	Rate	Amount
Brought Forward				
	<u>30MPa/19mm concrete</u>			
3.2	Slabs including beams and inverted beams	m ³	Rate Only	
3.3	340mm thick suspended concrete slab	m ³	Rate Only	
3.4	Beams	m ³	Rate Only	
3.5	Stairs including landings, beams and inverted beams	m ³	5	
3.6	Reinforced concrete gutter	m ³	Rate Only	
3.7	Columns in foundations (Provisional)	m ³	3	
3.8	Columns	m ³	2	
	<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>			
	<u>25MPa/19mm concrete</u>			
3.9	Strip footings	m ³	85	
3.10	Raft Foundation Slabs and beams	m ³	80	
3.11	Blinding Surfacebeds	m ³	84	
3.12	Bases	m ³	2	
	<u>TEST BLOCKS</u>			
3.13	Allow for all nexessary concrete test cubes size 150 x 150 x 150mm cast from batches of concrete required for entire contract as specified, made, stored, cured and tested in accordance with SABS Method 861 and 863, including cube mould, transporting to approved testing laboratory for testing paying all charges abd submitting reports to the Principal Agent		Item	
	<u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u>			
	<u>Smooth formwork of soffits</u>			
3.14	Slabs propped up exceeding 3.5m and not exceeding 4.5m high	m ²	Rate Only	
	<u>Finishing top surfaces of concrete smooth with a wood float</u>			
3.15	Surface beds, slabs, etc	m ²	950	
	<u>Finishing top surfaces of concrete smooth with a power float</u>			
3.16	Surface beds, slabs, etc	m ²	Rate Only	
Total Carried Forward				

Item No.	Description	Quantity	Rate	Amount
Brought Forward				
	<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>			
	<u>Rough formwork to sides</u>			
3.17	Strip footings	m ² 110		
3.18	Raft Slabs	m ² 50		
	<u>REINFORCEMENT (PROVISIONAL)</u>			
	<u>Haylett Formula Work Group No. 114</u>			
	<u>High tensile steel reinforcement to structural concrete work</u>			
3.19	Various diameter high yield reinforcement bars			
	i. In strip footing	t 1.5		
	ii. Surfacebeds	t Rate Only		
	iii Raft Slabs	t 0.6		
	iii Suspended Slabs, Beams and Roof Slabs	t 10.0		
3.20	<u>Fabric reinforcement</u>			
	i. Type 245 fabric reinforcement in blinding concrete surface beds, slabs, etc	kg 1 500		
	ii Type 617 fabric reinforcement in upper concrete surface bed	kg Rate Only		
	iii Type 617 fabric reinforcement in concrete raft slabs,	kg 4 400		
	iii Type 617 fabric reinforcement in cavity walls	kg Rate Only		
Total Carried Forward To Summary			R	

Item No.	Description	Quantity	Rate	Amount
2/4	<u>BILL NO. 4</u>			
	<u>MASONRY</u>			
	<u>BRICKWORK</u>			
	<u>FOUNDATIONS (PROVISIONAL)</u>			
	<u>Brickwork of NFXE bricks (14 Mpa nominal compressive strength in class I mortar in loadbearing wall etc</u>			
4.1	One brick wall	m ²	Rate Only	
	<u>Brickwork of NFXE bricks (14 Mpa nominal compressive strength in class I mortar in loadbearing wall etc</u>			
	<u>SUPERSTRUCTURE</u>			
	<u>Brickwork of NFXE bricks (14 Mpa nominal compressive strength in class I mortar in loadbearing wall etc</u>			
4.2	Piers	m ³	Rate Only	
4.3	Half brick walls	m ²	Rate Only	
4.4	One brick walls	m ²	Rate Only	
4.5	One brick cavity wall of two half brick skins filled with 25Mpa concrete	m ²	Rate Only	
	<u>BRICKWORK SUNDRIES</u>			
	<u>Steelbar Reinforcements</u>			
4.6	8mm Diameter mild steel bars in horizontally	t	Rate Only	
	<u>Brickwork reinforcement</u>			
4.7	75mm Wide reinforcement built in horizontally	m	Rate Only	
4.8	150mm Wide reinforcement built in horizontally	m	Rate Only	
	<u>FACE BRICKWORK</u>			
	<u>Face brickwork (P.C of R6000.00/1000) face bricks pointed with recessed horizontal and vertical joints</u>			
4.9	Extra over brickwork for face brickwork	m ²	Rate Only	
4.10	110mm Cut linings to concrete	m ²	Rate Only	
	<u>BLOCKWORK</u>			
	<u>Blockwork in class I mortae with cores filled solid with 25mPa concrete</u>			
4.11	250mm Walls	m ²	100	
	<u>NUTEC-CEMENT/FIBRE - CM=EMENT WINDOWS SILLS</u>			
	<u>Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc</u>			
	15 x 15mm Wide sills set flat and slightly projecting	m ²	Rate Only	
Total Carried Forward To Summary			R	

Section No. 2 : Site Works

Bill No. 4: Masonry

C19. 9

Item No.	Description	Quantity	Rate	Amount
2/5	<u>BILL NO. 5</u> <u>WATERPROOFING</u> <u>PREMABLES</u> For Premables refer to the ASAQs "Model Premables to All Trades", 2008 Edition <u>DAMP - PROOFING OF WALLS AND FLOORS</u> <u>One layer of 375 micron approved DPC embossed damp proof course</u>			
5.1	In wall <u>One layer of 250 micron USB Green waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>	m ² 104		
5.2	Under surface Beds	m ² 1 071		
5.3	Allow for specialist waterproofing	Prov Sum	1.00	300 000.00
Total Carried Forward To Summary			R	

Section No. 2 : Site Works

Bill No. 5: Waterproofing

C19. 10

Item No.	Description	Quantity	Rate	Amount
2/6	BILL No. 6 ROOF COVERING ETC For Premables refer to the ASAQs "Model Premables to All Trades", 2008 Edition CORRUGATED METAL SHEETING AND ACCESSORIES User Note: Supplementary preambles in connection with fixing of sheeting and accessories and laps are to be inserted when the Model Preambles for trades (or other preambles not covering the fixing of sheeting and accessories and laps) are used 0.5mm "C1S AZ SS" Galvanised ribbed sheet steel with SEA SPRAY - COLORPLUS finished or equal and approved, in single lengths fixed to steel purlins			
6.1	Menopitch roof covering with pitch not exceeding 10 degrees complete with 12 x 65mm Fixtite MF Hex head C4 Sundries	m ²	Rate Only	
8.2	Ribbed IBR Cloures C1S AZ SS SHEET METAL FLASHING, LININGS, COPYING, ETC	m	Rate Only	
Total Carried Forward To Summary			R	

Item No.	Description	Quantity	Rate	Amount
2/7	<p><u>SECTION 2</u></p> <p><u>BILL No. 7</u></p> <p><u>RETAINING STRUCTURES AND RETAINING WALLS</u></p> <p><u>PREAMBLES</u></p> <p>For Preambles refer to the ASAQs "Model Preambles to All Trades", 2008 Edition</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Cost of tests</u></p> <p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the architect. (Test cubes are measured separately)</p> <p><u>Formwork</u></p> <p>Description of formwork shall be deemed to include use and waste only (except where described as "left in" or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before reuse</p> <p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.</p> <p>Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"</p> <p><u>RETAINING STRUCTURES</u></p> <p><u>Earthworks</u></p> <p><u>Excavation other than bulk</u></p>			
7.1	Trenches not exceeding 1m deep	m ³	40.00	
7.2	Extra over for excavations in soft rock	m ³	25.00	
7.3	Extra over for excavations in hard rock	m ³	15.00	
Total Carried Forward				

Section No. 2 : Site Works

Bill No. 7 : Retaining Structures and Retaining Walls

C19. 12

Item No.	Description	Quantity	Rate	Amount
Brought Forward				
7.4	Backfilling with approved G7 material supplied and carted onto site by the Contractor, compacted to a density of at least 95% Mod. AASHTO maximum density behind retaining block structure	m ³	150	
7.5	Extra over G7 backfilling for stabilised fill with 6% cement	m ³	150	
7.6	Bidum U14 non woven geotextile behind loffelstein wall	m ²	120	
7.7	Flownet DN3 drainage core behind loffelstein wall	m ²	70	
	<u>Concrete, Formwork and Reinforcement</u>			
	<u>Cast Insitu Concrete</u>			
7.8	25MPa/19mm Reinforced concrete cast against excavated surfaces to strip footings	m ³	25	
7.9	15MPa/19mm Reinforced concrete infill to Terraforce blocks	m ³	70	
7.10	Allow for necessary concrete test cubes size 150 x 150 x 150mm from batches of concrete required for this building as specified, made, stored, cured and tested in accordance with SABS Methods 861 and 863, including use of approved cube moulds, transporting to an approved laboratory for testing, paying all charges and submitting reports to the Engineer		Item	
	<u>Formwork</u>			
7.11	Class FM2 ordinary finish formwork to sides to risers not exceeding 300mm high	m ²	4	
	<u>Reinforcement (CPAP Work Group No. 114)</u>			
7.12	Various diameter bars in high tensile steel reinforcement	tonne	0.3	
	<u>Precast Concrete</u>			
	<u>Interlocking Block Retaining Structures</u>			
	<u>'Terraforce' precast concrete 4 x 4 Multi Step or other approved interlocking planter blocks finished with grooves on exposed surfaces</u>			
7.13	Retaining walls with stepped face and curves as required to suit slopes, formed of 400 x 200 x 200mm high non-interlocking planter units laid with horizontal bed joints to 70 degree slope with geofabric reinforcing on designed foundations (elsewhere measured), backfilling and compacting with approved backfilling material obtained from the external sources and filling the units with 15Mpa mass concrete infill as the work proceeds (concrete infill elsewhere measured).	m ²	150	
Total Carried Forward				

Section No. 2 : Site Works

Bill No. 7 : Retaining Structures and Retaining Walls

C19. 13

Item No.	Description	Quantity	Rate	Amount
Brought Forward				
	<u>RETAINING WALLS</u>			
	<u>Earthworks</u>			
7.14	Excavate in earth not exceeding 2m deep for strip footings	m ³ 6		
7.15	Extra for excavation in soft rock	m ³ 3		
7.16	Extra for excavation in soft rock	m ³ 2		
7.17	Extra over all excavations for loading, carting and dumping surplus excavated material within site	m ³ 6		
7.18	Risk of collapse of sides of trench and hole excavations exceeding 1.5m deep	m ² 20		
7.19	Backfilling with approved G5 material under bases, floors supplied and carted onto site by the Contractor all in accordance with SABS 1200Dm compacted in layers of 150mm to 93% Mod. AASHTO maximum density	m ³ 2		
	<u>Concrete, Formwork and Reinforcement</u>			
	<u>Concrete</u>			
7.20	15MPa/ 19mm Unreinforced concrete cast against excavated surfaces in blinding under bases	m ³ 1		
7.21	25MPa/19mm Reinforced concrete cast against excavated surfaces in strip footings	m ³ 4		
7.22	25MPa/19mm Reinforced concrete in walls	m ³ 10		
	<u>Formwork</u>			
7.23	Class FM1 smooth finish formwork to sides of walls not exceeding 3500mm high	m ² 50		
	<u>Reinforcement</u>			
	<u>High tensile steel reinforcement to structural concrete work</u>			
7.24	Bars of various diameters	tonne 2		
	<u>TEST BLOCKS</u>			
	Allow for all necessary concrete test cubes size 150 x 150 x 150mm cast from batches of concrete required for the entire contract as specified, made, stored, cured and tested in accordance with SABS Methods 861 and 863, including use of approved cube moulds, transporting to an approved testing laboratory for testing, paying all charges and submitting reports to the Principal Agent			
	<u>PROVISIONAL BUDGETARY ALLOWANCE</u>			
7.25	Allow for Provisional Sum of R300 000 for protection of Phase 1 works before Phase 2 works	Prov Sum	1	300 000.00
Total Carried Forward To Summary			R	

Section No. 2 : Site Works

Bill No. 7 : Retaining Structures and Retaining Walls

C19. 14

Item No.	Description	Quantity	Rate	Amount
2/8	SECTION 2 - SITEWORKS			
	<u>BILL No. 8</u>			
	<u>ROADWORKS</u>			
	<u>Site clearance</u>			
8.1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m ² 28 000		
	<u>Open face excavation over sloping site</u>			
8.2	Open face excavation to form road formation, fill areas areas etc and depositing excavated material over site including haulage not exceeding 1km from perimeter of excavations	m ³ 6 000		
	<u>Extra over bulk excavation in earth for excavation in</u>			
8.3	Soft rock	m ³ 500		
8.4	Hard rock	m ³ 50		
	<u>Extra over all excavations for shaping of side drains</u>			
8.5	Excavations not exceeding 1.5m deep	m ³ 1 200		
	<u>Extra over all excavations for carting away</u>			
8.6	Surplus material from stock piles on site to a dumping site to be located by the contractor	m ³ 1 400		
	<u>Keeping excavations free of water</u>			
8.7	Keeping excavations free of all water other than subterranean water	iltem		
	<u>Compaction of surfaces</u>			
	<u>Compaction of ground surface under roadworks etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 99% Mod AASHTO density</u>			
8.8	In access road	m ³ 1 400		
8.9	In parking area	m ³ 50		
	<u>G6 material in stockpiles selected from site excavations compacted to 93% Mod AASHTO density, material with a PI not exceeding 6, free from stones exceeding 20mm, organic matter and lumps of clay, compacted in layers not greater than 150mm thick.</u>			
8.10	In access roads	m ³ Rate Only		
8.11	In parking area	m ³ 50		
Total Carried Forward				

Section No. 2 : Site Works

Bill No. 8 : Roadworks

C19. 15

Item No.	Description	Quantity	Rate	Amount
Brought Forward				
	<u>Imported G5 material obtained from commercial sources supplied by the contractor, compacted to 95% Mod AASHTO density or other approved gravel material with a PI not exceeding 6, free from stones exceeding 20mm, organic matter and lumps of clay, compacted in layers not greater than 150mm thick.</u>			
8.12	In access roads	m ³	Rate Only	
8.13	In parking area	m ³	Rate Only	
	<u>Stormwater Drainage</u>			
	<u>Class 100D concrete pipes in class C bedding:</u>			
8.14	600mm Pipes laid in and including excavation, risk of collapse, working space, hoisting in position, backfilling with selected excavated material, cart away surplus material and shoring to pipe trenches not exceeding 1m deep.	m	51	
8.15	900mm Pipes laid in and including excavation, risk of collapse, working space, hoisting in position, backfilling with selected excavated material, cart away surplus material and shoring to pipe trenches not exceeding 1m deep.	m	16	
	<u>Headwalls</u>			
8.16	Inlet and Outlets headwalls complete with floor slabs and Build headwalls complete with concrete floor slabs. as per drawing with one brick sides to suit depth as per the Engineer not exceeding 1500mm deep including excavation, risk of collapse, working space, hoisting in position, backfilling with selected excavated material, cart away surplus material and shoring	No	14	
	<u>Composite subsoil drainage systems:</u>			
8.17	Geocomposite pre-manufactured drainage system (Kaytech Flo-Drain) with Flownet drainage core			
	(a) Flodrain A2 (30m x 750mm)	m	1 400	
	(b) GeoPipe (6m x 100mm) M100 meshcore HDPE drainage pipe	m	1 400	
Total Carried Forward To Summary			R	

Section No. 2 : Site Works

Bill No. 8 : Roadworks

C19. 16

SUMMARY SCHEDULE OF QUANTITIES

Item No.	DESCRIPTION	Page No.	Rate	Amount
	Section 1			
1/1	Preliminaries	C20.2		
	Section 2			
2/1	Earthworks	C20.4		
2/2	Site Drainage	C20.5		
2/3	Concrete, Formwork and Reinforcement	C20.8		
2/4	Masonry	C20.9		
2/5	Waterproofing	C20.10		
2/6	Roof Coverings	C20.11		
2/7	Retaining Structures and Retaining Wall	C20.14		
2/8	Roadworks	C20.10		
	Sub-Total			
	Contingencies @ 7.5%			
	Add : Cost Escallation @ 2.5%			
	Sub-Total			
	Add 15% VAT			
	Total Carried to Form of Tender			