

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No	Quantity	Rate	Amount
<u>SECTION NO 1</u>			
<u>BILL NO 1</u>			
<u>PRELIMINARIES</u>			
BUILDING AGREEMENT AND PRELIMINARIES			
<u>Disclaimer</u>			
<u>Guidelines</u>			
The JBCC Principal Building Agreement edition 6.2 (May 2018 prepared by the Joint Building Contract Committee shall be the applicable building agreement, amended as hereinafter described			
The ASAQS Preliminaries (November 2007 edition) published by the Association of South African Quantity Surveyors for use with the said JBCC Principal Building Agreement shall be deemed to be incorporated in these bills of quantities			
The ASAQS Model Preambles for Trades (November 2008 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained. 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.			
The ASAQS Standard System of Measuring Building Work, Seventh Edition (2015) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said Standard System.			
Carried forward			R
SECTION NO. 1 PRELIMINARIES & GENERAL BILL NO. 1 PRELIMINARIES			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Brought forward		R	
<u>General</u>			
Contractors are referred to the above mentioned documents for the full intent and meaning of each clause thereof.			
These clauses are hereinafter referred to by clause number and heading only. Where standard clauses or alternatives are not entirely applicable to this agreement such modifications, corrections or supplements as will apply are given under each relevant clause heading and such modifications, corrections or supplements shall take precedence notwithstanding anything contrary contained in the above mentioned documents			
<u>Pricing of this BOQ</u>			
<u>Preliminaries</u>			
The amount entered into the amount column in these preliminaries is to be divided into one or more of the three categories provided namely Fixed (F), Value Related (V) and Time Related (T)			
Not all preliminary items have to be priced			
<u>Building & External work (Measured items)</u>			
All items have to be priced. Should no rate be inserted it will be deemed as no cost or included elsewhere			
<u>Provisional Amounts</u>			
Tender are not allowed to change amounts, only profit & attendance may be added if required.			
SECTION A - PRINCIPAL BUILDING AGREEMENT			
<u>Interpretation</u>			
1	Clause 1 - Definitions and Interpretation	Item	
2	Clause 2 - Law, Regulations and Notices	Item	
3	Clause 3 - Offer and Acceptance	Item	
Carried forward		R	
SECTION NO. 1 PRELIMINARIES & GENERAL BILL NO. 1 PRELIMINARIES			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward		R	
4	Clause 4 - Cession and Assignment	Item		
5	Clause 5 - Documents	Item		
6	Clause 6 - Employer's Agents	Item		
7	Clause 7 - Design Responsibility	Item		
	<u>Insurances and Securities</u>			
8	Clause 8 - Works Risk	Item		
9	Clause 9 - Indemnities	Item		
10	Clause 10 - Insurances	Item		
11	Clause 11 - Securities	Item		
	<u>Execution</u>			
12	Clause 12 - Obligations of the Parties	Item		
13	Clause 13 - Setting Out	Item		
14	Clause 14 - Nominated Subcontractors	Item		
15	Clause 15 - Selected Subcontractors	Item		
16	Clause 16 - Direct Contractors	Item		
17	Clause 17 - Contract Instructions	Item		
	<u>Completion</u>			
18	Clause 18 - Interim Completion	Item		
19	Clause 19 - Practical Completion	Item		
20	Clause 20 - Completion in Sections	Item		
21	Clause 21 - Defects Liability Period and Final Completion	Item		
22	Clause 22 - Latent Defects Liability Period	Item		
	Carried forward		R	
	SECTION NO. 1 PRELIMINARIES & GENERAL BILL NO. 1 PRELIMINARIES			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward		R	
23	Clause 23 - Revision of Date for Practical Completion	Item		
24	Clause 24 - Penalty for Late or Non completion	Item		
	<u>Payment</u>			
25	Clause 25 - Payment	Item		
26	Clause 26 - Adjustment of the Contract Value and Final Account	Item		
27	Clause 27 - Recovery of Expense and/or Loss	Item		
	<u>Suspension and Termination</u>			
28	Clause 28 - Suspension by the Contractor	Item		
29	Clause 29 - Termination	Item		
	<u>Dispute Resolution</u>			
30	Clause 30 - Dispute Resolution	Item		
	SECTION B - ASAQS PRELIMINARIES			
	<u>Definition and Interpretation</u>			
31	1.0 - Definitions and Interpretation	Item		
	<u>Documents</u>			
32	2.1 - Checking of documents	Item		
33	2.2 - Provisional bills of quantities	Item		
34	2.3 - Availability of construction documentation	Item		
	<u>Previous Work and Adjoining Properties</u>			
35	3.1 - Previous work - dimensional accuracy	Item		
36	3.2 - Previous work - defects	Item		
37	3.3 - Inspection of adjoining properties	Item		
	Carried forward		R	
	SECTION NO. 1 PRELIMINARIES & GENERAL BILL NO. 1 PRELIMINARIES			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward		R	
	<u>Samples, Shop Drawings and Manufacturer's Instructions</u>			
38	4.1 - Samples of materials	Item		
39	4.2 - Workmanship samples	Item		
40	4.3 - Shop drawings	Item		
41	4.4 - Compliance with manufacturer's instructions	Item		
	<u>Deposits and Fees</u>			
42	5.1 - Deposits and fees	Item		
	<u>Temporary Services</u>			
43	6.1 - Water	Item		
44	6.2 - Electricity	Item		
45	6.3 - Telecommunication facilities:	Item		
46	6.4 - Ablution facilities	Item		
	<u>Prime Cost Amounts</u>			
47	7.1 - Responsibility for prime cost amounts	Item		
	<u>Special Attendance on N/S Subcontractors</u>			
48	8.1 - Special attendance	Item		
	<u>General</u>			
49	9.1 - Protection of the works	Item		
50	9.2 - Protection/isolation of existing/sectionally occupied works	Item		
51	9.3 - Security of the works	Item		
52	9.4 - Notice before covering work	Item		
53	9.5 - Disturbance	Item		
	Carried forward		R	
	SECTION NO. 1 PRELIMINARIES & GENERAL BILL NO. 1 PRELIMINARIES			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward		R	
54	9.6 - Environmental disturbance	Item		
55	9.7 - Works cleaning and clearing	Item		
56	9.8 - Vermin	Item		
57	9.9 - Overhand work	Item		
	<u>Schedule of Variables</u>			
58	10.1 - Provisional Bills of Quantities	Item		
	Yes			
59	10.2 - Availability of Construction Documentation	Item		
	Yes please refer to drawings (Addendum A Drawings)			
	Architect (Arcxl): 100 Rev 2 - Site development plan 101 Rev 2 - Floor plans 200 Rev 2 - Ceilings and sections			
	Engineer (Shama Consultants) 01 Rev 0 - Structural site layout 02 Rev B - Foundation and first floor layout			
60	10.3 - Previous work - Dimensional Accuracy	Item		
	Appointed contractor will need to confirm existing building size and notify should it not correspond with drawings			
61	10 .4 - Previous work - Defects	Item		
	Contractor must notify client of his/her agent should a previous defect be found during construction.			
62	10.5 - Inspection of Adjoining Properties	Item		
	Contractor will need to do an inspection of existing adjoining buildings to note any structural cracks, issues before construction commences for record purposes			
63	10.6 - Water	Item		
	Carried forward		R	
	SECTION NO. 1 PRELIMINARIES & GENERAL BILL NO. 1 PRELIMINARIES			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward		R	
	Option A (By Contractor) - No Option B (By Employer - Free of charge) - No Option C (By Employer - Metered) - Yes			
64	10.7 - Electricity	Item		
	Option A (By Contractor) - No Option B (By Employer - Free of charge) - No Option C (By Employer - Metered) - Yes			
65	10.8 - Telecommunications	Item		
	Telephone Yes E-mail Yes Facsimile No			
66	10.9 - Ablution facilities	Item		
	Option A (By Contractor) - Yes Option B (By Employer) - No			
67	10.10 - Protection of the works	Item		
	Please be diligent to adjoining buildings in use.			
68	10.11 - Protection / isolation of existing / sectionally occupied works	Item		
	Yes			
69	10.12 - Disturbance	Item		
	Take note the construction site is located at a Golf club in a residential neighbourhood, after hour and weekend works will be limited.			
70	10.13 - Environmental disturbance	Item		
	N/A			
	SECTION C - JBCC CONTRACT DATA			
	Refer to main tender document for applicable information			
	Carried forward		R	
	SECTION NO. 1 PRELIMINARIES & GENERAL BILL NO. 1 PRELIMINARIES			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

<p style="text-align: right;">Brought forward</p> <p><u>B - Contract information</u></p> <p><u>4.0 - Documents (Refer to drawing addendum to this document)</u></p> <p><i>Architect (Arxcl Architects)</i></p> <p>-100 Rev2 - Site development plan</p> <p>-101 Rev 2 - Floor plans</p> <p>-200 Rev 2 - Ceilings and sections</p> <p>Structural/Civil Engineer (Shama Consultant)</p> <p>-1084-01 Rev 0 (Structural Site Layout)</p> <p>-1084-02 Rev B (Foundation and first floor layout)</p>		R	
<p style="text-align: right;">Carried to Final Summary</p> <p>SECTION NO. 1</p> <p>PRELIMINARIES & GENERAL</p> <p>BILL NO. 1</p> <p>PRELIMINARIES</p>		R	

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 1</u>			
	<u>ALTERATIONS</u>			
	GENERAL			
	<u>Notes</u>			
	<u>View site</u>			
	Before submitting his tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained			
	<u>General</u>			
	The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary hoarding that may be necessary during the progress of the works, all to the satisfaction of the principal agent			
	Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent			
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 1 ALTERATIONS			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<p>The contractor will be required to take all dimensions & photos of all work to be removed or altered under the Alteration BOQ (Provisional), do a properly marked up drawing either hard copy or pdf edit, including backing dims of quantities to match claim, including the photographic evidence, contractor to provide a copy to the quantity surveyor as backing of all dimensions relating to final account. Failing to produce such document there will be no evidence of work done and the quantity surveyor's quantities must be accepted</p> <p>Access scaffolding to reach all areas of works to be removed</p> <p>The items includes the demolishing and cart away of the material described</p> <p><u>Other</u></p> <p>The client or his/her representatives can demand any material or item on the premises found during demolitions or alterations. This items is limited to reusable materials and must be delivered to an alternative premises of the client not exceeding 5km away from the building site. As for building rubble (not usable) the contractor must cart away to his/her designated dump site</p>				
	REMOVAL/ DEMOLISHING OF EXISTING WORK				
	<u>Concrete & Reinforcing</u>				
	<u>Reinforced concrete, including cutting off reinforcing where needed</u>				
1	Foundation and ground floor concrete structures	m3	6		
2	Suspended concrete structures	m3	1		
	<u>Masonry, incl extra over items</u>				
	<u>Brickwork walls</u>				
3	One brick wall	m2	97		
4	280mm Cavity brick wall	m2	7		
	Carried forward			R	
	<p>SECTION NO. 2 BUILDING WORKS BILL NO. 1 ALTERATIONS</p>				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
5	Mass brickwork	m3	3		
	<u>Extra over items to be demolished with brickwork</u>				
6	Removing plaster skin with brickwork (Brickwork demolishing elsewhere)	m2	203		
	<u>Plastering</u>				
	<u>Plaster</u>				
7	Hack off plaster from brickwork	m2	22		
	<u>Doors, windows, louvres, glazed partitions, shopfronts, shower screens, etc</u>				
	<u>Doors</u>				
8	Timber doors, incl timber frames and ironmongery	m2	6		
9	Steel doors, incl steel frames and ironmongery	m2	2		
10	Roller shutter doors, incl guide rails and mechanisms complete	m2	26		
11	Aluminium glazed swing doors	m2	8		
	<u>Windows</u>				
12	Aluminium glazed fixed windows	m2	1		
	<u>Ceilings & Partitioning</u>				
	<u>Ceilings, Bulkheads</u>				
13	Nailed up ceilings, incl brandering	m2	98		
	<u>Partitioning</u>				
14	Standard partitions, incl top and bottom tracks	m2	15		
	<u>Structures external</u>				
	Carried forward			R	
SECTION NO. 2 BUILDING WORKS BILL NO. 1 ALTERATIONS					

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Fencing</u>				
15	Take down palisade fence not exceeding 2000mm high, incl all posts, removing foundations , close hole with excavated material obtained from excavations.	m2	2		
16	Take down palisade sliding gate not exceeding 69000x2000mm, incl all rails and supports	m2	6		
	<u>Landscaping</u>				
17	Cut into blocks, loosen lawn and remove grass from site	m2	124		
	<u>Roadwork and Parking</u>				
	<u>Paving</u>				
18	Hack up existing paving and directly cart away	m2	32		
19	Break up existing paving embedded in concrete and directly cart away	m2	87		
	<u>Kerbs</u>				
20	Take out kerbs and directly cart away. (To become property of the contractor)	m	13		
	<u>Hardstand</u>				
21	Break up and remove rock feature embedded in concrete not exceeding 150mm thick, keep rocks aside for re-use elsewhere on site	m2	121		
	<u>Miscellaneous Items</u>				
22	Antenna currently anchored to ground	No	1		
	CUTTING THROUGH FLOORS AND CEILINGS				
	The following items is only applicable when a clean cut must be done aesthetically purposes, to be instructed by principal agent(s)				
	Carried forward			R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 1 ALTERATIONS				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

		Brought forward			R
	<u>Masonry</u>				
23	Cutting into brickwork prior to demolishing a portion thereof	m	45		
	BUILDING UP OPENINGS				
	<u>Masonry</u>				
	<u>Build up openings not exceeding 5m2 in area per opening</u>				
24	One brick wall in patching	m2	4		
25	280mm Cavity brick wall in patching	m2	10		
	<u>Plaster</u>				
	<u>Plaster small areas not exceeding 5m2</u>				
26	Plaster to brick walls in patching	m2	31		
	PREPARATORY WORK TO EXISTING SURFACES				
	<u>Masonry</u>				
	<u>Tooth open into existing brick walls, incl removing plaster if necessary to new brick walls</u>				
27	Tooth out for new 220mm wall intersection	m	46		
28	Tooth out for new 280mm cavity wall intersection	m	12		
	<u>Close cavity walls</u>				
29	Close off cavity openings where new opening was created in existing brickwork (Plaster elsewhere)	m	12		
	<u>Plastering</u>				
	<u>Prepare existing walls</u>				
30	Preparation for new paint to existing unpainted walls, wash down with water, stop small holes, cracks and sand down, etc. (New paint elsewhere)	m2	355		
	Carried forward				R
	SECTION NO. 2 BUILDING WORKS BILL NO. 1 ALTERATIONS				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Painting</u>				
	<u>To plaster areas</u>				
31	Preparation for new paint to walls, wash down with sugar soap, stop small holes and sand down, etc. (New paint elsewhere)	m2	776		
	<u>Cleaning</u>				
	<u>Cart away existing material/items on site</u>				
32	Building rubble	m3	5		
33	General stored items	m3	7		
	MAKING GOOD OF FINISHES ETC				
	<u>Concrete</u>				
	<u>Surface beds</u>				
34	Bedding 200x100mm high to close between new brick wall and existing surface bed, including finishing and joints	m	166		
	<u>Plastering</u>				
	<u>Screeds (Not exceeding 50mm thick)</u>				
35	Screed 250mm wide (In areas where 220mm walls was removed)	m	40		
36	Screed in patches, irregular shapes	m2	35		
	<u>Plastering</u>				
37	Make good vertical strip where intersection brickwork was removed. (Not exceeding 300mm wide)	m	33		
38	Make good reveals where new opening was created in existing brickwork (Not exceeding 300mm wide on reveal), incl adjacent walls not exceeding 200mm wide if required	m	23		
	Carried forward			R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 1 ALTERATIONS				

-15-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 2</u>			
	<u>EARTHWORKS</u>			
	GENERAL			
	<u>Notes</u>			
	All excavations are measured as being in "earth" unless otherwise described, tenders are advised to visit the site before pricing this document to determine soil conditions			
	All earthworks is measured provisionally, contractor must be able to verify excavation depths during construction by marking depths on a drawing			
	All quantities is measured net, tenderer must allow in his/her pricing for bulking of materials			
	Descriptions of extra over excavations for encountering rock, etc, includes the difficulty of excavation, handling & carting away to a site located by the contractor			
	SITE CLEARANCE			
	<u>The removal of topsoil, rubbish, debris, vegetation, hedges and trees</u>			
1	Clear site 50mm thick to remove topsoil. inc removal of ground heap, existing building rubble and trees not exceeding 200mm girth, inc cart away all materials	m2	728	
	<u>Removal of trees, etc</u>			
	<u>Taking out and removing, grubbing up roots, filling in holes and compacting to 90% Mod AASHTO density</u>			
2	Tree stump measured 1000mm high above ground, exceeding 1000mm and not exceeding 1500mm girth high above ground	No	5	
	EXCAVATIONS, ETC.			
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 2 EARTHWORKS			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Excavations for trenches & holes</u>				
	<u>Excavate in earth (pickable material) below reduced or natural ground level and set aside (heap on site) for use as filling (backfilling elsewhere) or carted away (cart away elsewhere) for:</u>				
3	Strip footings to walls not exceeding 2000mm deep	m3	25		
4	Miscellaneous excavations by hand not exceeding 2000mm deep	m3	46		
5	Reduce ground levels not exceeding 2000mm deep	m3	2		
	<u>Carting away of excavated materials</u>				
6	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor. (Allow for bulking)	m3	32		
	<u>Risk of collapse of excavations</u>				
7	Sides of trench and hole excavations not exceeding 1500m deep	m2	84		
	<u>Keeping excavations free of water</u>				
8	Allow for keeping excavations free of water and mud by pumping or bailing		Item		
	<u>Dewatering</u>				
	FILLING, COMPACTION, ETC.				
	<u>Filling, etc</u>				
	<u>Earth filling obtained from the excavations and compacted to 93% Mod AASHTO density:</u>				
9	Backfilling to trenches, etc	m3	40		
	<u>Layerwork</u>				
	Carried forward			R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 2 EARTHWORKS				

-18-

-19-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

		Brought forward		R	
	<u>25Mpa unreinforced concrete</u>				
4	In cavity walls infill	m3	1		
	<u>30Mpa reinforced concrete</u>				
5	Downstand beams	m3	6		
6	Slabs	m3	50		
7	Stairs & landings	m3	4		
	SURFACE TREATMENT				
	<u>Wood float finish to exposed top surface of:</u>				
8	Surface beds	m2	30		
9	Surface beds sloping/ramps on filling	m2	10		
10	Slabs	m2	168		
11	Stair treads and landings	m2	6		
	GROOVES, CHANNELS, JOINTS, ETC.				
	<u>Saw cut joints</u>				
12	3x30mm deep cut in concrete surface bed within 24 hours	m	14		
	<u>Isolation Joints</u>				
	<u>Polystyrene boards between horizontal surfaces</u>				
13	35mm Thick between surface bed and brick walls 300mm high	m	36		
	<u>Jointex between horizontal surfaces</u>				
14	10mm Thick between surface bed and brick walls 100mm high	m	36		
	TEST BLOCKS AND TESTING.				
		Carried forward		R	
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 3				
	CONCRETE, FORMWORK AND REINFORCEMENT				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward		R	
	<u>Test blocks</u>			
15	Allow for preparing concrete "strength test cubes", delivered for testing and for paying all charges in connection therewith.(Provisional)	No	12	
	<u>FORMWORK</u>			
	CLASSIFICATION			
	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 re-use			
	Formwork to soffits of solid slabs, shall be deemed to be slabs not exceeding 250mm thick unless otherwise described			
	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"			
	Intersections, holes for rods, bolts, pipes and the like, propping, maintaining and removing			
	Formwork required to support concrete at non-prescribed temporary breaks			
	ROUGH FORMWORK (DEGREE OF ACCURACY III)			
	<u>Slabs</u>			
	<u>To soffits (Not exceeding 3500mm high from bearing level)</u>			
16	Soffits of slabs not exceeding 350mm thick	m2	159	
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 3 CONCRETE, FORMWORK AND REINFORCEMENT			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>To sides</u>				
17	Edges and ends not exceeding 300mm high	m	25		
	<u>Downstand beams</u>				
	<u>To soffits (Not exceeding 3500mm high from bearing level)</u>				
18	Soffit of beams	m2	9		
	<u>To sides</u>				
19	Sides of beams	m2	42		
	<u>Stairs.</u>				
	<u>To soffits (Not exceeding 3500mm high from bearing level)</u>				
20	Raking stair case slabs not exceeding 45 degrees and not exceeding 170mm thick	m2	10		
21	Landings not exceeding 170mm thick	m2	6		
	<u>To sides</u>				
22	Stepped sloping stairs sides not exceeding 300mm high	m	4		
23	Landing sides not exceeding 300mm high	m	2		
24	Risers not exceeding 300mm high	m	33		
	<u>REINFORCEMENT</u>				
	GENERAL				
	No separation of reinforcement shall be made for different concrete components				
	Bending, hooked ends and binding wire, cover blocks and spacers in accordance with the relevant SABS codes of practise and maintaining in position during pouring of concrete				
	Carried forward			R	
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 3				
	CONCRETE, FORMWORK AND REINFORCEMENT				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	Engineer to be notified before concrete can be poured to inspect reinforcing fixing, etc				
	Reinforcement to be galvanised or otherwise treated shall be given separately				
	REINFORCEMENT				
	<u>Bar reinforcement</u>				
	<u>High tensile steel reinforcement to structural concrete work</u>				
25	8-40mm Diameter bars	t	6		
	<u>Fabric reinforcement</u>				
	<u>Mesh placed in floors</u>				
26	High tensile mesh fabric reinforcement ref. 193 in surface beds (Measured nett)	m2	40		
	<u>Mesh placed in walls</u>				
27	High tensile mesh fabric reinforcement ref. 193 in cavity concrete walls. (Measured nett)	m2	2		
	Carried Forward to Sectional Summary: 2			R	
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 3				
	CONCRETE, FORMWORK AND REINFORCEMENT				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 4</u>			
	<u>MASONRY</u>			
	GENERAL			
	<u>Notes</u>			
	Half brick walls is classified as 110mm walls. One Brick wall is classified as 220mm walls			
	Face bricks shall be ordered timeously to obtain uniformity in size and colour			
	BRICKWORK			
	<u>Brickwork in class II mortar, 20Mpa approved clay bricks</u>			
	<u>Mass brickwork and piers</u>			
1	Brick stairs	m3	2	
	<u>Solid walls</u>			
2	Half brick walls	m2	29	
3	One brick walls in foundations	m2	58	
4	One brick walls	m2	299	
	<u>Hollow walls</u>			
5	280mm Cavity wall consisting of two half brick skins with clean cavity	m2	6	
	<u>Brickwork sundries</u>			
	<u>Splayed mortar fillets in cavities</u>			
6	100x85mm triangular fillet at bottom of cavity	m	9	
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 4 MASONRY			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Brought forward			R
	<u>Closing cavities</u>		
7	Build in 0.53mm galvanised cavity closure 150mm wide	m	9
	<u>Reinforcement to brickwork</u>		
	<u>"Brickforce" wire build into brickwork</u>		
8	75mm Wide reinforcement built into horizontal joints of half brick and 280mm cavity brick walls	m	153
9	150mm Wide reinforcement built into horizontal joints of one brick walls	m	1 563
10	230mm Wide reinforcement built into horizontal joints of one and a half brick walls	m	34
	<u>Galvanised mild steel butterfly wall ties spaced in a staggered pattern</u>		
11	Wall ties in 280mm Cavity wall	No	44
	<u>Fabricated lintels</u>		
	<u>Concrete prestressed lintels over openings</u>		
12	110x75mm Lintels in lengths not exceeding 3000mm	m	52
	MISCELLANEOUS		
	<u>Special features</u>		
13	Creating weepholes 20mm diameter through half brick	No	18
Carried Forward to Sectional Summary: 2			R
SECTION NO. 2			
BUILDING WORKS			
BILL NO. 4			
MASONRY			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 5</u>			
	<u>WATERPROOFING</u>			
	GENERAL			
	<u>Notes</u>			
	Waterproofing of roofs, basements, etc, shall be laid under a ten year guarantee			
	DAMP PROOF COURSE			
	<u>In foundations & brickwork</u>			
	<u>250 Microns black waterproofing membrane with minimum overlaps of 150mm, sealed with 48mm approved sealing strips.</u>			
1	Laid on ground or filling under solid floors	m2	44	
	<u>375 Microns black waterproofing membrane, with minimum overlaps of 200mm at ends and corners</u>			
2	Below brick walls	m2	3	
	<u>500 Microns black waterproofing membrane with minimum overlaps of 150mm, sealed with 48mm approved sealing strips</u>			
3	In foundation wall adjacent waterproofed wall	m2	57	
	SHEET OR MEMBRANE WATERPROOFING			
	<u>Protections</u>			
	<u>Filter blankets</u>			
4	Geofabric filter blanket "Kaymat U24" or similar approved vertically next to waterproofing to walls with 150 mm side and 300mm end laps inc stitching	m2	57	
	TROWELLED-ON WATERPROOFING			
	Carried forward		R	
	SECTION NO. 2			
	BUILDING WORKS			
	BILL NO. 5			
	WATERPROOFING			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Trowelled-on waterproofing</u>				
	<u>"Penetron" Crystalline waterproofing coating slurry, or similar approved products</u>				
5	Vertical plaster in foundations	m2	57		
	LIQUID WATERPROOFING				
	<u>Membrane reinforced liquid waterproofing</u>				
	<u>"ABE" Super laycrill Charcoal colour three coats together with "ABE" membrane or similar approved products</u>				
6	On chromadeck flashings not exceeding 200mm wide	m	70		
	WATERSTOPS, SEALING STRIPS, JOINT SEALANTS, ETC.				
	<u>Joint sealants</u>				
	<u>"ABE" or similar approved product acrylic sealing compound all in accordance with manufacturer's recommendations, all surfaces must be clean, dry and free from loose matter, oil, grease and other contaminants</u>				
7	5x5mm Wide in movement joints between concrete and masonry	m	94		
8	10x10mm Isolation joints	m	36		
9	3x30mm In saw cut joints	m	14		
	Carried Forward to Sectional Summary: 2			R	
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 5				
	WATERPROOFING				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 6</u>			
	<u>ROOF COVERINGS, CLADDING, ETC.</u>			
	PROFILES SHEETING OF METAL. FIBRE-CEMENT, PLASTIC, ETC.			
	<u>Flashings</u>			
	<u>Colour coated (TBC) approved 0.8mm flashings to match roof coverings</u>			
1	Head wall flashing 375mm girth, two times bend including broad flute metal and polyclosers	m	49	
2	Side wall cover flashing 375mm girth, two times bend	m	21	
3	Cover flashing 105mm girth, one bend sealed into plasterwork with saw cut and waterproof sealant	m	70	
	RAINWATER DISPOSAL			
	<u>Seamless gutters and downpipes</u>			
	<u>Aluminium seamless gutter, or similar approved products, overall size 85x85x0.6mm thick coated internally in colour white and externally in colour TBC with matching splash plate including cut and mitred angles covered with a mitre strip externally, stop ends crimped and all sealed on the inside with silicone sealer, secured to timber fascia with 25x2.5mm L - Shaped and internal brackets at 600mm centres using yellow passivated serrated nails</u>			
4	125x85mm Deep profile seamless gutter fixed to timber fascia	m	51	
5	Extra on last for stopped end	No	4	
6	Extra on last for 75x50 mm outlet with nozzle and grating	No	6	
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 6 ROOF COVERINGS, CLADDING, ETC			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Brought forward			R
	<u>Aluminium downpipe Charcoal Grey fixed to wall with straps at 1500mm centres using nail plugs, with downpipes riveted and silicone sealed to gutter outlets, inc all necessary bends, elbows, etc</u>		
7	75x50mm Rectangular seamless rainwater downpipe in accordance to the manufacturer's specification	m	20
8	Extra on last for shoe	No	2
9	Extra on last for bend	No	14
10	Rainwater spreader 500mm wide	No	4
Carried Forward to Sectional Summary: 2			R
SECTION NO. 2			
BUILDING WORKS			
BILL NO. 6			
ROOF COVERINGS, CLADDING, ETC			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 7</u>			
	<u>CARPENTRY AND JOINERY</u>			
	FLOORS			
	<u>Skirtings</u>			
	<u>Meranti hardwood skirting plugged to plastered walls</u>			
1	16x70mm Profiled skirting plugged to walls, inc preparation for paint	m	278	
	<u>Meranti hardwood quadrant plugged to skirting</u>			
2	19mm Quadrant to skirting, inc preparation for paint or varnish	m	278	
	<u>Pine or other approved skirting plugged to walls</u>			
3	19x75mm Profiled skirting plugged to walls, inc preparation for paint	m	37	
4	21x70mm Profiled skirting plugged to walls, inc preparation for paint	m	27	
	<u>Pine or other approved quadrant plugged to skirting</u>			
5	19mm Quadrant to skirting, inc preparation for paint or varnish	m	64	
	<u>Pine or other approved quadrant plugged to skirting</u>			
	TIMBER DOORS, WINDOWS, ETC.			
	<u>Doors</u>			
	<u>Approved solid "Masonite" flush doors, hung to door frames</u>			
6	40mm Door size 813x2032mm high. (PC Amount R 780)	No	11	
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 7 CARPENTRY AND JOINERY			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Brought forward			R
<u>Approved solid "Masonite" flush doors, hung to sliding door track</u>			
7	40mm Door size 813x2032mm high. (PC Amount R 780)	No	2
<u>Door frames</u>			
<u>Wrought meranti hardwood, fixed in brickwork opening</u>			
8	70x48mm Rebated frame for 813x2032mm high door. (PC Amount R 450)	No	9
9	70x48mm Rebated frame for 1612x2032mm high door. (PC Amount R 830)	No	1
FITTINGS			
<u>Cupboards & Tops</u>			
<u>The following budgets have been allowed, contractor to add profit the following items on the profit section below</u>			
10	Allow a net sum of R2 400.00/m for kitchen floor units fixed to wall.	m	9
11	Allow a net sum of R2 400.00/m for restroom vanities.	m	2
12	Allow a net sum of R2 800.00/m for reception counter	m	5
13	Allow a net sum of R2 700.00/m ² for cupboard tops	m ²	11
14	Allow a net sum of R1 500.00/No for supawood material box as sliding door enclosure	No	2
15	Allow a net sum of R350.00/m for timber cill detail	m	16
16	Add for profit and attendance on above six items	Item	
Carried Forward to Sectional Summary: 2			R
SECTION NO. 2			
BUILDING WORKS			
BILL NO. 7			
CARPENTRY AND JOINERY			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 8</u>			
	<u>CEILINGS, PARTITIONS AND ACCESS FLOORING</u>			
	CEILINGS			
	<u>Flush plastered ceilings</u>			
	<u>Gypsum plaster ceiling boarding installed below flat concrete slabs / steel purlins / timber trusses by means of an approved galvanized cold rolled steel tee suspension system, 25x25mm galvanised angle suspended vertically, main and cross tee's fixed horizontally, board up with screws, fibra tape joints inc compound filling, ceiling board to be skimmed with rhinolite cretestone 2 layers, or similar approved products.</u>			
1	Horizontal 9.5mm ceilings suspended from underside of timber trusses	m2	124	
	<u>Grid ceiling lay in tiles</u>			
	<u>Pelican systems AMF Mecure suspended gypsum ceiling tiles suspended on 24mm wide 0.4mm thick exposed tee suspension system comprising main tees at 1200mm centres with cross tees between each tile including hold-down clips, etc, all suspended with galvanized hangers at 1200mm centres, or similar approved products.</u>			
2	Horizontal ceilings 1200x600x15mm suspended from underside of timber trusses	m2	359	
	TRIMS, CORNICES, ETC.			
	<u>Cornices, etc</u>			
3	25x15mm Aluminium plaster trim, plugged to plastered wall (to plaster ceilings)	m	118	
4	25mm (SM25) Aluminium colour coated (White) shadowline wall angle (to drop in ceiling grids)	m	115	
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 8 CEILINGS AND PARTITIONING			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
5	Polystyrene plain cornice cove 75mm plugged to wall with silicone	m	69		
	<u>Trims, etc</u>				
6	Aluminium colour coated (White) transition trim (Between bulkhead and panel grid ceiling system)	m	11		
7	Galvanized corner beat in bulkheads between vertical and horizontal bulkheads.	m	19		
	INSULATION				
	<u>Isover Aerolite non-combustible light weight fibreglass Glasswool thermal ceiling insulation, or similar approved products</u>				
	<u>75mm thick</u>				
8	Laid loose on top of ceiling between ceiling wires	m2	497		
	<u>Isotherm "Cavity batt" insulation, or similar approved products</u>				
	<u>75mm Thick</u>				
9	Inserted between studs in drywall	m2	17		
	BULKHEADS, ETC.				
	<u>Flush plastered bulkheads</u>				
	Carried forward			R	
SECTION NO. 2 BUILDING WORKS BILL NO. 8 CEILINGS AND PARTITIONING					

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>9,5 mm Gypsum plaster bulkhead installed below flat concrete slabs / steel purlins / timber trusses by means of an approved galvanized cold rolled steel tee suspension system, 25x25 galvanised angle suspended vertically, main and cross tee`s installed to match bulkhead size, board up with screws, fibra tape joints incl compound filling, bulkhead to be skimmed with rhinolite cretestone 2 layers</u>				
	<u>Bulkheads exceeding 1200mm will be measured as plaster ceiling (m2)</u>				
	<u>Corner beads measured elsewhere</u>				
10	Horizontal bulkhead width exceeding 300mm, not exceeding 400mm wide	m	2		
11	Horizontal bulkhead width exceeding 600mm, not exceeding 700mm wide	m	12		
12	Vertical bulkhead width exceeding 300mm, not exceeding 400mm high	m	19		
	STANDARD PARTITIONS				
	<u>Partition with a total thickness of 126.5 mm consisting of 101.5mm stud fixed to 103mm top and bottom tracks with wafertek screws (16mm). 12.5mm drywall board boarded to both sides vertically with drywall screws (25mm) maximum 300mm c/c, vertical studs at 600mm c/c with intermediate horizontal stud supports at 1200mm. Boards budd jointed, taped over and flushed over with jointing compound, or similar approved products.</u>				
	<u>Partition walls</u>				
13	Partition wall 1400mm high, inc full skim mm thick	m	33		
14	Partition wall 2500mm high, inc full skim mm thick	m	72		
	<u>Sundries on partition walls</u>				
15	Extra over above for 90 degree corner	m	11		
	Carried forward			R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 8 CEILINGS AND PARTITIONING				

-35-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 9</u>			
	<u>FLOOR COVERINGS, WALL LININGS, ETC.</u>			
	VINYL FLOORCOVERINGS			
	<u>Approved (Allow PC amount of R 250/m2) vinyl fixed to floors with approved adhesive & underlay (not included in PC Amount)</u>			
	<u>On floor areas</u>			
1	Laid on concrete floors	m2	27	
	<u>Anti static vinyl 2.5mm on 3mm self levelling screed</u>			
	<u>On floor areas</u>			
2	Laid on concrete floors	m2	25	
	CARPETS			
	<u>Belgotex berber point 650 commercial "Resinbac" carpet tile, Colour "Urchin". Installed as per manufacturers specifications on concrete floor, or similar approved products</u>			
	<u>On floor areas</u>			
3	Laid on concrete floors	m2	383	
	TRIMS			
	<u>Aluminium transition cover and base</u>			
4	Between tile & carpet transitions	m	15	
	Carried Forward to Sectional Summary: 2			
	SECTION NO. 2			
	BUILDING WORKS			
	BILL NO. 9			
	FLOOR COVERINGS, WALL LININGS, ETC			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 10</u>			
	<u>IRONMONGERY</u>			
	GENERAL			
	<u>Supplementary Preambles</u>			
	Contractor to add for fixation, tools, labour and profit on PC Amounts			
	<u>Notes</u>			
	HINGES, BOLTS, ETC:			
	<u>Hinges</u>			
	<u>To timber frames</u>			
1	100x40x2.6mm Stainless steel sinkless hinges (PC amount R 90)	No	20	
	<u>Bolts</u>			
2	Flush bolt lever in door (PC Amount R 250)	No	2	
	<u>Fire escape systems</u>			
3	Panic push bar double door three point system (PC Amount R 3000.00)	No	2	
	LOCKS, CYLINDERS, ETC			
	<u>Locks</u>			
4	Cylinder sashlock (PC Amount R 200)	No	10	
	<u>Cylinders</u>			
5	5-Pin Euro double cylinder (PC Amount R 300)	No	10	
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 10 IRONMONGERY			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

		Brought forward		R	
	<u>Escutcheons</u>				
6	Escutcheons (PC Amount R 30)	No	20		
	HANDLES				
	<u>Handle sets</u>				
7	Furniture handle set (PC Amount R 300)	No	11		
	<u>Pull handles</u>				
8	Pull handle set (PC Amount 250)	No	2		
	ACCESSORIES				
	<u>Doorstops, doorclosers, etc</u>				
9	Stainless steel door stop (PC Amount R 60)	No	15		
	<u>Rails</u>				
	<u>Sliding door rails</u>				
10	Domestic door track 100Kg (PC Amount R 1390)	No	2		
11	Door bottom guide (PC Amount R 70)	No	2		
	<u>Grabrails</u>				
12	Stainless steel rear grab rail (PC Amount R 600)	No	2		
13	Stainless steel side grab rail (PC Amount R 650)	No	2		
	<u>Stainless steel plates</u>				
	<u>Kick plate</u>				
14	900x200x1.2mm Kick plate to timber door (PC Amount R 180)	No	2		
	<u>Push plate</u>				
15	200x400x1.2mm Push plate to timber door (PC Amount R 120)	No	2		
	Carried forward			R	
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 10				
	IRONMONGERY				

-39-

-40-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 12</u>			
	<u>PLASTERING</u>			
	SCREEDS			
	<u>Screeds finished smooth with a wood float to receive waterproofing</u>			
	<u>On horizontal surfaces</u>			
1	25mm Thick on concrete surfaces	m2	618	
2	25mm Thick on concrete surfaces to falls	m2	10	
	<u>On stairs</u>			
3	30mm Thick on treads, risers of stairs and landings	m2	21	
	<u>"Pavelite" or similar approved cementious smoothing compound</u>			
4	4mm thick on concrete surface beds or slabs, to level out imperfections	m2	3	
	PLASTER			
	<u>Externally</u>			
	<u>One coat 1:4.5 cement scratch plaster wood float finished on brickwork</u>			
5	Vertical brick surfaces.	m2	9	
	<u>Internally</u>			
	<u>One coat 1:6.0 cement scratch plaster wood float finished on brickwork</u>			
6	Vertical brick surfaces	m2	625	
7	Narrow widths not exceeding 300mm wide to brickwork	m2	30	
	Carried forward		R	
	SECTION NO. 2			
	BUILDING WORKS			
	BILL NO. 12			
	PLASTERING			

-42-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 13</u>			
	<u>TILING</u>			
	WALL TILES			
	<u>Ceramic tiles</u>			
	<u>Porcelain tiles</u>			
	<u>Approved 300x600mm (PC amount R 200/m2) porcelain tile fixed to walls with approved 6 hour tile adhesive ,inc tile bond application, "Keycoat" or similar approved if required and pointed with tile grout colour to be selected</u>			
1	To plastered walls	m2	34	
2	Leave attic stock in purchase box on site upon completion	m2	2	
	<u>Wall Sundries</u>			
	<u>Aluminium</u>			
3	10mm Aluminium straight edge trim on wall tile edges	m	33	
	FLOOR TILES			
	<u>Porcelain tiles</u>			
	<u>Approved 500x500mm (PC amount of R 200/m2) porcelain tile laid on floors with approved 12 hour tile adhesive ,inc tile bond application and pointed with tile grout colour to be selected</u>			
4	To floors areas	m2	208	
5	To sloped floors areas	m2	10	
6	To narrow widths not exceeding 300mm wide	m	19	
7	To stairs threads 270mm wide	m	47	
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 13 TILING			

-44-

-45-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<p><u>The following items includes all the necessary water supply pipes, cold and hot (if applicable) points , chased into brick walls where necessary, this includes the angle valves and flexi connectors where applicable, contractor to allow for his/her own design to meet SABS requirements</u></p> <p><u>The following items also includes the drainage system from each point to a designated gulley point or connection to sewerpipe, this includes the applicable trap needed, contractor to allow for his/her own design to meet SABS requirements</u></p> <p><u>The actual fitting with installation thereof have been measured elsewhere</u></p> <p><u>External water supply and sewer drainage measured elsewhere</u></p> <p><u>Cold & hot water point</u></p>				
8	Water closet point (WC), cold water point only	No	2		
9	Wash hand basin point (WHB), hot and cold water point	No	2		
10	Sink point, hot and cold water point	No	2		
	<u>Cold water point only</u>				
11	Geyser point, cold water point only	No	1		
	SANITARY FITTINGS, TANKS, GEYSERS, ETC.				
	<u>Sanitary fittings, etc.</u>				
	<p><u>The following sanware PC Amounts have been allowed for</u></p> <p><u>"Prime Cost Amount" (PC) means an amount included in the contract sum for the delivered cost of materials and goods obtained from a supplier as instructed by the client, or his/her agents</u></p> <p><u>Labour installation & Profit have to be added if applicable</u></p>				
	Carried forward			R	
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 14				
	PLUMBING & DRAINAGE				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Brought forward			R
<u>Water closets</u>			
12	Water closet - WC (PC Amount R 3000), add for installation and profit	No 2	
<u>Basins</u>			
13	Wash hand basin -WHB (PC Amount R 2500) mounted to vanity, add for installation and profit	No 2	
14	Basin mixers (PC Amount R 1800), add for installation and profit	No 2	
<u>Sinks & prepbowls</u>			
15	Double sink (PC Amount R 1500), add for installation and profit	No 2	
16	Sink mixer (PC Amount R 1100), add for installation and profit	No 2	
<u>Tanks, geysers, etc.</u>			
<u>Geysers</u>			
17	200 Litre vertical pressure type electric hot water geyser complying with the SABS specification 151 complete with "pressure control valve", brackets and connections to inlet and outlet pipes incl hoisting and fixing in position complete with drip tray incl all necessary fittings to connect to water supply	No 1	
<u>Hydroboils</u>			
18	15 Litre "Standard approved" hydroboil plugged to wall above kitchen sink, colour: White	No 1	
Carried Forward to Sectional Summary: 2			R
SECTION NO. 2 BUILDING WORKS BILL NO. 14 PLUMBING & DRAINAGE			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 15</u>			
	<u>FIRE SERVICES</u>			
	PIPEWORK, ETC			
	<u>Fire services pipework (Internal)</u>			
	<u>Medium class galvanised mild steel screwed and socketed water pipes including short lengths, cutting and plain sockets, including fixing brackets to walls/</u>			
1	25mm Galvanised mild steel fixed to wall including brackets, etc.	m	15	
2	25mm Bend.	No	6	
	FITTINGS, ETC			
	<u>Fire appliances (to comply with Act 103 of 1977 and SANS 10400 Part 0 and T - 2001)</u>			
	<u>Fire hose reels</u>			
3	Hose reel complete with 30000x25mm plastic hose, chromium plated stopcock, shut-off brass nozzle and wall bracket, stop valve with tamper proof seal, including connection to 25mm galvanised pipe.	No	1	
	<u>Fire extinguishers</u>			
4	4.5kg Dry chemical powder fire extinguisher, including hardwood backboard trimmed edges plugged and pelleted to wall, sealed with clear sealant to all sides to wall.	No	2	
5	9kg Dry chemical powder fire extinguisher, including hardwood backboard trimmed edges plugged and pelleted to wall, sealed with clear sealant to all sides to wall.	No	2	
	GAS SUPPRESSION			
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 15 FIRE SERVICES			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Brought forward			R
<u>Fire Suppression System</u>			
<u>Fire Detection</u>			
6	Supply and install Gas Suppression Fire Panel complete with batteries	No 2	
7	Supply and install conventional smoke detection system	No 8	
8	Supply and install manual gas release callpoint	No 2	
9	Supply and install fire bell	No 2	
10	Supply and install Siren / Beacon	No 4	
11	Supply and install release module interface enclosure	No 2	
12	Supply and install PH30 cabling	m 200	
<u>Gas Suppression</u>			
13	Supply and install Gas Suppression 30L Bottle	No 2	
14	Supply and install Guage with Pressure switch	No 2	
15	Supply and install Gas Suppression Bottle Strap	No 4	
16	Supply and install FM200 gas	kg 40	
17	Supply and install Gas Piping and Piping accessories	No 2	
18	Supply and install Gas Discharge Nozzle	No 2	
19	Supply and install Room Integrity Testing	No 2	
20	Supply and install Gas Warning Signage	No 2	
21	Supply and install Pressure Release Vent	No 2	
22	Supply and install Pressure Release Vent	No 2	
23	Test and Commission	No 2	
Carried Forward to Sectional Summary: 2			R
SECTION NO. 2 BUILDING WORKS BILL NO. 15 FIRE SERVICES			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 16</u>			
	<u>ELECTRICAL</u>			
	PRELIMINARIES AND GENERAL			
	<u>Compliance with contract</u>			
	Allow for costs directly associated with expenses to comply with the Conditions of Contract and the Main Contract Preliminaries			
1	Fixed cost component		SUM	
	<u>Site Establishment</u>			
2	Fixed cost component		SUM	
	<u>Contract Administration</u>			
3	Fixed cost component		SUM	
	<u>Provision of performance bond</u>			
4	Fixed cost component		SUM	
	<u>Insurance</u>			
5	Fixed cost component		SUM	
	<u>Compliance with Occupational Health and Safety Act</u>			
6	All costs associated with implementation of Health and Safety Act, including safety plan		SUM	
	<u>General Items</u>			
7	Mark up drawings to "As-Built"		SUM	
8	Travel & Time as per Main Contractor's Program		SUM	
9	Hard copies of O&M Manuals		SUM	
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 16 ELECTRICAL WORK			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Provision of defects liability guarantee to the value of 5% of the contract value</u>				
10	Fixed cost component (Valid for 12 months after works completion)			SUM	
	POWER				
	<u>Moulded Case Circuit Breakers</u>				
	Matching and cascading equivalent to Circuit Breaker Industries				
	<u>Fault Rating 25kA</u>				
11	G25D-125A	No	1		
	<u>Excavations</u>				
	Excavated materials are classified as follows: Class A material (rock) will be held to be any material possessing characteristics of hardness and geological structure which, in the opinion of the Engineer, necessitates the use of explosives for excavation. Class B material (hard) will be held to be any material which possesses characteristics of hardness and geological structure which, in the opinion of the Engineer, requires two separate operations for excavation, one for breaking by pneumatic or hydraulic means and one for removing the material from the excavation. The operations may be performed by one or more items of plant or equipment. Class C material (earth) will be held to be all material other than Class A and Class B material as defined above and shall include boulders of individual volume up to 0,25 m ³ and which constitute less than forty percent (40%) by volume of the material excavated				
12	Excavate 300 mm wide x 800 mm deep cable trench in Class C material (earth)	m	250		
13	SABS approved PVC Cable Warning Tape installed above cable in trench	m	250		
	Carried forward			R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 16 ELECTRICAL WORK				

-52-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Disconnect and remove all existing wireways, trunking, power skirting, etc.</u>				
23	Rate to include for 90deg bends, T-pieces, 45deg offsets, 4-way cross-over pieces, elbow pieces, end caps, splice kits, suspension brackets and hangers, slotted angles, 10mm threaded rods, cantilever arms and fixing brackets, fixing material, wastage, hoisting equipment and sundries. Installed at 500mm above ceiling level, suspended from purlines and rafters; O-Line or Cabstrut type or similar and equal approved			SUM	
	<u>Trunking / Cabletray / Powerskirting / Floorboxes</u>				
24	P9000 galvanised trunking with pre-punched knockouts (4 x 20mm dia per 1m, 4 x 25mm dia per 2m), on wood rafters or suspended from concrete slab (as per design drawings), incl. PVC lids	m	4		
25	300x50mm Galvanised Steel Wire-mesh Cabletray (Medium Duty), on wood rafters or suspended from concrete slab (as per design drawings)	m	120		
26	2 Tier, 2 Compartment, PVC Powerskirting (Grey) , incl. clips and covers; Legrand New DLP or similar and equal approved	m	200		
	<u>Power Poles and Columns</u>				
27	Power Pole mounting boxes, complete with 2x normal switch socket outlets, 2x dedicated socket outlets, 2x RJ 45 data outlets, 2x RJ11 phone outlets, 1x VGA plus audio	No	1		
	<u>Electrical DB Cupboards</u>				
28	P9000 galvanised trunking, on wall in distribution cupboards and connected to common trunking in ceiling.(Length per trunking = 3m)	m	2		
29	P9000 splice / switchboard entries	No	2		
	<u>General and Miscellaneous</u>				
30	Statutory notices and signage as per all applicable standards, regulations and specifications			SUM	
	Carried forward			R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 16 ELECTRICAL WORK				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Brought forward			R
<u>Small Power Installation:</u>			
For the supply, installation and connection inclusive of all fixing materials & waste, conduiting and boxes, wiring, cover plates, flush clips, sundries			
All SSO circuits to be wired in 2.5mm ² Live, Neutral and Earth unless otherwise shown			
<u>Switched Socket Outlets. To be LeGrand Arteor range (colour white) or similar and equal approved</u>			
31	1x16A Normal SSO + 1x16A normal SO Euro, white cover, recessed	No	30
32	1x16A normal SSO, powerskirting	No	120
33	1x16A normal SSO, Euro, powerskirting	No	120
34	1x16A Dedicated SSO, shaved earth pin, red toggle, red cover, powerskirting	No	120
35	HDMI outlet, recessed	No	1
36	Corporate Connections PL-Slimline Omega or similar approved modular power system, white, comprising of 2x end caps, 1x 25mm spacer, 1x SSO, 1x 2-pin socket, 2x 12.5mm spacers, 2x shuttered bezels with couplers for RJ11 & RJ45. Complete with connector cables, to be installed in linear work desks in positions indicated on drawings	No	1
37	Corporate Connections PL-Rotadock or similar approved modular power system, silver, comprising of 2x end caps, 1x reset switch, 3x SSO, 1x 2-pin socket, 4x 12.5mm spacers, 2x Comms Modules (including 1x VGA & Audio Coupler; 1x HDMI & data plate with couplers and 1x Bypass Connector. Complete with connector cables to be installed in Boardroom Tables in positions indicated on drawings	No	1
<u>Isolators, recessed, cover plate. To be LeGrand Arteor range (colour white) or similar and equal approved</u>			
38	20A - 30A DP, white cover, recessed;	No	13
Carried forward			R
SECTION NO. 2 BUILDING WORKS BILL NO. 16 ELECTRICAL WORK			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
39	20A - 30A DP, weatherproof (IP65), surface	No	9		
	<u>Flexible Conduit (KOPEX), 1.5m long, complete with ends; final connections to equipment</u>				
40	25mm dia	m	50		
	<u>Flexible cable (1.5m Silicon), incl. termination and connection, for final connections to Equipment</u>				
41	2.5mm ² x 3c	m	10		
	<u>Conduiting, surface mounted / via ceiling void / chased in wall / cast in concrete, including wastage, conduit boxes, sundries</u>				
42	25mm dia	m	240		
	<u>PVC wiring (600/1000V), incl. termination and connection, wastage, sundries</u>				
43	2,5mm ²	m	2 500		
	<u>Telkom / Data Installation</u>				
	For the supply and installation inclusive of all fixing materials & waste, conduiting, outlet boxes, 1.6mm draw wire, sundries. Cover and cradles to be of suit manufacturer specification				
	<u>Data Sockets To be LeGrand Arteor range (colour white) or similar and equal approved</u>				
44	For RJ 45 Data sockets (CAT 6) in wall: cover plate, recessed, 100 x 100 outlet box	No	1		
45	For RJ 45 Data sockets (CAT 6) in powerskirting: cover plate, recessed	m	70		
	<u>Conduiting installed for Data, surface mounted / via ceiling void / chased in wall / installed in wall / cast in concrete, including wastage, conduit boxes, draw wire and sundries</u>				
46	25mm dia PVC	m	500		
	Carried forward			R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 16 ELECTRICAL WORK				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Hand Driers</u>				
	(incl. conduiting, trunking, outlet boxes, covers, draw-wire, wiring, termination and connection, sundries, etc.)				
47	Wall mounted Hand Drier (910 Stiebel-Eltron Ultronic S or similar approved)	No	2		
	<u>Standby Diesel Generator (Containerized) with Aco panel</u>				
	Supply, testing before shipment, delivery, installation, site testing and commissioning, and handing over in a proper working condition of an automatic starting, diesel engine/alternator generating set, including all auxiliary materials and equipment necessary for the complete installation, as well as the supply of all required drawings, manuals and instructions as specified				
48	Design, engineering, fabrication, assembly, factory testing of 60kVA, 400V, three-phase diesel generator, fully packaged containerized set (as per Technical Specifications), complete with mains fail detection, automatic starting and automatic change-over facility	No	1		
49	Generator control panel - complete panel with all devices as per specification	No	1		
50	Over land transport to site in Site, Mosselbay			SUM	
51	Off-loading on site in Mosselbay			SUM	
52	Site erection, labour and supervision			SUM	
53	First diesel fill of day tank to maximum capacity on site			SUM	
54	Commissioning of generator set			SUM	
55	Operator Training for on-site personnel			SUM	
56	Other Specific Items (Not Included Above):		Item		
	LIGHTING				
	Carried forward			R	
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 16				
	ELECTRICAL WORK				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Lighting Installation</u>				
57	Disconnect and remove all existing luminaires and fittings, including wiring, switches, conduits, etc.			SUM	
	For the supply, installation and connection inclusive of all materials, fixing materials & waste, lamps, hoisting equipment, cutting of downlighter holes, conduiting and boxes, wiring, 5A unswitched socket outlets, sundries				
	All luminaires offered shall be either REGENT or similar and equal approved				
	All lighting circuits to be wired in 2.5mm ² Live, Neutral and Earth unless otherwise shown				
	ECG denotes electronic control gear; EMG denotes emergency battery pack and control gear (20% / 1 lamp / 1 hour)				
58	Type C1 (Regent Luxon or similar and equal approved): 600 x 600mm, 40W LED diffused, hinged louvre, recessed, ECG, 3m cabtyre with 5A plug top (4000K)	No	70		
59	Type C1/S (Regent Luxon or similar and equal approved): 600 x 600mm, 40W LED diffused, hinged louvre, surface mounted, ECG, 3m cabtyre with 5A plug top (4000K)	No	10		
60	Type C5 (Regent Orbit or similar and equal approved): I253, 300mm, 20W, surface mounted, ECG, 3m cabtyre with 5A plug top (4000K)	No	10		
61	Type D1 (Regent Luxon Round or similar and equal approved): I292, 12W, 145mm, LED Downlighter, white trim, ECG, 3m cabtyre with 5A plug top (4000K)	No	110		
	<u>Light Switches:</u>				
	Supply, install, terminate and connect 16A light switches complete with cradle and cover plate, 100 x 50 recessed outlet box, inclusive of all materials & waste, fixing materials, conduiting and outlet boxes, wiring and sundries. To be LeGrand Arteor range or similar and equal approved				
	Carried forward			R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 16 ELECTRICAL WORK				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

					R
	Brought forward				
62	1L, 1W, white cover, recessed	No	30		
63	2L, 2W, white cover, recessed	No	4		
64	1L, 2W, white cover, recessed	No	1		
65	2L,1W, white cover, recessed	No	2		
66	3L,1W, white cover, recessed	No	1		
	<u>Conduiting, surface mounted or via ceiling void or chased in wall or cast in concrete, including all materials and waste, fixing materials, conduit boxes and sundries</u>				
67	20mm dia	m	300		
	<u>PVC wiring (domestic house wiring), incl. termination and connection, wastage, sundries</u>				
68	2,5mm ²	m	2 000		
	DB's				
	<u>Distribution Boards</u>				
	<u>Modify existing Mini-Substation by adding switchgear to accommodate new refurbishment loading. Including internal wiring to accommodate new MCCB.</u>				
69	Add new G25D-125A, TP, MCCB to minisubstation	No	1		
	<u>Supply, install and connect the following distribution boards as per single-line and schematic diagrams. DB to be installed in service cupboards provided with doors or as applicable. All DB's to comply with the quality and general technical specifications and be approved by the Engineer</u>				
70	Main Distribution Board (MDB-1), Surface Mounted standing DB in service cupboard	No	1		
71	UPS DB's	No	2		
	Carried forward				R
	SECTION NO. 2 BUILDING WORKS BILL NO. 16 ELECTRICAL WORK				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Brought forward				R
ELECTRONIC SERVICES WIREWAYS				
For the supply, installation and connection inclusive of all fixing materials & waste, conduiting, outlet boxes, 1.6mm draw-wire, covers and sundries				
<u>Access Control Systems</u>				
<u>Conduit incl. outlet boxes, drawwire; surface mounted / via ceiling void / chased in brickwork / cast in concrete</u>				
72	25mm dia galvanised	m	1	
73	25mm dia PVC	m	100	
74	50mm Round PVC Outlet Box	No	10	
75	25mm Flexible Conduit (KOPEX), complete with ends; final connections to equipment	m	10	
ACCESS CONTROL AND CCTV				
<u>Access Control</u>				
76	Impro Access Portal Basic. Free software suitable for single sites, up to 100 APB doors and 1,000 tag holders; Installation is simplified with an auto-install function which includes the automatic configuration of your hardware	No	1	
77	Cluster Controller + 1 x Wiegand Reader Module - IPS (Two Readers Per Controller)	No	3	
78	MSO300 Morpho Take on Reader with License	No	6	
79	Sigma Lite Multi Biometric Reader	No	3	
80	Monitored Mag Lock 300kg	No	3	
81	Cable 4 Core Mylar Screen	No	50	
82	Cable CAT5E	No	300	
83	Rack Mountable 16 Port POE Switch	No	1	
84	Free Exit Readers	No	1	
Carried Forward to Sectional Summary: 2				R
SECTION NO. 2				
BUILDING WORKS				
BILL NO. 16				
ELECTRICAL WORK				

-60-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Boardroom (Ground floor)</u>				
7	18 000 BTU's Carrier midwall split unit - Fixed speed, Including: Bluchem corrosion preventative treatment	No	2		
	<u>Server (Ground floor)</u>				
8	9 000 BTU's Carrier midwall split unit - Inverter model, Including: Bluchem corrosion preventative treatment	No	2		
	<u>Ventilation</u>				
	<u>Pause and coffee area (First floor)</u>				
9	Extract wall fan 85 l/s @ 20Pa	No	1		
10	Wall sleeve	No	1		
11	Sundries			SUM	
	<u>General and disabled toilet extraction (First floor)</u>				
12	In-line fan 65l/s @ 100Pa	No	1		
13	Sound attenuator	No	2		
14	150mm Diameter DVP (disc valves)	No	2		
15	Aluminium door grille	No	1		
16	150mm Diameter galvanized ducting	No	8		
17	Galvanized nose cone	No	1		
18	150mm Diameter flexible ducting	No	2		
19	Sundries			SUM	
	<u>New Kitchen (First floor)</u>				
20	Extract wall fan 90 l/s @ 50Pa	No	1		
21	Wall sleeve	No	1		
22	Sundries			SUM	
	Carried forward			R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 17 MECHANICAL WORK				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Server room (First floor)</u>				
23	In-line fan 160 l/s @ 150Pa	No	1		
24	Sound attenuator	No	2		
25	Aluminium supply air grille	No	1		
26	200mm Diameter galvanized ducting	No	7		
27	Wall box with filter	No	1		
28	Weather louvre	No	1		
29	Grille box	No	1		
30	Sundries			SUM	
	<u>Store room (First floor)</u>				
31	Plate mount extract fan 100l/s @ 50Pa	No	1		
32	Wall sleeve	No	1		
33	Fibreglass weather cowl	No	1		
34	Sundries			SUM	
	<u>Male ablutions and disable (Ground floor)</u>				
35	In-line fan 90 l/s @ 100Pa	No	1		
36	150mm Diameter DVP (disc valves)	No	5		
37	Aluminium door grille	No	2		
38	Sound attenuator	No	2		
39	Galvanized nose cone	No	1		
40	150mm Diameter flexible ducting	No	5		
41	Sundries			SUM	
	Carried forward			R	
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 17				
	MECHANICAL WORK				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Brought forward				R	
<u>Female ablutions (Ground floor)</u>					
42	In-line fan 90 l/s @ 100Pa	No	1		
43	150mm Diameter DVP (disc valves)	No	4		
44	Aluminium door grille	No	1		
45	Sound attenuator	No	2		
46	150mm Diameter galvanized ducting	No	6		
47	Galvanized nose cone	No	1		
48	150mm Diameter flexible ducting	No	5		
49	Sundries			SUM	
<u>Server room (Ground floor)</u>					
50	In-line fan 65 l/s @ 80Pa	No	1		
51	Sound attenuator	No	2		
52	Grille box	No	1		
53	Wall box with filter	No	1		
54	Weather louvre	No	1		
55	Aluminium supply air grille	No	1		
56	150mm Diameter galvanized ducting	No	4		
57	Sundries			SUM	
LIFT INSTALLATION					
Carried forward				R	
SECTION NO. 2 BUILDING WORKS BILL NO. 17 MECHANICAL WORK					

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward		R
	<u>The following in paraplegic lift serving 3 floors with stops at all floors</u>		
58	<u>Model:</u> Ruck sack lift <u>Usage:</u> Public lift <u>Capacity:</u> Wheelchair and assistant / 450kg <u>Speed:</u> +-150mm/sec <u>Travel:</u> +- 3000mm <u>Stops:</u> 3 (2 on one side and a 3rd on other side), please refer to drawing sections for floor levels, there is a intermediate floor on the back side between die ground and first floor <u>Type of drive:</u> Hydraulic ram only <u>Position of drive:</u> Bottom <u>Size of motor:</u> 3Kw <u>Safety:</u> Lift without car doors; constant pressure is needed on the up/down button when moving between floors. Sensors in door openings <u>Mechanical safety:</u> Rupture valve, Over speed control valve, Hydraulic overload protection, Hydraulic pressure relieve valve <u>Electrical safety:</u> Override limit, Overload protection, Safety curtain in door opening <u>Power failure:</u> Lift is always able to decent during a power failure to avoid passengers being trapped <u>Electronic control:</u> Relay logic with fault indicator lights <u>Call Buttons:</u> On stations in door frame (Call) <u>Press buttons:</u> In car situated on the grab rail (G, 1, key, alarm, overload, buzzer) <u>Pressure:</u> Constant <u>Finish:</u> Brushed stainless steel with micro switch buttons <u>Car size:</u> 1020x1220x2100mm <u>Car finishes:</u> Melamine panels, Aluminium skirting, Black non slip rubber tiles to floor, Stainless steel and prismatic ceilings, Stainless steel handrail, White chroma deck roof with "No Step" sign <u>Pit:</u> Depth 350mm (Minimum requirement) <u>Light:</u> Supply <u>Drain pipe:</u> Supply <u>Headroom:</u> Height 2850mm <u>Light:</u> Supply <u>Drain pipe:</u> Supply <u>Other:</u> Sim card unit, Emergency light, Emergency alarm, Handrail, Heath and safety act plate.	Item	
	Carried Forward to Sectional Summary: 2		R
	SECTION NO. 2 BUILDING WORKS BILL NO. 17 MECHANICAL WORK		

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 18</u>			
	<u>GLAZING</u>			
	GENERAL			
	<u>Notes</u>			
	Where glazing details is not provided, contractor must design & supply glazing specifications, add for standard ironmongery to aluminium glazed doors and windows			
	All dimensions to be checked on site by manufacturer before manufacturing commences. Any variations must be approved by the client, or his/her agents.			
	MIRRORS			
	<u>6mm Mirrors with bevelled and polished edges holes for and screwed with including four chrome plated dome headed screws with cork washers to and including plugs in plastered walls.</u>			
1	Mirror size 450 x 600mm.	No	2	
	BALUSTRADES			
	<u>Glass balustrades</u>			
	<u>Glass design by contractor, frames less glass balustrade fixed to side of slab formed of panels</u>			
2	Frameless glass balustrade 1000mm high horizontal	m	14	
3	Extra over end to wall	No	5	
4	Extra over stop end	No	3	
5	Extra over for 90 degree corner	No	1	
6	Frameless glass balustrade 1000mm high raking (30 degrees)	m	8	
	Carried forward		R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 18 GLAZING			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
7	Extra over for raking/horizontal intersection	m	1		
8	Extra over for stop end	No	5		
	ALUMINIUM GLAZING				
	<u>Powder coated aluminium doors and doorframes to comply to AAAMSA specifications and with glazing to comply with AAAMSA and SABS Standards and plugged to brickwork or concrete neatly sealed off with approved sealant, including all standard ironmongery to be allowed by contractor. Shop drawings to be approved and signed of by the client.</u>				
	<u>Glass design by contractor, please stipulate design with tender submission</u>				
9	External double swing door 1800x2100mm (D2)	No	1		
10	External double sliding door 3950x2500mm	No	1		
11	Internal single swing door 900x2100mm	No	9		
12	Internal double sliding door 2400x2465mm	No	7		
13	Internal double swing door 1500x2100mm	No	2		
14	Internal double swing door 1700x2100mm	No	5		
	<u>Powder coated aluminium windows to comply to AAAMSA specifications and with glazing to comply with AAAMSA and SABS Standards and plugged to brickwork or concrete neatly sealed off with approved sealant, including all standard ironmongery to be allowed by contractor. Shop drawings to be approved and signed of by the client.</u>				
	<u>Glass design by contractor, please stipulate design with tender submission</u>				
15	External operable window 1500x1500mm (W4)	No	1		
16	External operable window 1500x1500mm (W5)	No	1		
17	External fixed window 1800x1500mm (W6)	No	3		
	Carried forward			R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 18 GLAZING				

-67-

-68-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Prepare, stop and clean with "Dulux galvanised cleaner" and paint one coat "Dulux primer for galvanised iron" and two coats "Dulux pearlglo waterbased enamel" (colour to be selected), or similar approved products</u>				
2	Angles, rails, pipes, etc, not exceeding 300 mm girth. (Standard base)	m	15		
	<u>On wood</u>				
	<u>Prepare, stop and paint three coats timber varnish "Dulux woodguard timbavarnish", or similar approved products</u>				
3	General surfaces of doors, etc	m2	14		
4	General surfaces of door frames, etc	m2	3		
	<u>On PVC</u>				
	<u>Prepare, stop and paint one coat timber primer "Dulux primer for wood" and one coat "Dulux trade universal undercoat" and two coats "Dulux pearlglo waterbased enamel" (colour to be selected), or similar approved products</u>				
5	On pipes not exceeding 300mm girth (Standard base)	m	8		
6	On pipes exceeding 300mm girth (Standard base)	m2	3		
	INTERNAL PAINT				
	<u>To walls</u>				
	<u>Prepare, stop and paint one coat plaster primer "Dulux trade alkali resistant" and two coats "Dulux Trade 100 lowsheen" (colour to be selected), or similar approved products</u>				
7	Plastered surfaces (Standard base)	m2	1 041		
	Carried forward			R	
	SECTION NO. 2 BUILDING WORKS BILL NO. 19 PAINTWORK				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R
	<u>Prepare, stop and paint one coat plaster primer "Dulux trade alkali resistant" and two coats "Dulux pearl glo" enamel (to bathroom walls) (colour to be selected), or similar approved products</u>			
8	Plastered surfaces (Standard base)	m2	19	
	<u>On ceilings & partitioning</u>			
	<u>Prepare, stop and paint one coat plaster primer "Dulux trade alkali resistant" and two coats "Dulux Trade 100 lowsheen" (colour to be selected), or similar approved products</u>			
9	Concrete soffits (Standard base)	m2	206	
10	Plasterboard partitions (Standard base)	m2	397	
	<u>Prepare, stop and paint one coat plaster primer "Dulux trade alkali resistant" and two coats "Dulux trade 65 matt" (colour to be selected), or similar approved products</u>			
11	Flush plastered ceilings (Standard base)	m2	124	
12	Flush plastered bulkheads (Standard base)	m2	14	
13	On coved polystyrene cornice not exceeding 100mm wide (Standard base)	m	69	
	<u>On wood</u>			
	<u>Prepare, stop and paint one coat timber primer "Dulux primer for wood" and one coat "Dulux trade universal undercoat" and two coats "Dulux solvent based enamel" (colour to be selected), or similar approved products</u>			
14	General surfaces of doors, etc. (Standard base)	m2	51	
15	General surfaces of door frames, etc (Standard base)	m2	13	
16	General surfaces of timber skirting's not exceeding 150mm high (Standard base)	m	342	
	Carried Forward to Sectional Summary: 2			R
	SECTION NO. 2			
	BUILDING WORKS			
	BILL NO. 19			
	PAINTWORK			

-71-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 1</u>			
	<u>LANDSCAPING</u>			
	EARTHWORKS			
	<u>Excavations for trenches & holes</u>			
	<u>Excavate in earth (pickable material) below reduced or natural ground level and set aside (heap on site) for use as filling (backfilling elsewhere) or carted away (cart away elsewhere) for:</u>			
1	Reduce levels under landscaping areas	m3	41	
	<u>Extra over all excavations for carting away</u>			
2	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor. (Allow for bulking)	m3	27	
	<u>Filling</u>			
	<u>Earth filling obtained from the excavations and spreaded for landscape where needed on site</u>			
3	Backfilling spreaded over area	m3	14	
	<u>Imported materials supplied by the contractor:</u>			
4	80mm Thick imported natural garden soil layer and spreaded	m3	41	
	LANDSCAPING			
	<u>"Kikiyu" Grass, or similar approved lawn</u>			
5	Laid and planted to topsoil, inc levelling with topsoil after laid down.	m2	135	
	Carried Forward to Sectional Summary: 3			
	SECTION NO. 3			
	EXTERNAL WORKS			
	BILL NO. 1			
	LANDSCAPING			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 2</u>			
	<u>ROADWORK & PAVING</u>			
	EARTHWORKS			
	<u>Excavations for trenches & holes</u>			
	<u>Excavate in earth (pickable material) below reduced or natural ground level and set aside (heap on site) for use as filling (backfilling elsewhere) or carted away (cart away elsewhere) for:</u>			
1	Reduce levels under paving areas	m3	331	
	<u>Extra over pickable material for difficulty excavating in:</u>			
2	Soft rock	m3	25	
3	Hard rock	m3	8	
4	Boulders excavation	m3	15	
	<u>Extra over all excavations for carting away</u>			
5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor. (Allow for bulking)	m3	331	
	<u>Compaction, etc</u>			
	<u>Compaction of ground & filling surface areas etc, breaking down oversize materials adding suitable material where necessary and compacting to 95% Mod AASHTO density</u>			
6	Under paving areas	m2	804	
	<u>Rip up, scarify and recompact earth surface 150mm deep to 90% Mod AASHTO density</u>			
7	On excavated platforms before importing new materials	m2	798	
	Carried forward		R	
	SECTION NO. 3			
	EXTERNAL WORKS			
	BILL NO. 2			
	ROADWORK & PAVING			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Filling</u>				
	<u>Imported materials G5 supplied by the contractor:</u>				
8	150mm Thick imported (G5) natural gravel layer and compacted to 97% MOD AASHTO density	m3	120		
	<u>Imported materials G7 supplied by the contractor:</u>				
9	150mm Thick imported (G7) natural gravel layer and compacted to 93% MOD AASHTO density	m3	132		
10	150mm Thick imported (G7) natural gravel layer and compacted to 95% MOD AASHTO density	m3	120		
	<u>Tests</u>				
	<u>Allow for tests</u>				
11	Allow for Mod AASHTO density tests to be carried out when instructed by the Engineer	No	8		
	PAVING				
	<u>Precast concrete block road surfacing</u>				
	<u>Grey (Uncoloured)</u>				
12	60mm Uncoloured grey interlocking concrete paving blocks (200x100mm) or similar approved, laid in herringbone pattern to falls on and including a 20mm bed of washed river sand, sand filling to joints compacted	m2	724		
	<u>Coloured</u>				
13	50mm Coloured "Charcoal" rectangular paver concrete paving blocks (200x100mm) or similar approved, laid in herringbone pattern to falls on and including a 20mm bed of washed river sand, sand filling to joints compacted	m2	80		
	Carried forward			R	
	SECTION NO. 3 EXTERNAL WORKS BILL NO. 2 ROADWORK & PAVING				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Brought forward			R
<u>Sundries</u>			
14	Extra over 200mm edging on above and including 200x150mm thick unreinforced concrete bedding including excavation, formwork, etc	m	102
KERBS & CHANNELS			
<u>Precast concrete kerbs finished smooth on exposed surfaces including excavation, bedding, small foundation, compacting, bedding, backing, jointing, pointing with 1-3 Cement Mortar, backfilling, etc</u>			
<u>Battered Kerbs</u>			
15	Figure 3 precast concrete kerb	m	53
16	Figure 3 precast concrete kerb, circular on plan not exceeding 4000mm radius	m	28
<u>Mountable Kerbs</u>			
17	Figure 8A precast concrete kerb	m	14
ROAD MARKINGS & SIGNS			
<u>Retro reflective road marking paint (minimum of two coats)</u>			
<u>Lines</u>			
18	White line 100mm wide	m	85
19	Yellow line 100mm wide	m	10
<u>Other</u>			
20	Word "STOP" in letters 2500mm high	No	1
21	Directional arrows 2800mm long	No	6
22	Form 'Disabled bay' logo 1200mm wide	No	2
Carried forward			R
SECTION NO. 3 EXTERNAL WORKS BILL NO. 2 ROADWORK & PAVING			

-76-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No			Quantity	Rate	Amount
	<u>SECTION NO. 3</u>				
	<u>BILL NO. 3</u>				
	<u>STORMWATER, SEWER & WATERSUPPLY SERVICES</u>				
	RAINWATER DRAINAGE				
	<u>Pipes</u>				
	<u>Perforated pipes</u>				
1	110mm Pipes laid in stone filling (Stones & earthworks elsewhere)	m	54		
2	110mm bend 90°	No	2		
3	110mm Junction 90°	No	1		
4	110mm Stop end	No	1		
	<u>Sundries on perforated pipe systems</u>				
5	Geofabric filter blanket "Kaymat U24" wrapped around stone encasing with 150mm side and 300mm end laps including stitching, or similar approved products	m2	108		
6	19mm Crushed stone encasing to pipes	m3	9		
	SEWERAGE PIPEWORK				
	<u>Pipes</u>				
	<u>PVC Pipes</u>				
7	110mm Pipes laid in trenches (Earthworks elsewhere)	m	41		
	<u>PVC Pipe fittings in ground</u>				
8	110mm Junction 45°.	No	2		
9	110mm PVC Inspection eye 45 degrees	No	1		
	Carried forward			R	
	SECTION NO. 3				
	EXTERNAL WORKS				
	BILL NO. 3				
	STORMWATER, SEWER & WATERSUPPLY SERVICES				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Gulleys, grease traps, etc</u>				
	<u>Gulleys</u>				
10	Standard precast gulley system complete with 410 x 430mm precast gulley embedded on to ground surface with mortar, including iron grating 110mm and 110mm uPVC trap beneath ground surface sealed to gulley connect to soil drainage, include for earthworks, etc	No	1		
	<u>Inspection chambers, catch pits, etc</u>				
	<u>Inspection chambers</u>				
11	Construct rectangular manhole 1050x890x1000mm deep (Earthworks elsewhere) of 150mm thick surface bedding at bottom, build up with 220mm brick wall until level with surface level, 600x450mm rectangular medium duty cast iron cover lid with frame placed on top of brick walls, plaster around cover to be trowelled smooth on outer edges and seal off neatly against surrounding surface areas, Benching to exposed pipes at bottom to be done at 45°	No	1		
	<u>Connections</u>				
	<u>Connections to service of the local authority</u>				
12	Connection to council/estate grid		Item		
	EARTHWORKS FOR PIPING				
	<u>Pipe trenches (Method A)</u>				
	<u>Pipe trenches</u>				
13	Excavate trenches for pipes not exceeding 1000mm deep, and spoil next to trench.	m3	17		
14	Excavate holes for manholes not exceeding 1500mm deep, and spoil next to hole	m3	2		
15	Cart away surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor. (Allow for bulking)	m3	5		
	Carried forward			R	
	SECTION NO. 3 EXTERNAL WORKS BILL NO. 3 STORMWATER, SEWER & WATERSUPPLY SERVICES				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R
16	Back filling obtained from the excavations and compacted to 93% Mod AASHTO density in trench	m3	13	
	<u>Bedding under and filling around pipes comprising sand, crushed stone, concrete, etc</u>			
17	Import materials & compact to create Class B bedding under pipes 100mm thick	m3	4	
Carried Forward to Sectional Summary: 3				R
SECTION NO. 3				
EXTERNAL WORKS				
BILL NO. 3				
STORMWATER, SEWER & WATERSUPPLY SERVICES				

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 4</u>			
	<u>BOUNDARY WALLS</u>			
	EXCAVATIONS (PROVISIONAL)			
	<u>Excavations for trenches & holes</u>			
	<u>Excavate in earth (pickable material) below reduced or natural ground level and set aside (heap on site) for use as filling (backfilling elsewhere) or carted away (cart away elsewhere) for:</u>			
1	Strip footings to walls not exceeding 2000mm deep	m3	10	
	<u>Extra over pickable material for difficulty excavating in:</u>			
2	Soft rock	m3	1	
	<u>Carting away of excavated materials</u>			
3	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor. (Allow for bulking)	m3	6	
	<u>Risk of collapse of excavations</u>			
4	Sides of trench and hole excavations not exceeding 1500mm deep	m2	32	
	<u>Keeping excavations free of water</u>			
5	Allow for keeping excavations free of water and mud by pumping or bailing		Item	
	<u>Filling, etc</u>			
	<u>Earth filling obtained from the excavations and compacted to 93% Mod AASHTO density:</u>			
6	Backfilling to trenches, holes, etc	m3	4	
	<u>Compaction of surfaces</u>			
	Carried forward		R	
	SECTION NO. 3			
	EXTERNAL WORKS			
	BILL NO. 4			
	BOUNDARY WALLS AND FENCING			

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

	Brought forward			R	
	<u>Compaction of ground & filling surface areas etc. breaking down oversize materials adding suitable material where necessary and compacting to 98% Mod AASHTO density</u>				
7	In bottom of trenches and bases	m2	10		
	CONCRETE, FORMWORK & REINFORCING				
	<u>Concrete (with 19mm Stone), cast to excavated surfaces</u>				
	<u>20Mpa unreinforced concrete</u>				
8	Strip footings	m3	2		
	<u>Concrete (with 19mm Stone), cast to brickwork/formwork</u>				
	<u>25Mpa unreinforced concrete</u>				
9	In cavity walls infill in foundations	m3	3		
	Bar reinforcement				
	<u>Mild tensile steel reinforcement to structural concrete work</u>				
10	8-40mm Diameter bars	t	0.1		
	<u>Mesh placed in walls</u>				
11	High tensile mesh fabric reinforcement ref. 193 in cavity concrete walls. (Measured nett)	m2	29		
	MASONRY				
	Brickwork				
	<u>Hollow walls</u>				
12	330mm Cavity wall consisting of two half brick skins with concrete cavity in foundations.(Concrete cavity infill measured elsewhere)	m2	29		
	Carried forward			R	
	SECTION NO. 3				
	EXTERNAL WORKS				
	BILL NO. 4				
	BOUNDARY WALLS AND FENCING				

-82-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Brought forward			
	<u>One coat 1:4.5 cement scratch plaster wood float finished on:</u>		
19	Vertical brick surfaces	m2	82
20	Narrow widths not exceeding 300mm wide to brickwork	m	16
TILES			
<u>Stone cladding</u>			
	<u>Approved (Allow PC amount of R 200/m2) stone cladding fixed to walls as per approved method of installation</u>		
21	To plastered walls	m2	35
PAINTWORK			
<u>To walls</u>			
	<u>Prepare, stop and paint one coat plaster primer "Dulux trade alkali resistant" and two coats "Dulux weatherguard smooth base 7" (colour to be selected), or similar approved products</u>		
22	Plastered surfaces (Standard base)	m2	71

Carried Forward to Sectional Summary: 3

SECTION NO. 3
 EXTERNAL WORKS
 BILL NO. 4
 BOUNDARY WALLS AND FENCING

R

R

-84-

-85-

CONSTRUCTION OF NEW EMERGENCY CONTROL CENTRE MOSSELBAY
BILLS OF QUANTITIES
MAIN CONTRACT

Section No	FINAL SUMMARY	Page No	Amount
1	PRELIMINARIES & GENERAL	8	
2	BUILDING WORKS	71	
3	EXTERNAL WORKS	84	
4	PROVISIONAL AMOUNTS	85	
	SUB TOTAL		R
	15% VALUE ADDED TAX		R
	Carried to Form of Tender		R