

ADH. OMADHOO**SUMMARY OF BILL OF QUANTITIES**

NO	BILL	QUANTITY	TOTAL (MVR)	USD (15.42)
1	GENERAL COMPONENTS	-		
2	GUARD ROOM A	1		
3	OFFICE A	1		
4	SHED A	1		
	GRAND TOTAL			

BOQ GENERAL COMPONENTS

SUMMARY OF BILL OF QUANTITIES

NO	BILL	TOTAL (MVR)
1	PRELIMINARIES	
2	GROUND WORKS	
3	CONCRETE WORKS	
4	MASONRY AND PLASTERING	
5	METAL WORKS	
6	PAINTING	
7	ELECTRICAL , IT & HVAC INSTALLATION	
8	HYDRAULICS & DRAINAGE	
9	OTHER WORKS	
	GRAND TOTAL	

PROJECT: ISWMC - WASTE MANAGEMENT PROJECT ZONE 3
 CLIENT: MINISTRY OF ENVIRONMENT

GENERAL COMPONENTS DETAILS

IETM NO:	DESCRIPTION	QTY	UNIT	RATES REDUCED	TOTAL IN MVR
1	Bill No. 01				
1.1	<u>PRELIMINARIES</u>				
	GENERAL				
	<i>Abbreviations</i>				
	m - meter				
	No - numbers				
	m3 - cubic meter				
	m2 - square meter				
	Lm - Linear meter				
	t - tonnes				
	incl - including				
	mm - millimeter				
	dia - diameter				
	SS - Stainless Steel				
	GI - Galvanized Iron				
1.2	SITE MANAGEMENT COSTS				
1.2.1	Allow for all on and off site management costs including costs of foreman and assistants, temporary services, telephone, fax, hoardings, fences and similar items.	1.00	Item		
1.3	SITE ESTABLISHMENT				
1.3.1	Allow for mobilization and demobilization				
1.3.2	Allow for relocation of any existing waste to a temporary location identified by the island council. Such waste should be brought back to center after completion of works	1.00	Item		
1.4	SERVICES AND FACILITIES				
1.4.1	Provision and maintenance of services and facilities such as Water, power supply, lighting and fuel required for the project.	3.00	Months		
1.5	TEMPORARY FENCING AND HOARDING				
1.5.1	Supply, erect and maintenance of a fence through out the construction period and hoarding all along the perimeter of the site.	1.00	Item		
1.6	SAFETY ON SITE				
1.6.1	Safety on site:- Providing and maintaining adequate safety measure on site for all workers and all authorized visitors on site and protecting adjoining properties and people against falling objects or other with regard to the construction works				
1.7	SIGN BOARD				
1.7.1	Allow for project sign board on site. (1 sqm, printed canvas on 10mm plywood)	1.00	Item		
1.8	CLEANING UPON COMPLETION				
1.8.1	Cleaning the site upon completion of all works.	1.00	Item		
TOTAL OF BILL NO. 01 (PRELIMINARIES)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
2	Bill no. 02				
2.1	<u>GROUND WORKS</u>				
2.1.1	GENERAL				
	(a) Rates shall include for: leveling, grading, trimming, compacting to faces of excavation, keep sides plumb, backfilling, consolidating and disposing surplus soil.				

2.1.2	Excavation quantities are measured to the faces of concrete members. Rates shall include for all additional excavation required to place the formwork.				
2.1.3	Filling rates shall include for: leveling, grading, trimming and compacting.				
2.1.4	Water proofing and damproofing rates shall include for: dressing around and sealing to all penetrations.				
2.2	SITE CLEARING				
2.2.1	Clear the area of site from rubbish and vegetable matters, stumps, roots etc. (Demolition of existing building shall be included)	1.00	item		
2.2.2	Allow for relocation of any existing waste to a temporary location identified by the island council. Such waste should be brought back to center after completion of works.	1.00	Item		
2.3	PROTECTION OF EXISTING FOUNDATIONS				
2.3.1	Protecting foundations of adjacent houses, by using the method of foundation protection as specified by the engineer and drawing.				
2.4	EXCAVATION				
2.4.1	Excavation quantities are measured to the faces of concrete members. Rates shall include for all additional excavation required to place the formwork, back fill, dewatering and others				
2.4.2	Excavation for concrete only slabs	13.05	m ³		
2.4.3	Excavation for hazardous container concrete slab	4.35	m ³		
2.4.4	Excavation for perimeter fence including gate	14.11	m ³		
2.4.5	Excavation for water tank foundation	0.98	m ³		
2.4.6	Excavation for light post footing	1.43	m ³		
2.5	BACK FILLING				
2.5.1	(a) Rates shall include for: leveling, grading, trimming, compacting and similar.				
2.5.2	(b) Ground need to be compacted to the required density by the consultant.				
2.5.3	Provisional rate for incidental earth filling dependent on island condition (if site is found too low). Formation level should be decided in consultation with engineer to avoid unnecessary backfilling	10.00	m ³		
2.5.4	Excavation quantities are measured to the faces of concrete members. Rates shall include for all additional excavation required to place the formwork, back fill, dewatering and others				
2.5.5	200 mm thick compacted gravel bed layer to receive damp proof membrane - concrete slab only area	41.82	m ³		
2.6	DAMP PROOF MEMBRANE				
2.6.1	(a) Rates shall include for: dressing around and sealing to all penetrations, laps and turnups				
2.6.2	Polythene damp proof membrane (1000 gauge) laid on blinding layer under concrete slab only area	233.03	m ²		
2.7	DEWATERING AND SHORING				
2.7.1	This item shall include for all the piping, pumps, etc. Water needs to be pumped to an assigned area as per local regulation.	1.00	Item		
TOTAL OF BILL NO. 02 (GROUND WORKS)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
3	Bill no. 03				
3.1	CONCRETE WORKS				
3.1	GENERAL				

3.1.1	a) Rate shall include for: placing in position; making good after removal of formwork and casting in all required items; additional concrete required to conform to structural and excavated tolerances.				
3.1.2	b) Mix ratio for reinforced concrete shall be 1:2:3				
3.1.3	c) Concrete quantity is measured to the edges of concrete foundation members. Rates shall be inclusive for any additional concrete required to place the formwork.				
3.2	LEAN CONCRETE				
3.2.1	50mm thick lean concrete under the fence and gate footing and foundation beams with a mix of 1:2:6	2.33	m ³		
3.2.2	50mm thick lean concrete under the water tank foundation with a mix of 1:2:6	2.45	m ³		
3.2.3	50mm thick lean concrete under the leachate gutter with a mix of 1:2:6	1.10	m ³		
3.3	REINFORCED CONCRETE				
3.3.1	In-situ reinforced concrete to:				
3.3.2	Add water proofing compound to concrete mix for walls, columns, footing and cover slab on or below GL				
3.3.3	Concrete Slab Only				
3.3.3.1	Slab including edge and mid beams (as given)	34.71	m ³		
3.3.4	Concrete Slab For Hazardous Container				
3.3.4.1	Slab including edge beams (as given)	5.88	m ³		
3.3.5	Fence				
3.3.5.1	Foundation Beam 200 x 350 mm	8.55	m ³		
3.3.5.2	Column 200 x 200 mm	1.76	m ³		
3.3.6	Gate				
3.3.6.1	Footing 600 x 650 x 350 mm	0.25	m ³		
3.3.6.2	Column 300 x 300 mm	0.51	m ³		
3.3.7	Water Tank Foundation				
3.3.7.1	Foundation (as given)	1.60	m ³		
3.3.8	Light Post Footing				
3.3.8.1	Footing (as given)	1.51	m ³		
3.3.9	Leachate Gutter				
3.3.9.1	Gutter	6.67	m ³		

TOTAL OF BILL NO. 03 (CONCRETE WORKS)
(CARRIED OVER TO THE GENERAL SUMMARY)

5	Bill no. 04				
5	MASONRY AND PLASTERING				
5.1	GENERAL				
5.1.1	Rates shall include for: cleaning out cavities, forming rebated reveals and pointing and cleaning down to reveals where necessary; fractional size blocks, all necessary machine cutting, cutting or forming chases or edges of floor slabs, cutting or leaving holes and openings as recesses for and building in pipes, conduits, sleeves and similar as required for all trades; leaving surfaces rough or raking out joints for plastering and flashings, bedding frames or plates, building in joists, bearers or similar, temporary supports to openings, templates, reinforcement in walls and for all necessary making good.				
5.1.2	Cement solid block, laid on and incl. mortar tie rods, compression joint gap filler, nylon/plastic mesh as specified				
5.1.3	Cement plastering on walls and concrete surfaces as specified incl. wire mesh at the joints of concrete surfaces and walls				

5.1.4	Masonry brick should be salt free PWS / Municipalty solid bricks.				
5.2	CEMENT BLOCK WORK				
5.2.1	150mm wide solid block wall on cement plastered and painted finish, laid on and incl. 1:4 Cement Mortar, tie rods, compression gap filler, nylon / plastic mesh as specified.				
5.2.2	Fence				
5.2.2.1	Half wall	101.14	m ²		
5.2.3	PLASTERING				
5.2.3.1	a) 24mm cement plastering on FENCE WALL and concrete surfaces with 1:4 Cement mortar mix as specified incl. wire mesh at joints of concrete surfaces and walls (first, second coats).				
5.2.3.2	Fence	219.89	m ²		
TOTAL OF BILL NO. 04 (MASONRY AND PLASTERING)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
6	Bill no. 05				
6.1	<u>METAL WORKS</u>				
6.1	GENERAL				
6.1.1	a) Rates shall include for: all fabrication work, welding, marking, drilling for bolts incl. steel Flanges, bolts, nuts and any type of washer, riveted work, counter sinking and tapping for bolts or machine screws.				
6.1.2	b) Rates shall include for fabrication and erection and temporary supports and fixing into position.				
6.2	Perimeter Fencing				
6.2.1	Rate shall include for installing perimeter fence including the wire mesh, GI pipes (concrete components are given under Concrete Works)				
6.2.2	3.05 m long Dia 50 mm GI pipe for fence columns	134.16	m		
6.2.3	Dia 35 mm GI pipe for fence wire mesh	329.83	m		
6.2.4	Wire mesh for fence	189.54	m ²		
6.2.5	Gates	1.00	nos		
TOTAL OF BILL NO. 05 (METAL WORKS)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
7	Bill no. 06				
7.1	<u>PAINTING</u>				
7.1	GENERAL				
7.1.1	a) Rates shall include for: the provision, erection and removal of scaffolding, preparation, rubbing down between coats and similar work, the protection and / or making floors, fittings and similar work, removing and replacing door and window furniture				
7.1.2	b) All painting work shall be carried in accordance with the specifications of "SKK or Equivalent"				
7.1.3	c) Colour and quality shall be approved prior to work.				
7.2	WALLS				
7.2.1	Fence Walls				
7.2.1.1	Oil-Based paint finish				
7.2.1.2	1 coat of wall sealer, 1 coat of textured & 2 coats of paints on external walls	219.89	m ²		
TOTAL OF BILL NO. 06 (PAINTING)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
8	Bill no. 07				
8.1	<u>ELECTRICAL . IT & HVAC INSTALLATION</u>				
8.1	GENERAL				

8.1.1	(a) Rates shall include for: screws, nails, bolts, nuts, standard cable fixing or supporting clips, brackets, straps, rivets, plugs and all incidental accessories				
8.1.2	(b) Rates for electrical conduits, fittings, equipment and similar items shall include for: all fixings to various building surfaces				
8.1.3	(d) Light end and switch end of wiring together measured as one point				
8.1.4	(e) A point wiring for power points is measured as one point for each socket outlet; other end of wire is not included in the quantity.				
8.1.5	(h) The Contractor shall provide shop drawings for approval before proceeding with any works				
8.1.6	(i) All electrical wires, cables, fittings, fixtures, accessories & similar shall be approved by the Consultant				
8.2	ELECTRICAL BOARDS & PANELS				
8.2.1	Complete installation, including for all connections, earthing, painting, testing and similar of:				
8.2.2	Three phase main power distribution box with connections from the mains including meters, cut-off fuse and other accessories to be located in the panel room at ground floor to electrical engineers specification upto STELCO & MEB standard.	1.00	Nos		
8.3	ELECTRICAL WIRING				
8.3.1	Electrical wiring with copper conductor cable in conduits in walls and concrete as per government regulations.				
8.3.2	Wiring to light post	8.00	Nos		
8.3.3	Wiring to DB	1.00	Nos		
8.4	LIGHTING, POWER POINTS & FANS				
8.4.1	Supply and fixing of, fans, lights, switches, sockets and similar				
8.4.2	Installation of light post(s) as given	8.00	Nos		
TOTAL OF BILL NO. 07 (ELECTRICAL , IT & HVAC INSTALLATION)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
9	Bill no. 08				
9.1	HYDRAULICS & DRAINAGE				
9.1.1	PREAMBLE NOTES (a) Rates shall include for sockets, running joints, connectors, elbows, junctions, valves, reducers, expansion joints, backnuts and similar, incidental fittings, clips saddles, brackets, straps, hangers, screws, nails and fixing complete, including cutting and forming holes, excavating, laying pipes and backfilling trenches.				
9.1.2	(b) All pipe work and fittings shall be high pressure PVC				
9.1.3	(c) Rates shall include for supply and fixing of all pipes				
9.1.4	(d) All sanitary fixtures used shall be of superior quality and approved by the architect/consultant on submission of samples.				
9.1.5	(e) Sanitary fixtures complete including brackets, flush pipes, valves, overflows, plugs and washers, as specified.				
9.2	INTERNAL PLUMBING - COLD WATER				
9.2.1	Internal plumbing to all toilets and kitchen incl. supply and laying of pipes.	1.00	Item		

9.2.2	Fresh water or utility water connection to all toilets and kitchen including the necessary catch pits and manholes as necessary. Rates shall include for supply and laying of pipes including clean-outs as necessary	1.00	Item		
9.3	EXTERNAL PLUMBING				
9.3.1	Connection to Main sewer line	1.00	Item		
9.3.2	Connection to MWSC water meters if available only	1.00	Nos		
9.3.3	Waste water and sewage connection from all the toilets and kitchen including the necessary catch pits and manholes as necessary. Rates shall include for supply and laying of pipes including clean-outs as necessary	1.00	Item		
TOTAL OF BILL NO. 08 (HYDRAULICS & DRAINAGE)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
10	Bill no. 09				
	OTHER WORKS				
10.1	Water Tank				
10.1.1	Supply and installation of 7800 liter water tank including plumbing	1.00	nos		
10.2	Ground Water Well				
10.2.1	Installation of ground water well on site as given	1.00	nos		
10.3	Septic Tank				
10.3.1	Construction of septic tank on site as given	1.00	nos		
10.4	SIGN BOARD				
10.4.1	Supply and installation of permanent signboards and signages upon completion of project. (1 sqm)	1.00	Item		
10.5	SITE SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN				
10.5.1	Implementation of the site specific environmental management plan for the construction of island waste management center	1.00	Item		
TOTAL OF BILL NO. 09 (OTHER WORKS)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					

TOTAL

BOQ GUARD ROOM A

SUMMARY OF BILL OF QUANTITIES

NO	BILL	TOTAL (MVR)
1	GROUND WORKS	
2	CONCRETE WORKS	
3	MASONRY AND PLASTERING	
4	CEILING	
5	DOORS AND WINDOWS	
6	TILING WORKS	
7	PAINTING	
8	ELECTRICAL , IT & HVAC INSTALLATION	
9	HYDRAULICS & DRAINAGE	
10	ROOFING	
	GRAND TOTAL	

PROJECT: ISWMC - WASTE MANAGEMENT PROJECT ZONE 3
 CLIENT: MINISTRY OF ENVIRONMENT

GUARD ROOM A DETAILS

IETM NO:	DESCRIPTION	QTY	UNIT	RATES REDUCED	TOTAL IN MVR
1	Bill no: 01				
	<u>GROUND WORKS</u>				
1.1	GENERAL				
1.1.1	(a) Rates shall include for: leveling, grading, trimming, compacting to faces of excavation, keep sides plumb, backfilling, consolidating and disposing surplus soil.				
1.1.2	Excavation quantities are measured to the faces of concrete members. Rates shall include for all additional excavation required to place the formwork.				
1.1.3	Filling rates shall include for: leveling, grading, trimming and compacting.				
1.1.4	Water proofing and damproofing rates shall include				
	for: dressing around and sealing to all penetrations.				
1.2	EXCAVATION				
1.2.1	Excavation quantities are measured to the faces of concrete members. Rates shall include for all additional excavation required to place the formwork, back fill, dewatering and others				
1.2.2	Excavation for foundation including foundation beams (Foundation depth 600 mm and additional 50 mm for lean concrete)	1.35	m ³		
1.3	BACK FILLING				
1.3.1	(a) Rates shall include for: leveling, grading, trimming, compacting and similar.				
1.3.2	(b) Ground need to be compacted to the required density by the consultant.				
1.3.3	Back filling to foundations	1.00	item		
1.3.4	200 mm thick compacted gravel bed layer to receive damp proof membrane	12.00	m ²		
1.4	DAMP PROOF MEMBRANE				
1.4.1	(a) Rates shall include for: dressing around and sealing to all penetrations, laps and turnups				
1.4.2	Polythene damp proof membrane (1000 gauge) laid on blinding layer under ground floor slab	12.48	m ²		
TOTAL OF BILL NO: 01 (GROUND WORKS) <i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
2	Bill no. 02				
	<u>CONCRETE WORKS</u>				
2.1	GENERAL				
2.1.1	a) RATE SHALL INCLUDE FOR: REINFORCEMENT AS SHOWN AND THE NECESSARY FORMWORK, placing in position; making good after removal of formwork and casting in all required items; additional concrete required to conform to structural and excavated tolerances.				
2.1.2	b) Mix ratio for reinforced concrete shall be 1:2:3				
2.1.3	c) Concrete quantity is measured to the edges of concrete foundation members. Rates shall be inclusive for any additional concrete required to place the formwork.				
2.2	LEAN CONCRETE				
2.2.1	50mm thick lean concrete under footings and foundation beams with a mix of 1:2:6	0.17	m ³		
2.3	REINFORCED CONCRETE				

2.3.1	In-situ reinforced concrete to:				
2.3.2	Add water proofing compound to concrete mix for walls and cover slab below GL				
2.3.3	Foundation				
2.3.3.1	Pad Footing F1, 300 x 500 x 500 mm	0.30	m ³		
2.3.3.2	Foundation Beam FB1, 200 x 300 mm	0.72	m ³		
2.3.4	Ground Floor				
2.3.4.1	RCC Ground Slab 100 mm thick with T10@200 mm c/c (Rate should include reinforcement and required shuttering for edge of slab)	1.25	m ³		
2.3.4.2	Columns C1, 200 x 200 mm	0.52	m ³		
2.3.4.3	Roof Beams RB1, 200 x 350 mm	1.05	m ³		
2.4	OTHER CONCRETE WORKS				
2.4.1	Wash area 100 thick low wall x 3 and 100 thick floor	0.37	m ³		
2.4.2	Rate shall include for: dressing around and sealing to all penetrations				
2.4.3	Apply crystalline or equivalent type waterproofing material to the surface of wash area and toilets in accordance with the specifications and manufacturer's instructions	1.00	Item		
TOTAL OF BILL NO. 02 (CONCRETE WORKS)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
3	Bill no. 03				
3	MASONRY AND PLASTERING				
3.1	GENERAL				
3.1.1	Rates shall include for: cleaning out cavities, forming rebated reveals and pointing and cleaning down to reveals where necessary; fractional size blocks, all necessary machine cutting, cutting or forming chases or edges of floor slabs, cutting or leaving holes and openings as recesses for and building in pipes, conduits, sleeves and similar as required for all trades; leaving surfaces rough or raking out joints for plastering and flashings, bedding frames or plates, building in joists, bearers or similar, temporary supports to openings, templates, reinforcement in walls and for all necessary making good.				
3.1.2	Cement solid block, laid on and incl. mortar tie rods, compression joint gap filler, nylon/plastic mesh as specified				
3.1.3	Cement plastering on walls and concrete surfaces as specified incl. wire mesh at the joints of concrete surfaces and walls				
3.1.4	Masonry brick should be salt free PWS / Municipalty solid bricks.				
3.2	CEMENT BLOCK WORK				
3.2.1	150mm wide solid block wall on cement plastered and painted finish, laid on 1:4 Cement Mortar, tie rods, compression gap filler, nylon / plastic mesh as specified.				
3.2.2	External walls	30.00	m ²		
3.3	PLASTERING				
3.3.1	a) 18mm cement plastering on EXTERNAL WALLS and concrete surfaces with 1:4 Cement mortar mix as specified incl. wire mesh at joints of concrete surfaces and walls (first, second coats).	40.00	m ²		

3.3.2	b) 12mm cement plastering on INTERNAL WALLS including wash area and concrete surfaces with 1:4 Cement mortar mix as specified incl. wire mesh at joints of concrete surfaces and walls (one coat).	43.51	m ²		
3.4	CEMENT SCREED FINISH				
3.4.1	35mm thick Cement screeding on the concrete floor with 1:4 cement mortar mix incl. float finish to receive the tiles	0.43	m ³		
TOTAL OF BILL NO. 03 (MASONRY AND PLASTERING) (CARRIED OVER TO THE GENERAL SUMMARY)					
4	Bill no. 04 CEILING				
4.1	GENERAL				
4.1.1	a) Rates shall include for: all labour in framing, notching and fitting around projections, pipes, light fittings, hatches, grilles and similar and complete with cleats, packers, wedges and timber bedding etc similar and all nails and screws.				
4.1.2	b) Rate shall include for: timber priming and all painting as specified in the drawing				
4.1.3	c) Rates shall include for fabrication and erection and temporary supports and fixing into position.				
4.2	CEILING FOR BATHROOM/ SHOP / OFFICE				
4.2.1	Ceiling (Boral) for office inside	9.00	m ²		
4.2.2	Ceiling (exterior) for roof soffit	6.20	m ²		
TOTAL OF BILL NO. 04 (CEILING) (CARRIED OVER TO THE GENERAL SUMMARY)					
5	Bill no. 05 DOORS AND WINDOWS				
5.1	GENERAL				
5.1.2	a) Rates shall include for: locks, latches, closers, push plates, pull handles, bolts, kick plates, hinges and all door & window hardware.				
5.1.3	b) All Aluminum windows shall be white powder coated 60-80 micron aluminum.				
5.1.4	c) All timber doors shall be solid timber paneled door with paint finish				
5.1.5	d) All glazing shall be 6mm clear glass.				
5.2	ALUMINUM DOOR & WINDOW UNITS				
5.2.1	Door with window D1	1.00	nos		
5.2.2	Window W1	1.00	nos		
TOTAL OF BILL NO. 05 (DOORS AND WINDOWS) (CARRIED OVER TO THE GENERAL SUMMARY)					
6	Bill no. 06 TILING WORKS				
6.1	GENERAL				
6.1.1	a) Rates shall include for: fixing, bedding, grouting, pointing, finishing and any other similar works to ensure the required finish.				
6.1.2	Colour combination of tiles, pattern and texture may vary.				
6.2	FLOOR TILES				
6.2.1	300 X 300 mm Homogeneous floor tiles laid on cement mortar on the General areas	0.43	m ²		
6.3	WALL TILES				
6.3.1	300 X 300 Ceramic Gloss high quality tiles upto full wall height with border tiles etc				
6.3.1.1	Wash area backsplash	4.80	m ²		
6.3.1.2	Wash area low wall	3.78	m ²		
6.3.1.3	Wash area floor	1.76	m ²		
6.4	SKIRTING TILE				

6.4.1	600mm x 100mm High Homogenous skirting tile	15.00	m		
TOTAL OF BILL NO. 06 (TILING WORKS)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
7	Bill no. 07				
	PAINTING				
7.1	GENERAL				
7.1.1	a) Rates shall include for: the provision, erection and removal of scaffolding, preparation, rubbing down between coats and similar work, the protection and / or making floors, fittings and similar work, removing and replacing door and window furniture				
7.1.2	b) All painting work shall be carried in accordance with the specifications of "SKK or Equivalent"				
7.1.3	c) Colour and quality shall be approved prior to work.				
7.2	WALLS				
7.2.1	External Walls				
7.2.1.1	Oil-Based paint finish				
7.2.1.2	<u>1 coat of wall sealer, 1 coat of textured & 2 coats of paints on external walls</u>	40.00	m ²		
7.2.2	Internal Walls				
7.2.2.1	Emulsion paint finish on plastered surfaces of on internal walls.				
7.2.2.2	<u>1 coat of wall sealer, & 2 coats of paints</u>	43.51	m ²		
7.3	CEILING				
7.3.1	<u>Putty with emulsion paint finish</u>				
7.3.2	Internal ceiling	9.00	m ²		
7.3.3	External ceiling	6.20	m ²		
TOTAL OF BILL NO. 07 (PAINTING)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
8	Bill no. 08				
	<u>ELECTRICAL , IT & HVAC INSTALLATION</u>				
8.1	GENERAL				
8.1.1	(a) Rates shall include for: screws, nails, bolts, nuts, standard cable fixing or supporting clips, brackets, straps, rivets, plugs and all incidental accessories				
8.1.2	(b) Rates for electrical conduits, fittings, equipment and similar items shall include for: all fixings to various building surfaces				
8.1.3	(d) Light end and switch end of wiring together measured as one point				
8.1.4	(e) A point wiring for power points is measured as one point for each socket outlet; other end of wire is not included in the quantity.				
8.1.5	(h) The Contractor shall provide shop drawings for approval before proceeding with any works				
8.1.6	(i) All electrical wires, cables, fittings, fixtures, accessories & similar shall be approved by the Consultant				
8.2	ELECTRICAL BOARDS & PANELS				
8.2.1	Complete installation, including for all connections, earthing, painting, testing and similar of:				
8.2.2	Distribution Boards	1.00	Nos		
8.3	ELECTRICAL WIRING				
8.3.1	Electrical wiring with copper conductor cable in conduits in walls and concrete as per government regulations.				
8.3.2	Wiring to lights & fans	5.00	Nos		

8.3.3	Wiring to power points	6.00	Nos		
8.3.4	Wiring to DB	1.00	Nos		
8.3.5	Wiring to mains or power distribution box	1.00	Nos		
8.4	LIGHTING, POWER POINTS & FANS				
8.4.1	Supply and fixing of, fans, lights, switches, sockets and similar				
8.4.2	Ceiling recessed E/S down light	2.00	Nos		
8.4.3	Waterproof spotlight LV halogen	2.00	Nos		
8.4.4	Well water pump	1.00	Nos		
8.4.5	Wall socket outlet Double Gang (2x13Amp)	2.00	Nos		
8.4.6	Wall socket outlet Single Gang (Splash proof)	1.00	Nos		
8.4.7	Service socket outlet (1x13Amp)	1.00	Nos		
8.4.8	Ceiling fan 1.2m dia with Dimmer	1.00	Nos		
8.4.9	Emergency light (rechargeable)	1.00	Nos		
8.4.10	One Way Switch 01 Gang	1.00	Nos		
8.4.11	One Way Switch 02 Gang	1.00	Nos		

TOTAL OF BILL NO. 08 (ELECTRICAL, IT & HVAC INSTALLATION)
(CARRIED OVER TO THE GENERAL SUMMARY)

9	Bill no. 09				
9.1	HYDRAULICS & DRAINAGE				
9.1.1	PREAMBLE NOTES (a) Rates shall include for sockets, running joints, connectors, elbows, junctions, valves, reducers, expansion joints, backnuts and similar, incidental fittings, clips saddles, brackets, straps, hangers, screws, nails and fixing complete, including cutting and forming holes, excavating, laying pipes and backfilling trenches.				
9.1.2	(b) All pipe work and fittings shall be high pressure PVC				
9.1.3	(c) Rates shall include for supply and fixing of all pipes				
9.1.4	(d) All sanitary fixtures used shall be of superior quality and approved by the architect/consultant on submission of samples.				
9.1.5	(e) Sanitary fixtures complete including brackets, flush pipes, valves, overflows, plugs and washers, as specified.				
9.2	INTERNAL PLUMBING - COLD WATER				
9.2.1	Internal plumbing to all toilets and kitchen incl. supply and laying of pipes.	1.00	Item		
9.2.2	Fresh water or utility water connection to all toilets and kitchen including the necessary catch pits and manholes as necessary. Rates shall include for supply and laying of pipes including clean-outs as necessary	1.00	Item		
9.3	EXTERNAL PLUMBING				
9.3.1	Waste water and sewage connection from all the toilets and kitchen and leachate tank including the necessary catch pits and manholes as necessary. Rates shall include for supply and laying of pipes including clean-outs as necessary	1.00	Item		
9.4	SANITARY FIXTURES & ACCESSORIES				
9.4.1	Sanitary fixtures complete including brackets, stop valves, fittings etc. All sanitary fittings shall be as given in product manual.				
9.4.2	Faucet	3.00	Nos		
9.4.3	Floor drain 100 mm dia	1.00	Nos		
9.5	RAINWATER DISCHARGE PIPE				
9.5.1	(a) Rates shall include for excavation, maintaining faces of drain pipe trenches and pits, backfilling, disposal of surplus soil, bends, junctions, reducers, expansion joints and all joints and other incidental materials.				

9.5.2	75 mm Ø Rainwater discharge pipe from roof, rates shall include for supply and installation of piping from roof.	1.00	Item		
TOTAL OF BILL NO. 09 (HYDRAULICS & DRAINAGE)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
10	Bill no. 10				
10.1	ROOFING				
10.1.1	GENERAL				
	Lysaght roofing sheet. Rate shall include all necessary	15.86	m ²		
	laps, bolts, fastening, fixtures and sealing of joints				
10.1.2	Insulation - 50 thick glass wool quilt both sides	15.86	m ²		
	aluminum				
10.1.3	50x150 timber rafters	24.00	m		
10.1.4	50x38 timber battens	30.40	m		
10.1.5	Gutter	3.80	m		
10.1.6	25x180 timber fascia	3.80	m		
10.1.7	Flashing	12.15	m		
TOTAL OF BILL NO. 10 (ROOFING)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					

BOQ OFFICE A

SUMMARY OF BILL OF QUANTITIES

NO	BILL	TOTAL (MVR)
1	GROUND WORKS	
2	CONCRETE WORKS	
3	MASONRY AND PLASTERING	
4	CEILING	
5	DOORS AND WINDOWS	
6	TILING WORKS	
7	PAINTING	
8	ELECTRICAL , IT & HVAC INSTALLATION	
9	HYDRAULICS & DRAINAGE	
10	ROOFING	
	GRAND TOTAL	

PROJECT: ISWMC - WASTE MANAGEMENT PROJECT ZONE 3
 CLIENT: MINISTRY OF ENVIRONMENT

OFFICE A DETAILS

IETM NO:	DESCRIPTION	QTY	UNIT	RATE REDUCED	TOTAL IN MVR
Bill No: 01					
1 GROUND WORKS					
1.1 GENERAL					
1.1.1	(a) Rates shall include for: leveling, grading, trimming, compacting to faces of excavation, keep sides plumb, backfilling, consolidating and disposing surplus soil.				
1.1.2	Excavation quantities are measured to the faces of concrete members. Rates shall include for all additional excavation required to place the formwork.				
1.1.3	Filling rates shall include for: leveling, grading, trimming and compacting.				
1.1.4	Water proofing and damproofing rates shall include for: dressing around and sealing to all penetrations.				
1.2 EXCAVATION					
1.2.1	Excavation quantities are measured to the faces of concrete members. Rates shall include for all additional excavation required to place the formwork, back fill, dewatering and others				
1.2.2	Excavation for foundation including foundation beams (Foundation depth 600 mm and additional 50 mm for lean concrete)	3.90	m ³		
1.3 BACK FILLING					
1.3.1	(a) Rates shall include for: leveling, grading, trimming, compacting and similar.				
1.3.2	(b) Ground need to be compacted to the required density by the consultant.				
1.3.3	Back filling to foundations	1.00	item		
1.3.3	200 mm thick compacted gravel bed layer to receive damp proof membrane	10.76	m ³		
1.4 DAMP PROOF MEMBRANE					
1.4.1	(a) Rates shall include for: dressing around and sealing to all penetrations, laps and turnups				
1.4.2	Polythene damp proof membrane (1000 gauge) laid on blinding layer under ground floor slab	53.80	m ²		
TOTAL OF BILL NO: 01 (GROUND WORKS) <i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
Bill no. 02					
2 CONCRETE WORKS					
2.1 GENERAL					
2.1.1	a) Rate shall include for: placing in position; making good after removal of formwork and casting in all required items; additional concrete required to conform to structural and excavated tolerances.				
2.1.2	b) Mix ratio for reinforced concrete shall be 1:2:3				
2.1.3	c) Concrete quantity is measured to the edges of concrete foundation members. Rates shall be inclusive for any additional concrete required to place the formwork.				
2.2 LEAN CONCRETE					
2.2.1	50mm thick lean concrete under the raft footing with a mix of 1:2:6	0.46	m ³		
2.3 REINFORCED CONCRETE					
2.3.1	In-situ reinforced concrete to:				
2.3.2	Add water proofing compound to concrete mix for walls and cover slab below GL				
2.3.3 Foundation					
2.3.3.1	Pad Footing F1, 300 x 500 x 500 mm	0.68	m ³		
2.3.3.2	Foundation Beam FB1, 200 x 300 mm	2.41	m ³		
2.3.4	Ground Floor				

2.3.4.1	RCC Ground Slab 100 mm thick with T10@200 mm c/c (Rate should include reinforcement and required shuttering for edge of slab)	5.38	m ³		
2.3.4.2	Columns C1, 200 x 200 mm	1.11	m ³		
2.3.4.3	Roof Beams RB1, 200 x 350 mm	2.41	m ³		
2.4	OTHER CONCRETE WORKS				
2.4.1	Rate shall include for: dressing around and sealing to all penetrations				
2.4.2	Apply crystalline or equivalent type waterproofing material to the surface of balcony, toilets & washing areas in accordance with the specifications and manufacturer's instructions	1.00	Item		
TOTAL OF BILL NO. 02 (CONCRETE WORKS)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
Bill no. 03					
3	MASONRY AND PLASTERING				
3.1	GENERAL				
3.1.1	Rates shall include for: cleaning out cavities, forming rebated reveals and pointing and cleaning down to reveals where necessary; fractional size blocks, all necessary machine cutting, cutting or forming chases or edges of floor slabs, cutting or leaving holes and openings as recesses for and building in pipes, conduits, sleeves and similar as required for all trades; leaving surfaces rough or raking out joints for plastering and flashings, bedding frames or plates, building in joists, bearers or similar, temporary supports to openings, templates, reinforcement in walls and for all necessary making good.				
3.1.2	Cement solid block, laid on and incl. mortar tie rods, compression joint gap filler, nylon/plastic mesh as specified				
3.1.3	Cement plastering on walls and concrete surfaces as specified incl. wire mesh at the joints of concrete surfaces and walls				
3.1.4	Masonry brick should be salt free PWS / Municipality solid bricks.				
3.2	CEMENT BLOCK WORK				
3.2.1	External Walls				
3.2.1.1	150mm wide solid block wall on cement plastered and painted finish, laid on and incl. 1:4 Cement Mortar, tie rods, compression gap filler, nylon / plastic mesh as specified.	49.00	m ²		
3.2.2	INTERNAL WALLS				
3.2.2.1	150 mm wide solid blocks, laid on and incl. 1:4 Cement Mortar, tie rods, compression gap filler, nylon / plastic mesh as specified.	28.95	m ²		
3.2.3	PLASTERING				
3.2.3.1	a) 18mm cement plastering on EXTERNAL WALLS and concrete surfaces with 1:4 Cement mortar mix as specified incl. wire mesh at joints of concrete surfaces and walls (first, second coats).	66.00	m ²		
3.2.3.2	b) 12mm cement plastering on INTERNAL WALLS and concrete surfaces with 1:4 Cement mortar mix as specified incl. wire mesh at joints of concrete surfaces and walls (one coat).	122.00	m ²		
3.2.4	CEMENT SCREED FINISH				
3.2.4.1	35mm thick Cement screeding on the concrete floor with 1:4 cement mortar mix incl. float finish to receive the tiles	1.87	m ³		
TOTAL OF BILL NO. 03 (MASONRY AND PLASTERING)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
Bill no. 04					
4	CEILING				
4.1	GENERAL				

4.1.1	a) Rates shall include for: all labour in framing, notching and fitting around projections, pipes, light fittings, hatches, grilles and similar and complete with cleats, packers, wedges and timber beeding etc similar and all nails and screws.				
4.1.2	b) Rate shall include for: timber priming and all painting as specified in the drawing				
4.1.3	c) Rates shall include for fabrication and erection and temporary supports and fixing into position.				
4.2	CEILING FOR BATHROOM/ SHOP / OFFICE				
4.2.1	Ceiling board (Boral) for office inside	39.96	m ²		
4.2.2	Ceiling board (exterior) for roof soffit	12.10	m ²		
TOTAL OF BILL NO. 04 (CEILING)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
5	Bill no. 05				
	<u>DOORS AND WINDOWS</u>				
5.1	GENERAL				
5.1.1	a) Rates shall include for: locks, latches, closers, push plates, pull handles, bolts, kick plates, hinges and all door & window hardware.				
5.1.2	b) All Aluminum windows shall be white powder coated 60-80 micron aluminum.				
5.1.3	c) All timber doors shall be solid timber paneled door with paint finish				
5.1.4	d) All glazing shall be 6mm clear glass.				
5.2	ALUMINUM DOOR & WINDOW UNITS				
5.2.1	Door D1	2.00	nos		
5.2.2	Door D2	2.00	nos		
5.2.3	Window W1	8.00	nos		
5.2.4	Ventilation V1	2.00	nos		
TOTAL OF BILL NO. 05 (DOORS AND WINDOWS)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
6	Bill no. 06				
	<u>TILING WORKS</u>				
6.1	GENERAL				
6.1.1	a) Rates shall include for: fixing, bedding, grouting, pointing, finishing and any other similar works to ensure the required finish.				
6.1.2	Colour combination of tiles,pattern and texture may vary.				
6.2	FLOOR TILES				
6.2.1	600 X 600 mm Homogeneous floor tiles laid on cement mortar on the General areas	1.87	m ²		
6.3	TOILET WALL TILES				
6.3.1	300 X 600 Ceramic Gloss high quality tiles upto full wall height with border tiles etc	36.52	m ²		
6.4	SKIRTING TILE				
6.4.1	600mm x 100mm High Homogenous skirting tile	33.40	m		
TOTAL OF BILL NO. 06 (TILING WORKS)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
7	Bill no. 07				
	<u>PAINTING</u>				
7.1	GENERAL				
7.1.1	a) Rates shall include for: the provision, erection and removal of scaffolding, preparation, rubbing down between coats and similar work, the protection and / or making floors, fittings and similar work, removing and replacing door and window furniture				
7.1.2	b) All painting work shall be carried in accordance with the specifications of "SKK or Equivalent"				
7.1.3	c) Colour and quality shall be approved prior to work.				
7.2	EXTERNAL WALLS				
7.2.1	Oil-Based paint finish				
7.2.2	<u>1 coat of wall sealer. 1 coat of textured & 2 coats of paints on external walls</u>	66.00	m ²		

7.3	INTERNAL WALLS				
7.3.1	Emulsion paint finish on plastered surfaces of on internal walls.				
7.3.2	<u>1 coat of wall sealer. & 2 coats of paints</u>	97.60	m ²		
7.4	CEILING				
7.4.1	<u>Putty with emulsion paint finish</u>				
7.4.2	Interior	39.96	m ²		
7.4.3	Exterior	12.10	m ²		
TOTAL OF BILL NO. 07 (PAINTING)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
8	Bill no. 08				
	<u>ELECTRICAL , IT & HVAC INSTALLATION</u>				
8.1	GENERAL				
8.1.1	(a) Rates shall include for: screws, nails, bolts, nuts, standard cable fixing or supporting clips, brackets, straps, rivets, plugs and all incidental accessories				
8.1.2	(b) Rates for electrical conduits, fittings, equipment and similar items shall include for: all fixings to various building surfaces				
8.1.3	(d) Light end and switch end of wiring together measured as one point				
8.1.4	(e) A point wiring for power points is measured as one point for each socket outlet; other end of wire is not included in the quantity.				
8.1.5	(h) The Contractor shall provide shop drawings for approval before proceeding with any works				
8.1.6	(i) All electrical wires, cables, fittings, fixtures, accessories & similar shall be approved by the Consultant				
8.2	ELECTRICAL BOARDS & PANELS				
8.2.1	Complete installation, including for all connections, earthing, painting, testing and similar of:				
8.2.2	Distribution Boards	1.00	Nos		
8.3	ELECTRICAL WIRING				
8.3.1	Electrical wiring with copper conductor cable in conduits in walls and concrete as per government regulations.				
8.3.2	Wiring to lights & fans	16.00	Nos		
8.3.3	Wiring to power points	11.00	Nos		
8.3.4	Wiring to DB	1.00	Nos		
8.3.5	Wiring to mains or power distribution box	1.00	item		
8.4	LIGHTING, POWER POINTS & FANS				
8.4.1	Supply and fixing of, fans, lights, switches, sockets and similar				
8.4.2	Ceiling recessed E/S down light	9.00	Nos		
8.4.3	Waterproof spotlight LV halogen	4.00	Nos		
8.4.4	Wall socket outlet Double Gang (2x13Amp)	7.00	Nos		
8.4.5	Wall socket outlet Single Gang (1x13Amp)	2.00	Nos		
8.4.6	Service socket outlet (1x13Amp)	2.00	Nos		
8.4.7	Ceiling fan 1.2m dia with Dimmer	3.00	Nos		
8.4.8	Emergency light (rechargeable)	2.00	Nos		
8.4.9	One Way Switch 01 Gang	5.00	Nos		
8.4.10	One Way Switch 02 Gang	2.00	Nos		
TOTAL OF BILL NO. 08 (ELECTRICAL , IT & HVAC INSTALLATION)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
9	Bill no. 09				
	<u>HYDRAULICS & DRAINAGE</u>				
9.1	PREAMBLE NOTES				
9.1.1	(a) Rates shall include for sockets, running joints, connectors, elbows, junctions, valves, reducers, expansion joints, backnuts and similar, incidental fittings, clips saddles, brackets, straps, hangers, screws, nails and fixing complete, including cutting and forming holes, excavating, laying pipes and backfilling trenches.				

9.1.2	(b) All pipe work and fittings shall be high pressure PVC				
9.1.3	(c) Rates shall include for supply and fixing of all pipes				
9.1.4	(d) All sanitary fixtures used shall be of superior quality and approved by the architect/consultant on submission of samples.				
9.1.5	(e) Sanitary fixtures complete including brackets, flush pipes, valves, overflows, plugs and washers, as specified.				
9.2	INTERNAL PLUMBING - COLD WATER				
9.2.1	Internal plumbing to all toilets and kitchen incl. supply and laying of pipes.	1.00	Item		
9.2.2	Fresh water or utility water connection to all toilets and kitchen including the necessary catch pits and manholes as necessary. Rates shall include for supply and laying of pipes including clean-outs as necessary	1.00	Item		
9.3	EXTERNAL PLUMBING				
9.3.1	Waste water and sewage connection from all the toilets and kitchen and leachate tank including the necessary catch pits and manholes as necessary. Rates shall include for supply and laying of pipes including clean-outs as necessary	1.00	Item		
9.4	SANITARY FIXTURES & ACCESSORIES				
9.4.1	Sanitary fixtures complete including brackets, stop valves, fittings etc. All sanitary fittings shall be as given in product manual.				
9.4.2	WC Complete	2.00	Nos		
9.4.3	Wash Basin	2.00	Nos		
9.4.4	Wash basin Tap	2.00	Nos		
9.4.5	Muslim Shower	2.00	Nos		
9.4.6	Frameless Mirror 450mm x 450mm high	2.00	Nos		
9.4.7	Floor drain 100 mm dia	2.00	Nos		
9.5	RAINWATER DISCHARGE PIPE				
9.5.1	(a) Rates shall include for excavation, maintaining faces of drain pipe trenches and pits, backfilling, disposal of surplus soil, bends, junctions, reducers, expansion joints and all joints and other incidental materials.				
9.5.2	75 mm Ø Rainwater discharge pipe from roof, rates shall include for supply and installation of piping from roof.	2.00	Item		
TOTAL OF BILL NO. 09 (HYDRAULICS & DRAINAGE)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
10	Bill no. 10				
10.1	ROOFING				
10.1.1	GENERAL				
10.1.1	Lysaght roofing sheet. Rate shall include all necessary laps, fastening, fixtures and sealing of joints	71.20	m ²		
10.1.2	Insulation - 50 thick glass wool quilt both sides aluminum	71.20	m ²		
10.1.3	50x150 timber rafters	72.00	m		
10.1.4	50x38 timber battens	160.20	m		
10.1.5	200x50 timber battens	8.90	m		
10.1.6	Gutter	17.80	m		
10.1.7	25x180 timber fascia	17.80	m		
10.1.8	Lysaght ridge cap	8.90	m		
10.1.9	Flashing	16.00	m		
TOTAL OF BILL NO. 10 (ROOFING)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					

BOQ SHED A

SUMMARY OF BILL OF QUANTITIES

NO	BILL	TOTAL (MVR)
1	GROUND WORKS	
2	CONCRETE WORKS	
3	MASONRY AND PLASTERING	
4	METAL WORKS	
5	ELECTRICAL , IT & HVAC INSTALLATION	
6	HYDRAULICS & DRAINAGE	
7	ROOFING	
	GRAND TOTAL	

PROJECT: ISWMC - WASTE MANAGEMENT PROJECT ZONE 3
 CLIENT: MINISTRY OF ENVIRONMENT

SHED A DETAILS

IETM NO:	DESCRIPTION	QTY	UNIT	RATES REDUCED	TOTAL IN MVR
1	Bill No. 01				
	<u>GROUND WORKS</u>				
1.1	GENERAL				
1.1.1	(a) Rates shall include for: leveling, grading, trimming, compacting to faces of excavation, keep sides plumb, backfilling, consolidating and disposing surplus soil.				
1.1.2	Excavation quantities are measured to the faces of concrete members. Rates shall include for all additional excavation required to place the formwork.				
1.1.3	Filling rates shall include for: leveling, grading, trimming and compacting.				
1.1.4	Water proofing and damproofing rates shall include				
	for: dressing around and sealing to all penetrations.				
1.2	EXCAVATION				
1.2.1	Excavation quantities are measured to the faces of concrete members. Rates shall include for all additional excavation required to place the formwork, back fill, dewatering and others				
1.2.2	Excavation for foundation including foundation beams (Foundation depth 600 mm and additional 50 mm for lean concrete)	16.25	m ³		
1.3	BACK FILLING				
1.3.1	(a) Rates shall include for: leveling, grading, trimming, compacting and similar.				
1.3.2	(b) Ground need to be compacted to the required density by the consultant.				
1.3.3	Back filling to foundations	1.00	item		
1.3.4	200 mm thick compacted gravel bed layer to receive damp proof membrane	33.28	m ³		
1.4	DAMP PROOF MEMBRANE				
1.4.1	(a) Rates shall include for: dressing around and sealing to all penetrations, laps and turnups				
1.4.2	Polythene damp proof membrane (1000 gauge) laid on blinding layer under ground floor slab	179.00	m ²		
TOTAL OF BILL NO. 01 (GROUND WORKS)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
2	Bill no. 02				
	<u>CONCRETE WORKS</u>				
2.1	GENERAL				
2.1.1	a) Rate shall include for: placing in position; making good after removal of formwork and casting in all required items; additional concrete required to conform to structural and excavated tolerances.				
2.1.2	b) Mix ratio for reinforced concrete shall be 1:2:3				
2.1.3	c) Concrete quantity is measured to the edges of concrete foundation members. Rates shall be inclusive for any additional concrete required to place the formwork.				
2.2	REINFORCED CONCRETE				
2.2.1	Add water proofing compound to concrete mix for walls and cover slab below GL.				
2.2.2	Slab beams				
2.2.2.1	Edge beam	11.61	m ³		
2.2.2.2	Mid beam	4.64	m ³		
2.2.3	Ground Floor				
2.2.3.1	RCC Ground Slab 100 mm thick with T10@200 mm c/c (Rate should include reinforcement and required shuttering for edge of slab)	16.64	m ³		

2.2.4	OTHER CONCRETE WORKS				
2.2.4.1	Column pipe sleeve	0.07	m ³		
TOTAL OF BILL NO. 02 (CONCRETE WORKS) (CARRIED OVER TO THE GENERAL SUMMARY)					
3	Bill no. 03 MASONRY AND PLASTERING				
3.1	GENERAL				
3.1.1	Rates shall include for: cleaning out cavities, forming rebated reveals and pointing and cleaning down to reveals where necessary; fractional size blocks, all necessary machine cutting, cutting or forming chases or edges of floor slabs, cutting or leaving holes and openings as recesses for and building in pipes, conduits, sleeves and similar as required for all trades; leaving surfaces rough or raking out joints for plastering and flashings, bedding frames or plates, building in joists, bearers or similar, temporary supports to openings, templates, reinforcement in walls and for all necessary making good.				
3.1.2	Cement solid block, laid on and incl. mortar tie rods, compression joint gap filler, nylon/plastic mesh as specified				
3.1.3	Cement plastering on walls and concrete surfaces as specified incl. wire mesh at the joints of concrete surfaces and walls				
3.1.4	Masonry brick should be salt free PWS / Municipality solid bricks.				
3.2	EXTERNAL WALLS				
3.2.1	150mm wide solid block wall on cement plastered and painted finish, laid on and incl. 1:4 Cement Mortar, tie rods, compression gap filler, nylon / plastic mesh as specified.	75.60	m ²		
3.3	PLASTERING				
3.3.1	a) 18mm cement plastering on EXTERNAL WALLS and concrete surfaces with 1:4 Cement mortar mix as specified incl. wire mesh at joints of concrete surfaces and walls (first, second coats).	151.20	m ²		
TOTAL OF BILL NO. 03 (MASONRY AND PLASTERING) (CARRIED OVER TO THE GENERAL SUMMARY)					
4	Bill no. 04 METAL WORKS				
4.1	GENERAL				
4.1.1	a) Rates shall include for: all fabrication work, welding, marking, drilling for bolts incl. steel Flanges, bolts, nuts and any type of washer, riveted work, counter sinking and tapping for bolts or machine screws.				
4.1.2	b) Rates shall include for fabrication and erection and temporary supports and fixing into position.				
4.2	COLUMNS				
4.2.1	100 mm dia GI Pipe Column with 200x200 plate welded to base as given in drawings	9.00	Nos		
4.3	BRACINGS				
4.3.1	38 mm dia GI Pipe Bracing pairs attached to columns as given in drawings (one set is considered as two diagonals between columns spanning 6m)	6.00	sets		
4.4	TRUSS				
4.4.1	Truss TR1 - 6.1 m long, 0.475 wide truss made from GI Pipes as given in the drawings	10.00	Nos		
4.4.1	Truss TR2 - 12 m long, 0.475 wide truss made from GI Pipes as given in the drawings	3.00	Nos		
TOTAL OF BILL NO. 04 (METAL WORKS)					

(CARRIED OVER TO THE GENERAL SUMMARY)

5	Bill no. 05				
	<u>ELECTRICAL , IT & HVAC INSTALLATION</u>				
5.1	GENERAL				
5.1.1	(a) Rates shall include for: screws, nails, bolts, nuts, standard cable fixing or supporting clips, brackets, straps, rivets, plugs and all incidental accessories				
5.1.2	(b) Rates for electrical conduits, fittings, equipment and similar items shall include for: all fixings to various building surfaces				
5.1.3	(d) Light end and switch end of wiring together measured as one point				
5.1.4	(e) A point wiring for power points is measured as one point for each socket outlet; other end of wire is not included in the quantity.				
5.1.5	(h) The Contractor shall provide shop drawings for approval before proceeding with any works				
5.1.6	(i) All electrical wires, cables, fittings, fixtures, accessories & similar shall be approved by the Consultant				
5.2	ELECTRICAL BOARDS & PANELS				
5.2.1	Complete installation, including for all connections, earthing, painting, testing and similar of:				
5.2.2	Distribution Boards	1.00	Nos		
5.3	ELECTRICAL WIRING				
5.3.1	Electrical wiring with copper conductor cable in conduits in walls and concrete as per government regulations.				
5.3.2	Wiring to lights & fans	4.00	Nos		
5.3.3	Wiring to power points	8.00	Nos		
5.3.4	Wiring to DB	1.00	Nos		
5.3.5	Wiring to mains or power distribution box	1.00	Nos		
5.4	LIGHTING, POWER POINTS & FANS				
5.4.1	Supply and fixing of, fans, lights, switches, sockets and similar				
5.4.2	Mercury flood led light	4.00	Nos		
5.4.3	Wall socket outlet Single Gang	4.00	Nos		
5.4.4	Service socket outlet Single Gang	4.00	Nos		
5.4.5	One Way Switch 01 Gang	1.00	Nos		
TOTAL OF BILL NO. 05 (ELECTRICAL , IT & HVAC INSTALLATION)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
6	Bill no. 06				
	<u>HYDRAULICS & DRAINAGE</u>				
6.1	PREAMBLE NOTES				
6.1.1	(a) Rates shall include for sockets, running joints, connectors, elbows, junctions, valves, reducers, expansion joints, backnuts and similar, incidental fittings, clips saddles, brackets, straps, hangers, screws, nails and fixing complete, including cutting and forming holes, excavating, laying pipes and backfilling trenches.				
6.1.2	(b) All pipe work and fittings shall be high pressure PVC				
6.1.3	(c) Rates shall include for supply and fixing of all pipes				
6.1.4	(d) All sanitary fixtures used shall be of superior quality and approved by the architect/consultant on submission of samples.				
6.1.5	(e) Sanitary fixtures complete including brackets, flush pipes, valves, overflows, plugs and washers, as specified.				
6.2	INTERNAL PLUMBING - COLD WATER				
6.2.1	Internal plumbing to all toilets and kitchen incl. supply and laying of pipes.	1.00	Item		

6.2.2	Fresh water or utility water connection to all toilets and kitchen including the necessary catch pits and manholes as necessary. Rates shall include for supply and laying of pipes including clean-outs as necessary	1.00	Item		
6.3	EXTERNAL PLUMBING				
6.3.1	Waste water and sewage connection from all the toilets and kitchen including the necessary catch pits and manholes as necessary. Rates shall include for supply and laying of pipes including clean-outs as necessary	1.00	Item		
10.1.13	SANITARY FIXTURES & ACCESSORIES				
10.1.14	Sanitary fixtures complete including brackets, stop valves, fittings etc. All sanitary fittings shall be as given in product manual.				
10.1.15	Faucet	1.00	Nos		
6.4	RAINWATER DISCHARGE PIPE				
6.4.1	(a) Rates shall include for excavation, maintaining faces of drain pipe trenches and pits, backfilling, disposal of surplus soil, bends, junctions, reducers, expansion joints and all joints and other incidental materials.				
6.4.2	75 mm Ø Rainwater discharge pipe from roof, rates shall include for supply and installation of piping from roof.	4.00	Item		
TOTAL OF BILL NO. 06 (HYDRAULICS & DRAINAGE)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					
7	Bill no. 07				
7.1	ROOFING				
7.1.1	GENERAL				
7.1.1	Lysaght roofing sheet. Rate shall include all necessary laps, fastening, fixtures and sealing of joints	157.38	m ²		
7.1.2	Insulation - 50 thick glass wool quilt both sides aluminum	157.38	m ²		
7.1.3	Purlins GI RHS 100x50x3	193.50	m		
7.1.4	Gutter	25.80	m		
7.1.5	25x180 timber fascia	25.80	m		
7.1.6	Lysaght ridge cap	12.90	m		
TOTAL OF BILL NO. 07 (ROOFING)					
<i>(CARRIED OVER TO THE GENERAL SUMMARY)</i>					