SECTION NO. 1 PRELIMINARIES

		Unit	Quantity	Rate	Amount
	SECTION NO.1				
	BILL NO. 1				
	PRELIMINARIES				
	NOTES				
	The works information and NEC contract conditions are to be studied carefully when pricing the items in the Bill of				
	Quantities				
	FIXED CHARGE ITEMS				
1	Contractual requirements	Item	1		
	Facilities for Contractor on site:				
2	Offices and storage sheds	Item	1		
	The Contractor shall provide a Container that will be used as a				
3	temporal Kitchen/Canteen during the Construction period refers to the architecture's scope of work at 1.3.1.	Item	1		
4	Ablutions	Item	1		
5	Water, electricity and communication	Item	1		
6	Fencing for site establishment and recreational working area.	Item	1		
7	Tools and equipment	Item	1		
8	Water, electricity and communications	Item	1		
9	Access and access control	Item	1		
10	Removal of site establishment	Item	1		
11	Rehabilitate site establishment area	Item	1		
	Other fixed obligations:				
12	(i) Health & safety obligations as per H&S specifications, including provision of risk assessments, project specific H&S plan, H&S safety file, training, medical assessments.	Lump Sum	1		
13	(ii) Compliance with COVID 19 regulations	Lump Sum	1		
	Time related items:				
14	Contractual requirements	Months	5		
	Operation and maintenance of facilities on site for				
	duration of construction except where stated				
	Facilities for the Contractor:				
15	Offices and storage	Months	5		
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	The Contractor shall provide a Container that will be used as a temporal Kitchen/Canteen during the Construction period refers to the architecture's scope of work at 1.3.1.	Months	5		
16	Handover Clean	Months	5		
17	Ablutions	Months	5		
18	Tools and Equipment	Months	5		
19	Water and electricity	Months	5		
20	Scaffolding	Months	5		
21	Supervision	Months	5		
22	Transport	Months	5		
23	Crainage	Months	5		
24	Security	Months	5		
25	IT and communications	Months	5		
26	Skips,etc	Months	5		
	Other items:				
27	Complying with Environmental Specifications	Months	5		
28	Complying with Health and Safety Specifications	Months	5		
29	Complying with the Industrial Relations	Months	5		
30	Compliance with COVID 19 regulations	Months	5		
	Professional Services (refer to works information):				
	Professional Electrical Engineer/ Pr. Eng Technologist:				
31	(i) ECSA Registered Electrical Engineer for the design including issuing of approved for construction (AFC) drawings, intergration with other disciplines, commisining and close-out documentations for Electrical works as detailed in the works information.	Months	5		
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32	(ii) Technical Management Packs - incl. data books, quality control documentation, operation and maintenance manuals, as-built drawings, technical monthly reports, engineering technical monthly queries, Final close out reports, etc.	Months	5			
33	(iii) Supervision for duration of construction (monitoring, quality control, etc.)	Months	5			
34	(iv) Project Progress Meetings	Months	5			
	Professional Mechanical Engineer/ Pr. Eng Technologist:					
35	(i) ECSA Registered Mechanical Engineer for the design including issuing of approved for construction (AFC) drawings, intergration with other disciplines, commisining and close-out documentations for Electrical works as detailed in the works information.	Months	5			
36	(ii) Technical Management Packs - incl. data books, quality control documentation, operation and maintenance manuals, as-built drawings, technical monthly reports, engineering technical monthly queries, Final close out reports, etc.	Months	5			
37	(iii) Supervision for duration of construction (monitoring, quality control, etc.)	Months	5			
38	(iv) Project Progress Meetings	Months	5			
	Professional Civil/ Structural Engineer/ Pr. Eng Technologist:					
39	(i) ECSA Registered Civil/ Structural Engineer for the design including issuing of approved for construction (AFC) drawings, intergration with other disciplines, commisining and close-out documentations for Electrical works as detailed in the works information.	Months	5			
40	(ii) Technical Management Packs - incl. data books, quality control documentation, operation and maintenance manuals, as-built drawings, technical monthly reports, engineering technical monthly queries, Final close out reports, etc.	Months	5			
41	(iii) Supervision for duration of construction (monitoring, quality control, etc.)	Months	5			
42	(iv) Project Progress Meetings	Months	5			
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SECTION NO. 2 BUILDING WORKS

		Unit	Quantity	Rate	Amount
SECTION NO	<u>. 2</u>				
BUILDING W	<u>ORKS</u>				
BILL NO. 1					
ALTERATION	ıs				
Key:	Location Description:				
Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W	FIRST FLOOR-WEST				
FF-E	FIRST FLOOR-EAST				
SF-W	SECOND FLOOR-WEST				
SF-E	SECOND FLOOR-EAST				
TF-W	THIRD FLOOR-WEST				
TF-E	THIRD FLOOR-EAST				
1	Item Location (Auto)				
4F-W	FOURTH FLOOR-WEST				
4F-E	FOURTH FLOOR-EAST				
BF-1	BASEMENT FLOOR 02				
BF-2 RK	BASEMENT FLOOR-02 RECREATIONAL & KITCH				
CWK	COVERED WALKWAY				
Trades' (2008	ambles refer to 'Model Preambles for edition) for the full descriptions of material d work to be done in this Bill.				
CUDDI EMEN	TARY PREAMBLES				
Proprietary it					
	ems or materials:				
Ojoot iviaila	ms or materials where specified are to be pecified - or other approved - by the				
	ms or materials where specified are to be pecified - or other approved - by the				
View Site:	ms or materials where specified are to be pecified - or other approved - by the ger.				
View Site: Before submit site and satisf work to be do in the building demolished. I sum in respec	ms or materials where specified are to be pecified - or other approved - by the ger. ting this tender the contractor shall visit the y himself as to the nature and extent of the ne and the value of the materials contained s or portions of the buildings to be No claim for any variations of the contract t of the nature and extent of the work or of				
View Site: Before submit site and satisf work to be do in the building demolished. I sum in respec	ms or materials where specified are to be pecified - or other approved - by the ger. ting this tender the contractor shall visit the y himself as to the nature and extent of the ne and the value of the materials contained s or portions of the buildings to be No claim for any variations of the contract				
View Site: Before submit site and satisf work to be doi in the building demolished. I sum in respec	ms or materials where specified are to be pecified - or other approved - by the ger. ting this tender the contractor shall visit the y himself as to the nature and extent of the ne and the value of the materials contained is or portions of the buildings to be No claim for any variations of the contract it of the nature and extent of the work or of naged materials will be entertained.			R	
View Site: Before submit site and satisf work to be doin the building demolished. It sum in respectinferior or dam	ms or materials where specified are to be pecified - or other approved - by the ger. ting this tender the contractor shall visit the y himself as to the nature and extent of the ne and the value of the materials contained is or portions of the buildings to be No claim for any variations of the contract it of the nature and extent of the work or of naged materials will be entertained. Carried to Collection			R	
View Site: Before submit site and satisf work to be doin the building demolished. I sum in respectinferior or dam	ms or materials where specified are to be pecified - or other approved - by the ger. ting this tender the contractor shall visit the y himself as to the nature and extent of the ne and the value of the materials contained is or portions of the buildings to be No claim for any variations of the contract it of the nature and extent of the work or of naged materials will be entertained. Carried to Collection			R	
View Site: Before submit site and satisf work to be doi in the building demolished. It sum in respect inferior or dam Section No. 2 Bill No. 1	ms or materials where specified are to be pecified - or other approved - by the ger. ting this tender the contractor shall visit the y himself as to the nature and extent of the ne and the value of the materials contained is or portions of the buildings to be No claim for any variations of the contract it of the nature and extent of the work or of naged materials will be entertained. Carried to Collection			R	
View Site: Before submit site and satisf work to be doin the building demolished. I sum in respectinferior or dam	ms or materials where specified are to be pecified - or other approved - by the ger. ting this tender the contractor shall visit the y himself as to the nature and extent of the ne and the value of the materials contained is or portions of the buildings to be No claim for any variations of the contract it of the nature and extent of the work or of naged materials will be entertained. Carried to Collection			R	

		Unit	Quantity	Rate	Amount	-F OIN
	General:					
	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 tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the Project Manager.					
	Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc. and making good floor and wall finishes to match existing					
	TEMPORARY BARRIERS, SCREENS, ETC.					
	Temporary barriers, screens, etc including removal.					
1	Drywall barrier 3200mm high of galvanised steel channel section rails and studs covered on one side with 12,7mm gypsum plasterboard and finished with two coats interior quality PVA emulsion paint, including corners, ends, etc	m	156			
	GF-W 33 FF-W 20 FF-E 18					
	SF-W 33					
2	Extra over for hollow core single door size 813 x					
	2032mm high, including steel frame, two-lever mortice lock, hinges, primer and two coats paint	No	47			
	GF-W 8 GF-E 7 FF-W 6 FF-E 4 SF-W 4 SF-E 6					
	TF-E 4					
	BF-1 2 BF-2 2					
	REMOVAL OF EXISTING WORK					
	<u>Taking down and removing roofs, floors, panelling,</u> ceilings, partitions, etc					
	REMOVAL OF EXISTING WORK .					
3	Allow for watering, cleaning, protection, etc. of the works to prevent any nuisance of dust, noise, pollution, etc. and supply, errect and remove on completion all temporary dust screens, signs, etc. required for the working regulation compliances. (for entire working area)	Item				
	I 1					
						
	Carried to Collection			R		
	Section No. 2					
	Bill No. 1 Alterations					
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1	1	Unit	Quantity	Rate	Amount	I
4	Allow for protecting all existing work liable to suffer damage (i.e. Walls, doors, windows, roofs, finishes, floors, fittings, etc.) from damage during the building operations, alterations, etc., and make good all work damaged with new material to match existing to the approval of the Project Manager. (For entire working area and the payment will be pro-rata in accordance of value related work).	Item				
	I 1					
	Breaking down and removing brickwork, concrete, etc.					
5	230mm brick walls. (tiled & steel edge protection strips, etc.).	m²	32			
6	GF-W 32 350mm Brick walls. (plastered).	m²	284			
7	GF-W 50 GF-E 216 RK 18 350mm Cavity brick walls.(plastered).	m²	41			
8	GF-E 39 RK 2 350mm Cavity brick walls (tiled & steel edge protection strips, etc.).	m²	20			
9	GF-E 20 500mm Cavity brick walls.(plastered).	m²	3			
10	RK 3 500mm Cavity brick walls including foundations, column bases, etc.(plastered).	m²	4			
	RK 4 Taking out and removing doors, windows, etc from brickwork to be demolished:					
11	Timber single door and frame size 813 x 2032mm high overall from 90mm thick partition/brickwalls/concrete,etc.	No	6			
12	GF-W 4 GF-E 1 TF-E 1 Timber double door and frame size 1800 x 2032mm high overall from 90mm thick partition/brickwalls/concrete,etc.	No	2			
	GF-W 2					
	Carefully Taking out and removing doors, windows, etc from brickwork/concrete to be handed over to client:					
13	Heavy Duty Double Door hardwood timber and frame size 1800 x 2700mm high overall from 350mm brickwalls/ concrete, etc.	No	4			
	GF-W 4					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 1					
	Alterations 6					
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1	ı	Unit	Quantity	Rate	Amount	1
14	Heavy Duty Roller Shutter Door steel with size 4800 x 2100mm opening size locked side and wall, locks to be					
	fitted on both sides internally finish floor level, components including end plates, guide rails, 400mm wide grinate counter top, etc. from brickwalls / concrete, etc.	No	1			
15	GF-W 1 Heavy Duty/Special Sliding timber room diving panels with steel and system tracks and frame size 14800 x 3200mm high overall from brickwalls, concrete, roof, etc.	No	1			
16	GF-E 1 Heavy Duty/Special projector board or screen / frame with hanger size 2250 x 3600mm high overall from brickwalls, concrete, roof, etc.	No	1			
17	GF-W 1 Heavy Duty/Special video screen or television with hanger size 2250 x 3600mm high overall toghether with projector from brickwalls, concrete, roof, etc.	No	1			
18	GF-E 1 Heavy Duty/Special Granite counter planter box (trough planter) plugged on floor size 4517 x 600 x 1200mm high, store in contractor's store, set aside for re-use and install later.	No	2			
19	GF-E 2 Heavy Duty/Special Granite counter planter box (trough planter) plugged on floor size 2300 x 600 x 1200mm high store in contractor's store, set aside for re-use and install later.	No	2			
20	GF-E 2 Heavy Duty cabinet plugged on floor & wall size 2500 x 600 x 2200mm high store in contractor's store, set aside for re-use and install later.	No	1			
21	RK 1 1500x2700mm high blinding including sundry items, etc. store in contractor's store, set aside for re-use and install later.	No	6			
	Taking out and removing doors, windows, etc. including thresholds, sills, etc (building up openings and making good finishes elsewhere measured)					
22	Glazed Aluminium window not exceeding 2,5m ² .	No	1			
	RK 1					
	Carried to Collection			R		
	Section No. 2					+
	Bill No. 1					
	Alterations					
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1	1	Unit	Quantity	Rate	Amount
	Taking down and removing roofs, floors, panelling,				
	ceilings, partitions, etc				
23	Side sheets or cladding steel covering and steel purlins, vertical internal ceiling, etc.	m²	7		
	RK 7				
24	Side flashing to eaves overhangs, etc. including steel purlin or sprockets.	m	10		
	RK 10				
	Taking out and removing doors, windows, gates, etc., including thresholds, sills, etc., and making good plaster on both sides and plastering reveals (making good paint work elsewhere measured):				
25	Timber single door and timber frame size 813 x 2032mm				
25	high overall from one brickwall.	No	1		
	Carefully Taking down and removing roofs, floors,				
	panelling, ceilings, partitions, etc., set aside for later refixing to similar position:				
26	Acoustic tile suspended ceilings, including cornices, suspension grid, hangers, etc.	m²	1,004		
	GF-W 446 GF-E 407 FF-E 52 SF-W 41 4F-W 13 4F-E 12 BF-1 33				
	Taking down and removing roofs, floors, panelling,				
	ceilings, partitions, etc.:				
27	Timber bulkhead size 1300 x 300mm fixed at junction				
21	bewteen wall and concrete soffit inculding making good plaster. (making good paint elsewhere measured).	m	11		
	GF-E 11				
28	Gypsum plasterboard ceilings including cornices, steel/timber brandering, etc.	m²	15		
	RK 15				
29	Drywall partitions 3620mm high, including doors, glazed borrowed lights, etc.	m	33		
	GF-W 17 GF-E 9 SF-E 4				
	TF-E 3 Taking out and removing sundry joinery work,				
	fittings, etc and making good plaster where				
	disturbed. (Making good paint elsewhere measured):				
30	Timber skirtings from brickwork.	m	43		
	GF-W 20 GF-E 23				
31	12 000 x 5 000 x 350mm high raised timber floor supporting platform including underneath services, etc.	No	1		
	GF-W 1				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 1				
	Alterations				
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1	1	Unit	Quantity	Rate	Amount	1
	Carefully taking out and removing joinery fittings					
	etc.:					
32	Cupboard doors size 540 x 2500mm high from exising					
	DB built-in cupboard and make good to receive new					
	doors (new doors elsewhere measured).	No	2			
	GF-E 2					
	Taking out and removing sundry joinery work,					
	fittings, etc, setting aside for re-use and later refixing in similar new position					
00			500			
33	Timber skirtings	m	500			
	GF-W 123 GF-E 197 FF-W 23					
	FF-E 23 SF-W 29 SF-E 50 TF-E 33 4F-W 15 4F-E 7					
34	Timber counter size 640 x 4811 x 900mm high including					
	drawers, etc.	No	1			
	GF-E 1					
35						
	high with grill on top including bases, etc.	No	1			
	RK 1					
36	Structural steel posts size 100x100x2300mm high	NI-				
	including bases, etc.	No	2			
	RK 2					
	Taking up and removing wood block floor coverings, vinyl floor coverings, carpets, etc. and preparing					
	screeds for new self- levelling screed (self-levelling					
	screed elsewhere measured):					
37	Carpet floor covering including alluminium dividing strips.	m²	1,732			
	GF-W 136 GF-E 1374 FF-W 84					
	FF-E 14 SF-W 27 SF-E 53					
	TF-W 15 TF-E 24 4F-E 5 Taking out/off and removing sundry metalwork:					
20	-					
38	1000mm high Steel /Alluminium balustrades fixed to concrete/brickwork, etc.	m	47			
	GF-W 15 SF-E 5 TF-E 5	•••	''			
	BF-1 7 RK 15					
	Taking out/off and removing metalwork and					
	preparing for refixing new:					
39						
	2180mm high and make good to receive new shopfront (new shopfront elsewhere measured).					
	,	No	1			
	RK 1					
	Carried to Collection			R		
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Aluminium shopfronts, fixed light and frame size 5000 x 3400mm high with double door size 1800 x 2300mm high with adouble door size 1800 x 2300mm high with double door size 2000 x 2300mm high with double door size 2000 x 2300mm high and make good to receive new shopfront flow shopfronts fixed light and frame size 9000 x 3400mm high with double door size 2000 x 2300mm high and make good(new shopfront elsewhere measured). RK 1 Hacking uploff and removing granolithic, screeds, plaster, etc. from concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc.: Internal plaster from walls and columns. GF-W 20 External plaster from walls, columns and beams. GF-W 20 External plaster from walls, columns and beams. GF-W 13 Hacking uploff and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc.: Tiles to floors including aluminium dividing strips. M* 1,197 GF-W 522 GF-E 188 FF-W 55 FF-E 81 SF-W 100 SF-E 89 TF-E 29 4-W 11 Alter to walls. GF-W 285 BF-1 33 Interior stone to walls. R* 21 Taking out and removing ploing, sanitary fittings, etc., including cutting off as necessary, disconnecting, ploing from fittings and brackets and blanking off in walls. GF-W 12 Topper piping including fittings and brackets and blanking off in walls. GF-W 12 External plaint from fittings and brackets and blanking off in walls. GF-W 15 Carried to Collection Section No. 2 Bill No. 1 Alterations	ı	I	Unit	Quantity	Rate	Amount
3400mm high with double door size 1800 x 2300mm high and make good to receive new shopfront (new shopfront elsewhere measured). GF-W 1 Aluminium shopfronts, fixed light and frame size 9000 x 3400mm high and make good (new shopfront elsewhere measured). RK 1 Hacking up/off and removing granolithic, screeds, plaster, etc. from concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc.: Internal plaster from walls, columns and beams. GF-W 20 SExtemal plaster from walls, columns and beams. GF-W 13 Hacking up/off and removing granolithic, screeds, plaster, tile finishes, etc.: Internal plaster from walls, columns and beams. GF-W 13 Hacking up/off and removing ceramic tiles including removing mortar bad or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc.: Tiles to floors including aluminium dividing strips. Tiles to floors including aluminium dividing strips. Tiles to malls, etc.: Tiles to malls, etc.: BF-L 29						
41 Aluminium shopfronts, fixed light and frame size 9000 x 3400mm high with double door size 2000 x 2300mm high and make good(new shopfront elsewhere measured). RK 1 Hacking up/off and removing granolithic, screeds, plaster, etc. from concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc.: 12 Internal plaster from walls and columns. GF-W 20 43 External plaster from walls, columns and beams. GF-W 13 Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc.: 44 Tiles to floors including aluminium dividing strips. GF-W 522 GF-E 188 FF-W 555 GF-W 522 GF-E 188 FF-W 55 FF-E 81 SF-W 100 SF-E 89 TF-E 29 AF-E 13 RK 63 45 Tiles to walls. GF-W 285 BF-1 33 RK 63 46 Interior stone to walls. RK 21 Taking out and removing piping, sanitary fittings, etc., including cutting off as necessary, disconnecting piping including fittings and making good floor and wall finishes (making good floor and wall finishes (making apantwork elsewhere): 47 15mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 CF-W 12 48 22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 49 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection Section No. 2 Bill No. 1 Alterations	40	3400mm high with double door size 1800 x 2300mm high and make good to receive new shopfront (new	No	1		
RK 1 Hacking up/off and removing granolithic, screeds, plaster, etc. from concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc.: 42 Internal plaster from walls and columns. GF-W 20 43 External plaster from walls, columns and beams. GF-W 13 Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc.: 44 Tiles to floors including aluminium dividing strips. GF-W 522 GF-E 188 FF-W 55 FF-E 81 SF-W 100 SF-E 89 TF-E 29 4F-W 13 4F-E 24 BF-1 33 RK 63 45 Tiles to walls. GF-W 285 BF-1 33 46 Interior stone to walls. RK 21 Taking out and removing piping, sanitary fittings, etc., including cutting off as necessary, disconnecting piping from fittings and blanking off or and wall finishes (making good floor and wall finishes (making qood floor and wall finishes (making qood floor and wall finishes (making ond blanking off in walls. GF-W 5 48 22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 49 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection Section No. 2 Bill No. 1 Alterations	41	Aluminium shopfronts, fixed light and frame size 9000 x 3400mm high with double door size 2000 x 2300mm high and make good(new shopfront elsewhere				
Hacking up/off and removing granolithic, screeds, plaster, etc. From concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc.; 42 Internal plaster from walls and columns. m² 20 GF-W 20 43 External plaster from walls, columns and beams. GF-W 13 Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc.; 44 Tiles to floors including aluminium dividing strips. m² 1,197 GF-W 522 GF-E 188 FF-W 55 FF-E 81 SF-W 100 SF-E 89 TF-E 29 4F-W 13 4F-E 24 BF-1 33 RK 63 45 Tiles to walls. gF-W 33 HK 63 46 Interior stone to walls. m² 318 GF-W 285 BF-1 33 Interior stone to walls. m² 21 Taking out and removing piping, sanitary fittings, etc., including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere): 47 15mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 ZBmm Copper piping including fittings and brackets and blanking off in walls. GF-W 15 Carried to Collection Section No. 2 Bill No. 1 Alterations		measured).	No	1		
GF-W 20 External plaster from walls, columns and beams. GF-W 13 Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc.: 44 Tiles to floors including aluminium dividing strips. GF-W 522 GF-E 188 FF-W 55 FF-E 81 SF-W 100 SF-E 89 TT-E 29 4F-W 13 4F-E 24 BF-1 33 RK 63 Tiles to walls. GF-W 285 BF-1 33 Interior stone to walls. RK 21 Taking out and removing piping, sanitary fittings, etc., including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere): 47 15mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 49 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection Section No. 2 Bill No. 1 Alterations		Hacking up/off and removing granolithic, screeds, plaster, etc. from concrete or brickwork and preparing surfaces for new screed, plaster, tile				
External plaster from walls, columns and beams. GF-W 13 Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc.: 144 Tiles to floors including aluminium dividing strips. GF-W 522 GF-E 188 FF-E 81 SF-W 100 SF-E 89 TF-E 29 4F-W 13 4F-E 24 BF-1 33 RK 63 45 Tiles to walls. GF-W 285 GF-W 285 BF-1 33 Interior stone to walls. RK 21 Taking out and removing piping, sanitary fittings, etc., including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good filing and paintwork elsewhere): 15mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 49 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection Section No. 2 Bill No. 1 Alterations	42	Internal plaster from walls and columns.	m²	20		
Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc.: Tiles to floors including aluminium dividing strips. GF-W 522			•			
Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc.: 44 Tiles to floors including aluminium dividing strips. GF-W 522 GF-E 188 FF-W 55 FF-E 81 SF-W 100 SF-E 89 TF-E 29 4F-W 13 4F-E 24 BF-1 33 RK 63 45 Tiles to walls. GF-W 285 BF-1 33 RK 63 Hilerior stone to walls. RK 21 Taking out and removing piping, sanitary fittings, etc., including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere): 47 15mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 49 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection Section No. 2 Bill No. 1 Alterations	43	•	m²	13		
GF-W 522 GF-E 188 FF-W 55 FF-E 81 SF-W 100 SF-E 89 TF-E 29 4F-W 13 4F-E 24 BF-1 33 RK 63 45 Tiles to walls. GF-W 285 BF-1 33 Interior stone to walls. RK 21 Taking out and removing piping, sanitary fittings, etc, including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere): 17 15mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 49 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection R Section No. 2 Bill No. 1 Alterations		Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed,				
FF-E 81 SF-W 100 SF-E 89 TF-E 29 4F-W 13 4F-E 24 BF-1 33 RK 63 45 Tiles to walls. GF-W 285 BF-1 33 Hoterior stone to walls. RK 21 Taking out and removing piping, sanitary fittings, etc., including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere): 15mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 49 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection R BR Alterations	44	Tiles to floors including aluminium dividing strips.	m²	1,197		
Tiles to walls. GF-W 285 BF-1 33 Interior stone to walls. RK 21 Taking out and removing piping, sanitary fittings, etc., including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere): 15mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 48 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection R Section No. 2 Bill No. 1 Alterations		FF-E 81 SF-W 100 SF-E 89 TF-E 29 4F-W 13 4F-E 24				
A6 Interior stone to walls. RK 21 Taking out and removing piping, sanitary fittings, etc., including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere): 47 15mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 48 22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 49 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection Section No. 2 Bill No. 1 Alterations	45	Tiles to walls.	m²	318		
Taking out and removing piping, sanitary fittings. etc., including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere): 15mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection Section No. 2 Bill No. 1 Alterations	46		m²	21		
etc., including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere): 47 15mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 48 22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 49 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection Section No. 2 Bill No. 1 Alterations		RK 21				
blanking off in walls. GF-W 5 22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 49 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection Section No. 2 Bill No. 1 Alterations		etc., including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and				
22mm Copper piping including fittings and brackets and blanking off in walls. GF-W 12 28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection Section No. 2 Bill No. 1 Alterations	47		m	5		
28mm Copper piping including fittings and brackets and blanking off in walls. GF-W 5 Carried to Collection Section No. 2 Bill No. 1 Alterations	48	22mm Copper piping including fittings and brackets and	m	12		
Carried to Collection Section No. 2 Bill No. 1 Alterations	49	28mm Copper piping including fittings and brackets and	m	5		
Section No. 2 Bill No. 1 Alterations		GF-W 5				
Bill No. 1 Alterations					R	
Alterations						
10						
		10				

1	ı	Unit	Quantity	Rate	Amount
50	250 x 250 Gutters and downpipes includind brackects, fittings, etc.	No	11		
	RK 11	110			
51	floor grill & drain including pipes, fittings and brackets and blanking off in floors.	No	3		
	GF-W 1 RK 2 CUTTING THROUGH FLOORS AND CEILINGS				
	Cutting through:				
52	150mm thick reinforced concrete surface bed for 750mm wide concrete wall footings and making good concrete on both sides of new 230mm brick walls.	m	6		
53	RK 6 Existing suspended ceilings and alluminium frame for 100mm thicik shopfronts, including making good on both				
	sides, new cornices to match existing ceiling.	m	113		
	GF-W 19 GF-E 41 FF-W 8 FF-E 9 SF-W 19 SF-E 10 4F-E 7				
54	Existing suspended ceilings and alluminium frame for 100mm dry wall partition walls, including making good on both sides of walls including new cornices to match existing	m	121		
	GF-W 14 GF-E 95 FF-E 4				
	SF-W 4 4F-W 4 PREPARATORY WORK TO EXISTING SURFACES				
	Hacking existing screed to receive tiles				
55	Hacking existing screed to receive tiles (tiles elsewhere measured).	m²	77		
	, RK 77				
	MAKING GOOD OF FINISHES, ETC.				
	Making good cement screeds:				
56	Floors where Dry walls removed.	m	36		
	GF-W 17 GF-E 9 SF-E 4 TF-E 3 RK 3				
57	Floors where one brick walls removed.	m	31		
	GF-W 6 GF-E 25				
	Making good internal cement plaster (Provisional):				
58	Walls in patches.	m²	36		
59	GF-W 35 RK 1 Walls where half brick walls removed.	m	12		
	GF-W 12				
	Carried to Collection			R	
	Section No. 2			K	
	Bill No. 1				
	Alterations				
	11				

				eMENDI BUILI	DING ALTERATION	N-PoN
1		Unit	Quantity	Rate	Amount	I
60	Walls where one brick walls removed.	m	14			
	GF-W 14					
61	Chase for 15mm diameter pipes.	m	10			
01	* *	111	10			
	GF-W 10					
62	Chase for 22mm diameter pipes.	m	23			
	GF-W 23					
63	Chase for 28mm diameter pipes.	m	22			
	GF-W 22					
64	Chase for 40mm diameter pipes.	m	33			
	GF-W 33					
65	Chase for 50mm diameter pipes.	m	2			
	GF-W 2	•••	_			
66						
00	Chase for 15mm diameter pipes including 'Menlath 213' galvanised 'Mentex' plaster mesh fixed to concrete or					
	brickwork.	m	4			
		111	-			
0.7	GF-W 4					
67	Chase for 20mm diameter pipes including "Menlath 213" galvanised "Mentex" plaster mesh fixed to concrete or					
	brickwork. (Provisional)		_			
	·	m	5			
	GF-W 5					
68	Chase for 22mm diameter pipes including 'Menlath 213'					
	galvanised 'Mentex' plaster mesh fixed to concrete or brickwork.		4.0			
	DIICKWOIK.	m	12			
	GF-W 12					
	BUILDING UP OPENINGS					
	Brickwork in NFP bricks in class II mortar in building					
	up openings					
69	One brick walls	m²	7			
	GF-W 3 RK 4					
	PREPARATORY WORK TO EXISTING SURFACES					
	Preparatory work to existing surfaces:					
70	Prepare existing painted walls to receive skim coat					
	plaster.	m²	10			
	TF-E 10					
71	Prepare existing painted walls to receive ceramic tiles.	m²	134			
	GF-W 67 RK 67					
	01 W 01					
	Orando Ako O H. C			_		
	Carried to Collection			R		
	Section No. 2					
	Bill No. 1					
	Alterations					
	12					
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	I	Unit	Quantity	Rate	Amount	
	OPENINGS THROUGH EXISTING WALLS ETC					
	Breaking out for and forming plain openings through brick walls, including prestressed concrete lintels, making good cement plaster on both sides and into reveals and making good 'Prostruct' polyurethane coating where disturbed. (making good paintwork elsewhere)					
72	Opening size 813 x 2032mm high through one brick wall for door. (door elsewhere measured).	No	1			
73	Opening size 1500 x 1200mm high through 270mm cavity wall for folding window. (window elsewhere measured).	No	1			
74	Opening size 900 x 2100mm high through dry wall partitioning for door. (door elsewhere measured).	No	1			
	Breaking out for and forming plain openings through brick walls, including prestressed concrete lintels, making good cement plaster on both sides and into reveals. (making good paintwork elsewhere measured)					
75	Hole through half brickwall for pipe not exceeding 50mm diameter.	No	3			
76	GF-W 3 Hole through half brickwall for pipe exceeding 50mm not exceeding 100mm diameter.	No	2			
77	GF-W 2 Hole through half brickwall for pipe exceeding 100mm not exceeding 150mm diameter.	No	4			
	GF-W 4					
	Carried to Collection			R		
	Section No. 2			K		
	Bill No. 1					
	Alterations 13					

I		I	Amount	I
BILL NO. 1 ALTERATIONS COLLECTION		Page No		
	Brought Forward from Page	4		
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		10		
		11		
		12		
		13		
Continue No. 0	Carried To Section Summary	R		
Section No. 2 Bill No. 1 Alterations				
	14			

		Unit	Quantity	Rate	Amount
SECTION NO.	_2				
BUILDING WO	<u>ORKS</u>				
BILL NO. 2					
EARTHWORK	<u>ss</u>				
Key:	Location Description:				
Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W	FIRST FLOOR-WEST				
FF-E	FIRST FLOOR-EAST				
SF-W	SECOND FLOOR-WEST				
SF-E	SECOND FLOOR-EAST				
TF-W	THIRD FLOOR-WEST				
TF-E	THIRD FLOOR-EAST				
 4E W	Item Location (Auto)				
4F-W 4F-E	FOURTH FLOOR-WEST FOURTH FLOOR-EAST				
4F-E BF-1	BASEMENT FLOOR-01				
BF-1 BF-2	BASEMENT FLOOR-02				
RK	RECREATIONAL & KITCH				
CWK	COVERED WALKWAY				
SUPPLEIMEN	TADV DDEAMDLES				
Nature of ground The nature of the possibly intersal Carting away Descriptions of the deemed to the trucks directly stock piles situation.	the ground is assumed to be earth, but persed with hard rock or soft rock. of excavated material: f carting away of excavated material shall include loading excavated material onto from the excavations or, alternatively, from ated on the building site.				
Nature of ground The nature of the possibly intersal Carting away Descriptions of the deemed to trucks directly stock piles situs Demolition:	the ground is assumed to be earth, but persed with hard rock or soft rock. of excavated material: f carting away of excavated material shall include loading excavated material onto from the excavations or, alternatively, from ated on the building site.				
Nature of grown The nature of the possibly intersplant of the possibly of the possible po	the ground is assumed to be earth, but persed with hard rock or soft rock. of excavated material: f carting away of excavated material shall include loading excavated material onto from the excavations or, alternatively, from				
Nature of ground The nature of the possibly intersal Carting away Descriptions of the deemed to trucks directly stock piles situs Demolition: The contractor to be demolish additional cost considered.	the ground is assumed to be earth, but persed with hard rock or soft rock. of excavated material: f carting away of excavated material shall include loading excavated material onto from the excavations or, alternatively, from lated on the building site. is to visit the site, and inspect the works ed and price accordingly. No claims for			R	
Nature of ground The nature of the possibly intersal Carting away Descriptions of the deemed to trucks directly stock piles situs Demolition: The contractor to be demolish additional cost considered.	the ground is assumed to be earth, but persed with hard rock or soft rock. of excavated material: f carting away of excavated material shall include loading excavated material onto from the excavations or, alternatively, from ated on the building site. This to visit the site, and inspect the works ed and price accordingly. No claims for in regard of demoliitions will be			R	
Nature of ground The nature of the possibly intersal Carting away Descriptions of the deemed to trucks directly stock piles situs Demolition: The contractor to be demolish additional cost considered.	the ground is assumed to be earth, but persed with hard rock or soft rock. of excavated material: f carting away of excavated material shall include loading excavated material onto from the excavations or, alternatively, from ated on the building site. This to visit the site, and inspect the works ed and price accordingly. No claims for in regard of demoliitions will be			R	
Nature of ground The nature of the possibly intersal Carting away Descriptions of the deemed to trucks directly stock piles situs Demolition: The contractor to be demolish additional cost considered.	the ground is assumed to be earth, but persed with hard rock or soft rock. of excavated material: f carting away of excavated material shall include loading excavated material onto from the excavations or, alternatively, from ated on the building site. This to visit the site, and inspect the works ed and price accordingly. No claims for in regard of demoliitions will be			R	

1	ı	Unit	Quantity	Rate	Amount	
	Filling: Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material					
	Note:					
	The removal of bitumen paving has not been measured, and forms part of the relevent excavations. No payment will be made for the removal of bitumen pavings when it forms part of areas to be excavated.					
	BULK EXCAVATIONS ETC.					
	Open face excavation in earth over sloping site:					
1	Open face excavation.	m³	187			
	RK 187 Extra over bulk excavations in earth for excavation in:					
2	Soft rock	m³	19			
_	RK 19					
3	Hard rock.	m³	9			
	RK 9					
	EXCAVATION OTHER THAN BULK.					
	Excavation in earth not exceeding 2m deep:					
4	Trenches.	m³	62			
5	RK 62 Holes.	m³	178			
3	RK 87 CWK 91	•••	176			
	Extra over excavations other than bulk in earth for					
	excavation in:					
6	Soft rock.	т³	24			
	RK 15 CWK 9					
7	Hard rock.	m³	12			
	RK 7 CWK 5 Risk of collapse of excavations other than bulk:					
8	Sides of trenches and hole excavations not exceeding					
	1,5m deep.	m²	583			
	RK 369 CWK 214					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 2					
	Earthworks					
	16					

				eMENDI BUILI	DING ALTERATION	-PoN
		Unit	Quantity	Rate	Amount	
	CARTING AWAY.					
	Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):					
9	Off site to a dumping site to be found by the Contractor.	m³	105			
	RK 86 CWK 19 EARTH FILLING, ETC.					
	Filling with material from the excavations compacted to a density of at least 95% Mod. AASHTO maximum density:					
10	Backfilling to trenches, holes, etc.	m³	82			
	RK 46 CWK 36 Filling with approved G7 material in accordance with SABS 1200 DM supplied and carted on to site site by the Contractor, compacted to 95% Mod AASHTO density.					
11	Under floors, pavings, etc.	m³	8			
12	RK 8 Backfilling to trenches, holes, etc.	m³	44			
	Filling with over site of G5 material in accordance with SABS 1200 DM supplied and carted on to site by the Contractor, compacted to 95% Mod AASHTO density.					
13	Under floors, pavings, etc.	m³	8			
14	RK 8 Backfilling to trenches, holes, etc.	m³	46			
	RK 28 CWK 18 Hardcore filling:					
15	Under floors etc.	m³	16			
	RK 16					
	Coarse river sand filling compacted to 95% Mod. AASHTO maximum density:					
16	Under floors, etc.	m³	3			
	RK 3					
	Carried to Collection Section No. 2			R		<u> </u>
	Bill No. 2					
	Earthworks 17					

				eMENDI BUILI	DING ALTERATION	I-PoN
1		Unit	Quantity	Rate	Amount	I
	Surface Preparation:					
17	Trim and level off surface of ground (excavated or filled under this Contract) to receive concrete surface beds, including excavating or filling, ripping and scarifying as necessary and compacting the whole area for a depth of 150mm to a density of at least 93% Mod. AASHTO maximum density, part to falls.	m²	55			
	RK 55 KEEPING EXCAVATIONS FREE OF WATER.					
	Keeping excavations free of water:					
18		Item				
	1 <u>TESTS.</u>					
	Prescribed density tests on filling:					
19	Modified AASHTO Density test.	No	26			
20	RK 26 Field Density test including Optimum Moisture Content (four readings per test).	No	15			
	RK 15 SOIL POISONING.					
	Approved brand of anti-termite soil poison applied by a Registered Pest Control company and guaranteed against termite infestation for ten years:					
21	Under floors, etc., including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming.	m²	55			
22	RK 55 To bottoms and sides of trenches, holes, etc	m²	762			
22	RK 426 CWK 336	""	702			
	TRADE PREAMBLES					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 2					
	Earthworks					
	18					

1		I	Amount	
BILL NO. 2 EARTHWORKS COLLECTION	Brought Forward from Page	Page No		
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	Carried To Section Summany			
Section No. 2	Carried To Section Summary	R		
Bill No. 2				
Earthworks	19			
1			11)

		Unit	Quantity	Rate	Amount
SECTION NO	<u>. 2</u>				
BUILDING WO	<u>ORKS</u>				
BILL NO. 3					
	FORMWORK AND REINFORCEMENT				
Key:	Location Description:				
Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W	FIRST FLOOR-WEST				
FF-E	FIRST FLOOR-EAST				
SF-W	SECOND FLOOR-WEST				
SF-E	SECOND FLOOR-WEST				
TF-W TF-E	THIRD FLOOR FAST				
IF-E I	THIRD FLOOR-EAST Item Location (Auto)				
ı 4F-W	FOURTH FLOOR-WEST				
4F-E	FOURTH FLOOR-EAST				
BF-1	BASEMENT FLOOR-01				
BF-2	BASEMENT FLOOR-02				
RK	RECREATIONAL & KITCH				
CWK	COVERED WALKWAY				
SUPPLEMEN'	TARY PREAMBLES				
Cost of tests: The costs of m cubes as requ G shall include necessary for submitting rep testing shall be institution nom					
Cost of tests: The costs of moubes as requiged Shall included necessary for submitting representation shall be institution normal the Architect.	naking, storing and testing of concrete test ired under clause 7 'Tests' of SABS 1200 at the cost of providing cube moulds the purpose, for testing costs and for orts on the tests to the Architect. The a undertaken by an independent firm or inated by the Contractor to the approval of Test cubes are measured separately).				
Cost of tests: The costs of moubes as requiged shall include necessary for submitting reptesting shall be institution nominated the Architect. (Breeze Concreturnace ash, frone part cemes which will passifialls to pass a the screening street.)	naking, storing and testing of concrete test ired under clause 7 'Tests' of SABS 1200 at the cost of providing cube moulds the purpose, for testing costs and for orts on the tests to the Architect. The a undertaken by an independent firm or inated by the Contractor to the approval of Test cubes are measured separately).				
Cost of tests: The costs of moubes as requiced Shall include necessary for submitting reptesting shall be institution now the Architect. (Breeze Concreturnace ash, frome part ceme which will pass fails to pass a the screening mortar and the incorporated.	naking, storing and testing of concrete test ired under clause 7 'Tests' of SABS 1200 the cost of providing cube moulds the purpose, for testing costs and for orts on the tests to the Architect. The e undertaken by an independent firm or inated by the Contractor to the approval of Test cubes are measured separately). Tete: It eshall consist of twelve parts clean dry the from coal or other foreign matter, to out (12:1), the ash graded up to particles a 16,5mm ring from a minimum which 4,75mm mesh. The finer materials from are to be first mixed with the cement into a			R	
Cost of tests: The costs of moubes as requiged shall include necessary for submitting reptesting shall be institution now the Architect. (Breeze Concreturnace ash, frone part ceme which will pass fails to pass a the screening mortar and the incorporated.	naking, storing and testing of concrete test ired under clause 7 'Tests' of SABS 1200 at the cost of providing cube moulds the purpose, for testing costs and for orts on the tests to the Architect. The e undertaken by an independent firm or inated by the Contractor to the approval of Test cubes are measured separately). Tete: It eshall consist of twelve parts clean dry ree from coal or other foreign matter, to ant (12:1), the ash graded up to particles as a 16,5mm ring from a minimum which 4,75mm mesh. The finer materials from are to be first mixed with the cement into a seash added afterwards and thoroughly			R	
Cost of tests: The costs of moubes as requiced Shall include necessary for submitting reptesting shall be institution noming the Architect. (Breeze Concreturnace ash, frone part cemes which will passefulls to pass a the screening mortar and the incorporated. Section No. 2 Bill No. 3	naking, storing and testing of concrete test ired under clause 7 'Tests' of SABS 1200 at the cost of providing cube moulds the purpose, for testing costs and for orts on the tests to the Architect. The equidertaken by an independent firm or inated by the Contractor to the approval of Test cubes are measured separately). Tete: It is shall consist of twelve parts clean dry the from coal or other foreign matter, to ant (12:1), the ash graded up to particles as a 16,5mm ring from a minimum which 4,75mm mesh. The finer materials from are to be first mixed with the cement into a each added afterwards and thoroughly Carried to Collection			R	
Cost of tests: The costs of moubes as requiced Shall include necessary for submitting reptesting shall be institution noming the Architect. (Breeze Concreturnace ash, frone part cemes which will passefulls to pass a the screening mortar and the incorporated. Section No. 2 Bill No. 3	naking, storing and testing of concrete test ired under clause 7 'Tests' of SABS 1200 at the cost of providing cube moulds the purpose, for testing costs and for orts on the tests to the Architect. The e undertaken by an independent firm or inated by the Contractor to the approval of Test cubes are measured separately). Tete: It eshall consist of twelve parts clean dry ree from coal or other foreign matter, to ant (12:1), the ash graded up to particles as a 16,5mm ring from a minimum which 4,75mm mesh. The finer materials from are to be first mixed with the cement into a seash added afterwards and thoroughly			R	

	Unit	Quantity	Rate	Amount	
Foamcement Lightweight Concrete:					
Foamcement lightweight concrete is to have a density of 600kg/m3 for the top 50mm and 500kg/m3 for the remaining thickness. The minimum thickness at outlets, channels, etc. shall be 50mm.					
Celbeton Lightweight Concrete:					
Celbeton lightweight concrete is to have a density of 1000kg/m3 for the top 20mm and 408kg/m3 for the remaining thickness. The minimum thickness at outlets, channels, etc. shall be 30mm.					
Formwork:					
Descriptions 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.					
The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.					
Formwork to soffits of solid slabs etc., shall be deemed to be to 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.					
UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES.					
15Mpa/19mm Concrete					
Surface blinding under footings and bases.	m³	8			
RK 5 CWK 3 20Mpa/19mm Concrete					
Filling to cavity of hollow brick wall.	m³	3			
RK 3					
					+
Carried to Collection Section No. 2			R		1
Bill No. 3					
Concrete, Formwork And Reinforcement					
21					

		1.1	O		DING ALTERATION	N-PoN
		Unit	Quantity	Rate	Amount	
	REINFORCED CONCRETE.					
	30MPa/19mm Concrete:					
3	Slabs including beams and inverted beams.	m³	19			
	RK 19	•				
4	Columns in foundations.	m³	8			
	RK 4 CWK 4 REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES.					
	30Mpa/19mm Concrete					
5	Surface beds cast in panels on waterproofing.	m³	13			
	RK 13					
6	Strip footings.	m³	12			
7	RK 12 Bases.	m³	47			
'	RK 23 CWK 24	***	71			
	TEST BLOCKS.					
	Test blocks:					
8	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes.	Sets	20			
	RK 20					
	GROUTING.					
	35MPa non-shrink grout:					
9	Bedding approximately 150 x 150 x 25mm thick to 250 x 250mm base plate including chamfered edges all round.	No	80			
	GF-E 3 FF-W 15 RK 20 CWK 42					
	SUNDRIES.					
10	Take delivery of holding down bolts and cast into exact position in top of column or base including template, etc	Item				
	1 1					
	ROUGH FORMWORK (DEGREE OF ACCURACY II)					
44	Rough formwork to sides of columns in foundations.					
11	Square columns with total height not exceeding 3,5m high.	m²	98			
	RK 48 CWK 50					
	Rough formwork to soffits					
12	Slabs exceeding 250mm but not exceeding 500mm thick propped up exceeding 3,5m and not exceeding 5,0m high.	m²	57			
	RK 57	""	31			
	Carried to Collection			R		
	Section No. 2					+-
	Bill No. 3					
	Concrete, Formwork And Reinforcement					
	22					

ı		Unit	Quantity	Rate	Amount	
4.0	Rough Formwork to Sides and Soffits:					
13	Edges of roof slab propped up exceeding 3,5m and not exceeding 5m high.	m²	28			
	RK 28 MOVEMENT JOINTS ETC.					
	Saw cut joints:					
14	Saw cut joint in top of concrete formed of a 10mm x 60mm first cut not later than 1 day after casting concrete and 6mm x 20mm second cut at top of joint made 21 days after casting.	m	34			
	RK 34					
	Expansion joints with bitumen impregnated softboard between vertical concrete surfaces:					
15	10mm Joints not exceeding 300mm high.	m	15			
	RK 15					
	'Sondor Jointex' closed cell expanded polyethylene between vertical concrete surfaces:					
16	10mm Joints not exceeding 300mm high.	m	21			
	RK 21					
	<u>'Sondor Jointex' closed cell expanded polyethylene</u> between vertical concrete and brick surfaces:					
17	10mm Joints not exceeding 330mm high.	m	23			
	RK 23					
	Vertical joggle construction joints through concrete including applying bond breaker to mating face and finishing joint with a nosing tool:					
18	Surface beds not exceeding 300mmm thick.	m	67			
	RK 67					
	REINFORCEMENT					
	$\underline{\mbox{Mild steel reinforcement to structural concrete work:}}$					
19	12mm Diameter bars.	Tonnes	2.65			
	RK 1.45 CWK 1.2					
20	10mm Diameter bars.	Tonnes	0.72			
24	RK 0.51 CWK 0.21 8mm Diameter bars.	Tannaa	0.70			
21		Tonnes	0.72			
	RK 0.51 CWK 0.21 High tensile steel reinforcement to structural					
	concrete work:					
22	32mm Diameter bars.	Tonnes	0.72			
	RK 0.51 CWK 0.21					
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	Carried to Collection Section No. 2			R		
	Bill No. 3					
	Concrete, Formwork And Reinforcement					
	23					
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eMENDI BUILDING ALTERATION-PoN

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1		Unit	Quantity	Rate	Amount	I
23	25mm Diameter bars.	Tonnes	0.72			
	RK 0.51 CWK 0.21					
24	20mm Diameter bars.	Tonnes	0.72			
	RK 0.51 CWK 0.21					
25	16mm Diameter bars.	Tonnes	0.72			
	RK 0.51 CWK 0.21					
26	12mm Diameter bars.	Tonnes	0.72			
	RK 0.51 CWK 0.21					
27	10mm Diameter bars.	Tonnes	0.72			
	RK 0.51 CWK 0.21					
28	8mm Diameter bars.	Tonnes	0.72			
	RK 0.51 CWK 0.21					
	Fabric reinforcement:					
29	Type 245 fabric reinforcement in concrete surface beds,					
	etc.	m²	55			
	RK 55					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 3					
	Concrete, Formwork And Reinforcement					
	24					

		I	Amount
BILL NO. 3			
CONCRETE, FORMWORK AND REINFOR	<u>CEMENT</u>		
COLLECTION			
		Page No	
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Carried To Section No. 2	on Summary	R	
Bill No. 3			
Concrete, Formwork And Reinforcement	25		

SECTION NO. 2 BUILDING WORKS BILL NO. 4 MASONRY Key: Location Description: Un/A Unallocated GF-W GROUND FLOOR-WEST GF-E GROUND FLOOR-EAST FF-W FIRST FLOOR-WEST FF-E FIRST FLOOR-WEST SF-E SECOND FLOOR-WEST SF-E SECOND FLOOR-EAST TF-W THIRD FLOOR-EAST TF-B THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
BUILDING WORKS BILL NO. 4 MASONRY Key: Location Description: Un/A Unallocated GF-W GROUND FLOOR-WEST GF-E GROUND FLOOR-EAST FF-W FIRST FLOOR-WEST FF-E FIRST FLOOR-EAST SF-W SECOND FLOOR-WEST SF-E SECOND FLOOR-EAST TF-W THIRD FLOOR-EAST TF-B THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-WEST 4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
MASONRY Key: Location Description: Un/A Unallocated GF-W GROUND FLOOR-WEST GF-E GROUND FLOOR-EAST FF-W FIRST FLOOR-WEST FF-E FIRST FLOOR-WEST SF-W SECOND FLOOR-WEST SF-E SECOND FLOOR-EAST TF-W THIRD FLOOR-WEST TF-E THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
MASONRY Key: Location Description: Un/A Unallocated GF-W GROUND FLOOR-WEST GF-E GROUND FLOOR-EAST FF-W FIRST FLOOR-WEST FF-E FIRST FLOOR-WEST SF-W SECOND FLOOR-WEST SF-E SECOND FLOOR-EAST TF-W THIRD FLOOR-WEST TF-E THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
MASONRY Key: Location Description: Un/A Unallocated GF-W GROUND FLOOR-WEST GF-E GROUND FLOOR-EAST FF-W FIRST FLOOR-WEST SF-W SECOND FLOOR-WEST SF-E SECOND FLOOR-EAST TF-W THIRD FLOOR-EAST TF-E THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
Key:Location Description:Un/AUnallocatedGF-WGROUND FLOOR-WESTGF-EGROUND FLOOR-EASTFF-WFIRST FLOOR-WESTFF-EFIRST FLOOR-EASTSF-WSECOND FLOOR-WESTSF-ESECOND FLOOR-EASTTF-WTHIRD FLOOR-WESTTF-ETHIRD FLOOR-EASTIItem Location (Auto)4F-WFOURTH FLOOR-WEST4F-EFOURTH FLOOR-EASTBF-1BASEMENT FLOOR-01			
Un//A Unallocated GF-W GROUND FLOOR-WEST GF-E GROUND FLOOR-EAST FF-W FIRST FLOOR-WEST FF-E FIRST FLOOR-WEST SF-W SECOND FLOOR-WEST SF-E SECOND FLOOR-EAST TF-W THIRD FLOOR-WEST TF-E THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
GF-W GROUND FLOOR-WEST GF-E GROUND FLOOR-EAST FF-W FIRST FLOOR-WEST FF-E FIRST FLOOR-WEST SF-W SECOND FLOOR-WEST SF-E SECOND FLOOR-EAST TF-W THIRD FLOOR-WEST TF-E THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-WEST 4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
GF-E GROUND FLOOR-EAST FF-W FIRST FLOOR-WEST FF-E FIRST FLOOR-WEST SF-W SECOND FLOOR-WEST SF-E SECOND FLOOR-EAST TF-W THIRD FLOOR-WEST TF-E THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-WEST 4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
FF-W FIRST FLOOR-WEST FF-E FIRST FLOOR-EAST SF-W SECOND FLOOR-WEST SF-E SECOND FLOOR-EAST TF-W THIRD FLOOR-WEST TF-E THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-WEST 4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
SF-W SECOND FLOOR-WEST SF-E SECOND FLOOR-EAST TF-W THIRD FLOOR-WEST TF-E THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-WEST 4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
SF-E SECOND FLOOR-EAST TF-W THIRD FLOOR-WEST TF-E THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-WEST 4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
TF-W THIRD FLOOR-WEST TF-E THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-WEST 4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
TF-E THIRD FLOOR-EAST I Item Location (Auto) 4F-W FOURTH FLOOR-WEST 4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
I Item Location (Auto) 4F-W FOURTH FLOOR-WEST 4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
4F-W FOURTH FLOOR-WEST 4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01			
BF-1 BASEMENT FLOOR-01			
BF-2 BASEMENT FLOOR-02			
RK RECREATIONAL & KITCH			
CWK COVERED WALKWAY			
BRICKWORK Sizes in descriptions: Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick. Hollow walls etc: Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole. Walls in two skins described as 'bagged and sealed' shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats 'Brixeal' bitumen emulsion			
Carried to Collection Section No. 2 Bill No. 4 Masonry		R	

			eMENDI BUIL	DING ALTERATION-
	Unit	Quantity	Rate	Amount
Face bricks:				
Bricks shall be ordered timeously to obtain uniformity in size and colour.				
Pointing:				
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.				
BRICKWORK IN FOUNDATIONS				
Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class II mortar:				
115mm brick walls in foundation.	m²	11		
RK 11				
270mm Hollow walls of two half brick skins including wire ties in foundation.	m²	33		
RK 33 450mm Hollow walls of two half brick skins including wire ties in foundation.	m²	6		
RK 6 BRICKWORK IN SUPERSTRUCTURE				
Brickwork of NFP bricks in class II mortar:				
115mm brick walls	m²	76		
GF-W 4 RK 72 230mm brick in parapet walls.	m²	12		
RK 12 270mm Hollow walls of two half brick skins including wire ties	m²	95		
GF-E 7 RK 88 450mm Hollow walls of two half brick skins including wire ties.	m²	19		
RK 19 BRICKWORK SUNDRIES.				
Sundries: Cutting toothings and bonding new brickwork to existing.	m²	2		
FF-W 1 RK 1	""			
Splayed mortar fillets one course high in 50mm cavities.	m	2		
RK 2 Closing 50mm cavities of hollow walls vertically with brickwork half brick wide	m	22		
RK 22				
Carried to Collection	n		R	
Section No. 2				
Bill No. 4				
Masonry				

eMENDI BUILDING ALTERATION-PoN

1		Unit	Quantity	Rate	Amount	ı
	Bagging of 1:3 cement and sand mixture:					
11	270mm brick walls, piers, etc	m²	95			
	GF-E 7 RK 88					
	Joint forming material in movement joints:					
12	Expansion joints with low density (33kg/m³), cross linked, closed cell, expanded polyethylene joint former, with tear off strip fitted to concrete surface with adhesive as per the manufacturer's recommendation and built in vertically between brickwalls.	m²	8			
	RK 8					
	Brickwork reinforcement:					
13	75mm Wide reinforcement built in horizontally.	m	1,214			
	GF-W 12 GF-E 163 RK 1039					
14	75mm Wide reinforcement built in horizontally in					
	foundations.	m	654			
	RK 654					
15	150mm Wide reinforcement built in horizontally.	m	251			
	GF-W 66 GF-E 140 RK 45					
	Prestressed fabricated lintels:					
16	110 x 75mm Lintels in lengths not exceeding 3m.	m	16			
	GF-W 2 RK 14					
	NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS					
	Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs, etc:					
47						
17	15 x 150mm Wide sills set flat and slightly projecting.	m	4			
	RK 4					
	O			_		
	Carried to Collection			R		
	Section No. 2 Bill No. 4					
	Masonry					
	28					
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BILL NO. 4 MASONRY COLLECTION	Brought Forward from Page	Page No 26 27 28		
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					DING ALTERATION	N-I
		Unit	Quantity	Rate	Amount	
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SECTION NO.	<u>2</u>					
BUILDING WC	RKS					
BILL NO. 5						
WATERPROO	FING					
Key:	Location Description:					
Un/A	Unallocated					
GF-W	GROUND FLOOR-WEST					
GF-E	GROUND FLOOR-EAST					
FF-W	FIRST FLOOR-WEST					
FF-E SF-W	FIRST FLOOR-EAST SECOND FLOOR-WEST					
SF-W SF-E	SECOND FLOOR-WEST SECOND FLOOR-EAST					
TF-W	THIRD FLOOR-WEST					
TF-E	THIRD FLOOR-EAST					
1	Item Location (Auto)					
4F-W	FOURTH FLOOR-WEST					
4F-E	FOURTH FLOOR-EAST					
BF-1	BASEMENT FLOOR-01					
BF-2 RK	BASEMENT FLOOR-02					
CWK	RECREATIONAL & KITCH COVERED WALKWAY					
OWIC	OOVERED WALKWAT					
TRADE PREAL	MRI ES					
Trade Preamb						
Trades' (2008 e	mbles refer to 'Model Preambles for edition) for the full descriptions of material work to be done in this Bill.					
SUPPLEMENT	ARY PREAMBLES					
Waterproofing	<u>u</u>					
under a ten yea be laid to even hips and valley waterproofing s	of roofs, basements, etc shall be laid ar guarantee. Waterproofing to roofs shall falls to outlets etc with necessary ridges, s. Descriptions of sheet or membrane shall be deemed to include additional ps and turn-downs.					
DAMPPROOF	NG OF WALLS AND FLOORS.					
One layer of 3	75 micron Consol Plastics Brikgrip d damp proof course:					
In walls.		m²	43			
RK 43		-				
One layer of 2	50 micron Consol Plastics Brikgrip d damp proof course:					
Under surface	beds.	m²	147			
RK 147		***				
						_
	Carried to Collection			R		_
Section No. 2						
Bill No. 5						
Waterproofing						
	30					

				eMENDI BUIL	DING ALTERATION-	-PoN
1		Unit	Quantity	Rate	Amount	l
3	Two coats 'ABE Brixeal' bitumen emulsion waterproof coating: On bagged brick walls GF-E 7 RK 88 WATERPROOFING TO ROOFS, BASEMENTS, ETC. One layer Derbigum SP4 waterproofing membrane, with 75mm side laps and 100mm end laps, sealed to primed surface to falls and crossfalls by 'torchfusion'. Waterproofing to be installed by an Approved Derbigum Contractor under a ten year	m²	95			
	guarantee:	•				
4	On flat roofs	m²	57			
5	On turn-ups and turn-downs exceeding 300mm girth.	m²	28			
6	RK 28 Additional membrane 300mm girth at internal and external angles.	m	32			
7	FF-W 4 RK 28 Additional membrane and sealing into 80mm diameter outlet.	No	2			
8	RK 2 Additional membrane and sealing into 100mm diameter outlet.	No	2			
9	RK 2 Additional membrane and sealing into 150mm diameter outlet. RK 2	No	2			
10	PROTECTIVE ROOFING PAINT Two coats 'Roofcote' bituminous aluminium paint: On waterproofing to roofs. RK 57 JOINT SEALANTS, ETC.	m²	57			
11	Approved two-part polyurethane sealing compound including backing cord, bond breaker, primer, etc: 10 x 60mm In saw cut joints in floors RK 23	m	23			
12	10 x 20mm In isolation joints in floors including raking out expansion joint filler as necessary.	m	12			
	RK 12					
	Carried to Collection			R		
	Section No. 2 Bill No. 5					
	Waterproofing 31					
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eMENDI BUILDING ALTERATION-PoN

1	I	Unit	Quantity	Rate	Amount	I
13	10 x 10mm In expansion joints in walls including raking					
	out expansion joint filler as necessary.	m	719			
	GF-E 78 FF-W 477 RK 80 CWK 84					
	Clear silicone sealant applied in accordance with the					
	manufacturers instructions:					
14	In joints between ceramic sanitary ware and ceramic tiles.	m	4			
15	RK 4 In joints between stainless steel sanitary ware and					
13	ceramic tiles.	m	4			
	GF-W 1 FF-W 1 TF-E 1					
	RK 1					
	Carried to Collection					
	Section No. 2			R		
	Bill No. 5					
	Waterproofing					
	32					

	I	Amount	
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Waterproofing			
33			

		Unit	Quantity	Rate	Amount	
050510N NO	•					
SECTION NO.						
BUILDING WO	<u>ORKS</u>					
BILL NO. 6						
ROOF COVER	RINGS					
Key:	Location Description:					
Un/A	Unallocated					
GF-W	GROUND FLOOR-WEST					
GF-E	GROUND FLOOR-EAST					
FF-W	FIRST FLOOR-WEST					
FF-E	FIRST FLOOR-EAST					
SF-W	SECOND FLOOR-WEST					
SF-E	SECOND FLOOR-EAST					
TF-W	THIRD FLOOR-WEST					
TF-E	THIRD FLOOR-EAST					
I	Item Location (Auto)					
4F-W	FOURTH FLOOR-WEST					
4F-E	FOURTH FLOOR-EAST					
BF-1	BASEMENT FLOOR-01					
BF-2	BASEMENT FLOOR-02					
RK	RECREATIONAL & KITCH					
CWK	COVERED WALKWAY					
TRADE PREA	MBLES					
Trade Preamb	oles:					
For Trade Prea	ambles refer to 'Model Preambles for edition) for the full descriptions of material work to be done in this Bill.					
RIBBED META	AL SHEETING AND ACCESSORIES					
Supplemetary	Preambles:					
Guarantee All guarantee and and accessorie	material will carry a manufacturer's an approved contractor shall lay sheeting es in strict accordance with the s specifications					
	0 1 1 0 " "			_		
	Carried to Collection			R		
Section No. 2						
Bill No. 6						
Roof Covering	S					
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			_		DING ALTERATION	-r oin
J	I	Unit	Quantity	Rate	Amount	
	Erection, handling and storage Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duckboards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way shall be replaced The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity The contractor shall ensure that all materials used on site are transported, handled and stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material	Unit	Quantity			
	at the contractor's expense. Repair of damaged material will no be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction					
	Cleaning, etc All debris, swarf, etc. arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners and sealants, mandrels from pop rivets, off-cuts of flashings and sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, down pipes, etc					
	Guarantee:					
	The manufacturer shall comply with ISO9002 Quality Management System. Sheeting shall be laid in strict accordance with the manufacturer's specifications by an approved contractor.					
	'Klip-Lok 406' profile rolled formed in continuous lengths form 0,8mm Color-Tech G4 finish aluminium roof sheeting and accessories fixed to steel purlins or rails at 1350mm centres:					
1	Roof covering to curved roof fixed to steel purlins.	m²	80			
2	RK 80 Roof covering to roof fixed to steel purlins.	m²	309			
3	RK 99 CWK 210 Sides cladding fixed to side steel purlins.	m²	7			
4	RK 7 Circular cutting.	m²	211			
	RK 11 CWK 200					
	Carried to Collection			R		
	Section No. 2			•		
	Bill No. 6					
	Roof Coverings					
	35					

		Unit	Quantity	Rate	Amount	I-F OIN
		Offic	Quantity	Nate	Amount	
	'Klip-Lok 406 0.8mm thick Colortech G4 C1S'					
	Flashings:					
5	Side cover flashing 350mm girth and bent along girth (curved).	m	10			
	RK 10 ROOF AND WALL LINING AND INSULATION.					
	Double-sided 'Sisalation®' FR405 light industrial aluminium foil sheeting fixed in strict accordance with the manufacturers instructions:					
6	Insulation sheeting laid taut over purlins (at approximately 1500mm centres) and fixed concurrent with roof covering with minimum 150mm stapled laps including galvanised steel straining wires at not exceeding 400mm centres and doublesided tape at edges where required.	m²	80			
	RK 80	1111	00			
						_
	Carried to Collection			R		
	Section No. 2 Bill No. 6					
	Roof Coverings					
	36					

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BILL NO. 6 ROOF COVERINGS COLLECTION	Page No		
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Carried To Section Summary Section No. 2	R		
Bill No. 6 Roof Coverings			
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1		Unit	Quantity	Rate	Amount
SECTION NO.	<u>2</u>				
BUILDING WO	ORKS				
BILL NO. 7					
CARPENTRY	AND JOINERY				
Key:	Location Description:				
Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W FF-E	FIRST FLOOR-WEST FIRST FLOOR-EAST				
SF-W	SECOND FLOOR-WEST				
SF-E	SECOND FLOOR-EAST				
TF-W	THIRD FLOOR-WEST				
TF-E	THIRD FLOOR-EAST				
1	Item Location (Auto)				
4F-W 4F-E	FOURTH FLOOR-WEST FOURTH FLOOR-EAST				
4F-E BF-1	BASEMENT FLOOR-01				
BF-2	BASEMENT FLOOR-02				
RK	RECREATIONAL & KITCH				
CWK	COVERED WALKWAY				
TRADE PREAM	MBLES				
Trade Preamb	les:				
Trades' (2008 e	ambles refer to 'Model Preambles for edition) for the full descriptions of material				
	work to be done in this Bill.				
SUPPLEMENT	ARY PREAMBLES				
Joinery:					
	frames shall be deemed to include ms, mullions, rails, etc.				
	hardwood joinery shall be deemed to g of bolt holes.				
<u>Fixing:</u>					
	d as nailed shall be deemed to be fixed steel nails or shot pins to brickwork or				
Decorative lan	ninate finish:				
	shall be glued under pressure. Edge outt jointed at junctions with adjacent				
	Carried to Collection			R	
Section No. 2					
Bill No. 7					
Carpentry And	Joinery				
	38				
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1	ı	Unit	Quantity	Rate	Amount
	SKIRTING.				
	Wrought meranti:				
1	19 x 70mm skirting with straight top edge, including 19mm quadrant bead nailed.	m	473		
	GF-W 136 GF-E 227 FF-W 19 FF-E 9 SF-W 9 TF-E 5 4F-W 5 4F-E 4 BF-1 4 BF-2 54 RK 1				
	PURPOSE MADE SOLID HARDWOOD DOORS:				
	Solid hardwood doors:				
2	40mm Door size 813 x 1800mm high solid core, flush panel door suitable for exterior use with sill, horizontally routered grooves 10mm wide including weather-bar to botton edge of the door. RK 1	No	1		
	SEMI SOLID CORE FLUSH DOORS				
	Solid core doors with sill:				
	Laminated Semi-solid flush panel doors:				
3	40mm Door size 813 x 2032mm high fitted with hardwood edging and paintable 'Masonite' faces both sides, horizontally routered grooves 10mm wide.	No	4		
	RK 4				
4	40mm Door size 1600 x 2032mm high double door fitted with hardwood edging and paintable 'Masonite' faces both sides, horizontally routered grooves 10mm wide.	No	2		
5	FF-W 2 40mm Door size 1752 x 2032mm high double door fitted with hardwood edging and paintable 'Masonite' faces both sides, horizontally routered grooves 10mm wide.	No	2		
	FF-W 2				
	FRAMED FRAMES ETC.				
	Meranti door frames:				
6	50 x 76mm Single Rebated frames	m	118		
	GF-W 15 GF-E 4 FF-W 79 RK 20				
	JOINERY SUNDRIES				
	16mm Melawood:				
7	Natural finish, colour to be charcoal grey cupboard doors size 600 x 2875mm high including hinges, fixed to existing built-in cupboards.	No	2		
	GF-E 2				
	Carried to Collection			R	
	Section No. 2			K	
	Bill No. 7				
	Carpentry And Joinery				
	39				

ı		Unit	Quantity	Rate	Amount	ı
	FITTINGS					
	FITTINGS.					
	PG Bison Melawood or similar approved:	2	4.0			
8	16mm Tops, shelves, sides, divisions, etc. Colour:	m²	18			
	BF-1 18 Steel Metal Shelves:					
9	Adjustable metal shelves, etc.	m²	12			
9	BF-1 12	111-	12			
	PG Bison Formica Lifeseal or similar approved 32mm worktop including fixing brackets:					
10	32mm Thick x 400mm wide to tops including fixing					
	brackets.	m	5			
	RK 5					
11	32mm Thick x 600mm wide to tops including fixing brackets.	m	43			
	GF-W 5 TF-E 3 RK 35					
	Fenix NTM or similar approved 10mm counter tops - Colour 0720 Nero Ingo:					
12	600mm wide to tops fixed to walls including fixing brackets (vertical to walls).	m	11			
	GF-W 6 TF-E 4 RK 1 Rustenberg Granite or similar approved 30mm counter top (Kitchenette tops):					
13	30mm Thick x 600mm wide to tops including fixing brackets.	m	8			
	GF-W 5 TF-E 3 FITTINGS					
	General:.					
	The following cupboard fittings have been measured as complete units i.e. the components of the units have not been separately measured. The descriptions, therefore, of such units shall be deemed to include all components, assembling, housing, notching, glueing, blocking, planting on and screwing with countersunk screws, edge strips, decorative plastic finish, glass, ironmongery, metalwork, paint or varnish finishes, etc.					
	The references given in the descriptions are to the respective types of fittings detailed on the Architect's drawings numbered as indicated in the descriptions and annexed to these Bills of Quantities for tender purposes.					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 7					
	Carpentry And Joinery					
	40					

eMENDI BUILDING ALTERATION-PoN

				eMENDI BUILI	DING ALTERATION	I-PoN
1		Unit	Quantity	Rate	Amount	1
	Kitchen Joinery:					
14						
14	top, sides, bottom, division, shelf, back and six hinged					
	doors, shadow line, ironmongery.	No	1			
	TF-E 1	110				
15	Floor cupboard type size 5000 x 600 x 900mm high with					
15	top, sides, bottom, back, four drawers and six hinged					
	doors and dividing framework, stainless steel kickplate,					
	ironmongery.	No	1			
	SF-E 1					
16	Kitchen timber slatted timber screen to match other					
	kitchens, it is made of 28 pieces of evenly spaced					
	38X114mm SA Pine, shaved smooth to a thickness of					
	30mm, stained in Ebony and finished in a glossy varnish; These are held together by 2X 25mm diameter chrome					
	round tube posts at both edges and at approximately 1m					
	spacing in-between.	No	3			
	GF-W 1 GF-E 1 SF-E 1					
	GI-W I GI-L I					
	Carried to Collection			R		
	Section No. 2			1		
	Bill No. 7					
	Carpentry And Joinery 41					
I	41		1			

		Amount	ı
BILL NO. 7 CARPENTRY AND JOINERY COLLECTION	Page No		
Brought Forward	from Page 38		
	40		
Carried To Section Summary Section No. 2	R		
Bill No. 7 Carpentry And Joinery			
42			

		Unit	Quantity	Rate	Amount
SECTION NO	<u>. 2</u>				
BUILDING WO	<u>ORKS</u>				
BILL NO. 8					
CEILINGS PA	RTITIONS AND ACCESS FLOORING				
<u>Key:</u>	Location Description:				
Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W	FIRST FLOOR-WEST				
FF-E	FIRST FLOOR-EAST				
SF-W	SECOND FLOOR-WEST				
SF-E	SECOND FLOOR-EAST				
TF-W	THIRD FLOOR FAST				
TF-E I	THIRD FLOOR-EAST Item Location (Auto)				
ı 4F-W	FOURTH FLOOR-WEST				
4F-VV 4F-E	FOURTH FLOOR-WEST				
4r-⊑ BF-1	BASEMENT FLOOR-01				
BF-2	BASEMENT FLOOR-02				
RK	RECREATIONAL & KITCH				
CWK	COVERED WALKWAY				
to be used and	edition) for the full descriptions of material d work to be done in this Bill.				
SUPPLEMENT Proprietary ite Proprietary ite	d work to be done in this Bill. TARY PREAMBLES ems or materials: ms or materials where specified are to be				
SUPPLEMEN Proprietary ite Proprietary ite of the brand sp Principal Agen	d work to be done in this Bill. TARY PREAMBLES ems or materials: ms or materials where specified are to be becified - or other equal approved - by the t.				
SUPPLEMEN Proprietary ite Proprietary ite of the brand sp	d work to be done in this Bill. TARY PREAMBLES ems or materials: ms or materials where specified are to be becified - or other equal approved - by the t.				
Proprietary iterity of the brand sprincipal Agent Descriptions:	d work to be done in this Bill. TARY PREAMBLES ems or materials: ms or materials where specified are to be becified - or other equal approved - by the it. ed as nailed shall be deemed to be fixed steel nails or pins or shot pinned to				
Proprietary iter of the brand sprincipal Agen Descriptions: Items describe with hardened brickwork or collected to the brand of the brand sprincipal Agen Descriptions: Items describe with hardened brickwork or collected to the brand sprincipal agent brand to the brand sprincipal agent brand to the brand sprincipal agent to	d work to be done in this Bill. TARY PREAMBLES ems or materials: ms or materials where specified are to be decified - or other equal approved - by the lat. det as nailed shall be deemed to be fixed steel nails or pins or shot pinned to concrete. det as plugged shall be deemed to include are, plastic or metal plugs at not exceeding les, and where described as bolted the bolts				
Proprietary iter of the brand sprincipal Agen Descriptions: Items describe with hardened brickwork or collection to the brand sprincipal Agen Descriptions: Items describe with hardened brickwork or collection to the brand describe screwing to fib 600mm centre	d work to be done in this Bill. TARY PREAMBLES ems or materials: ms or materials where specified are to be decified - or other equal approved - by the lat. det as nailed shall be deemed to be fixed steel nails or pins or shot pinned to concrete. det as plugged shall be deemed to include are, plastic or metal plugs at not exceeding les, and where described as bolted the bolts				
Proprietary iter of the brand sprincipal Agen Descriptions: Items describe with hardened brickwork or collection to the brand sprincipal Agen Descriptions: Items describe with hardened brickwork or collection to the brand describe screwing to fib 600mm centre	d work to be done in this Bill. TARY PREAMBLES ems or materials: ms or materials where specified are to be decified - or other equal approved - by the lat. det as nailed shall be deemed to be fixed steel nails or pins or shot pinned to concrete. det as plugged shall be deemed to include are, plastic or metal plugs at not exceeding les, and where described as bolted the bolts			R	
Proprietary iter of the brand sprincipal Agen Descriptions: Items describe with hardened brickwork or collection to the brand sprincipal Agen Descriptions: Items describe screwing to fib 600mm centre have been given	d work to be done in this Bill. TARY PREAMBLES ems or materials: ms or materials where specified are to be decified - or other equal approved - by the st. ed as nailed shall be deemed to be fixed steel nails or pins or shot pinned to concrete. ed as plugged shall be deemed to include are, plastic or metal plugs at not exceeding es, and where described as bolted the bolts en. Carried to Collection			R	
Proprietary iter of the brand sprincipal Agen Descriptions: Items describe with hardened brickwork or collection to fib 600mm centre have been given Section No. 2	d work to be done in this Bill. TARY PREAMBLES ems or materials: ms or materials where specified are to be decified - or other equal approved - by the st. ed as nailed shall be deemed to be fixed steel nails or pins or shot pinned to concrete. ed as plugged shall be deemed to include are, plastic or metal plugs at not exceeding es, and where described as bolted the bolts en. Carried to Collection			R	
Proprietary iter of the brand sprincipal Agen Descriptions: Items describe with hardened brickwork or collection to the been give Section No. 2 Bill No. 8	d work to be done in this Bill. TARY PREAMBLES ems or materials: ms or materials where specified are to be decified - or other equal approved - by the st. ded as nailed shall be deemed to be fixed steel nails or pins or shot pinned to concrete. ded as plugged shall be deemed to include are, plastic or metal plugs at not exceeding as, and where described as bolted the bolts en. Carried to Collection			R	
Proprietary items of the brand sprincipal Agen Descriptions: Items describe with hardened brickwork or collection to the been give the been give the been give the been give the been section No. 2 Bill No. 8	d work to be done in this Bill. TARY PREAMBLES ems or materials: ms or materials where specified are to be decified - or other equal approved - by the st. ed as nailed shall be deemed to be fixed steel nails or pins or shot pinned to concrete. ed as plugged shall be deemed to include are, plastic or metal plugs at not exceeding es, and where described as bolted the bolts en. Carried to Collection			R	

١	1	Unit	Quantity	Rate	Amount	I
	CEILING TIMBERS, BEADS, INSULATION, ETC.					
	6,4mm Gypsum plasterboard with taped joints and the whole finished with gypsum plaster trowelled to a smooth polished surface to the thickness recommended by the manufacturer.					
1	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres and cross brandering at 1200mm centres	m²	166			
2	FF-W 151 RK 15 Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres and cross brandering at 1200mm					
	centres (curved). RK 63	m²	63			
3	Circular cutting	m	10			
4	Opening for sprinkler head	No	8			
5	Extra over ceiling for opening for size 1200 x 600mm light fitting	No	4			
6	Extra over ceiling for size 600 x 600mm opening for ventilation grille/air conditioning diffuser	No	4			
7	Extra over ceiling for size 900 x 900mm trap door of 38 x 38mm wrought softwood rebated framing with one cross brander, covered with ceiling board and fitted flush in opening, including necessary trimmers around	No	2			
	TF-E 2					
	Gypsum plasterboard cornices:					
8	75mm Coved cornices, plugged	m	324			
	6,4mm Gypsum plasterboard bulkhead with taped joints and the whole finished with gypsum plaster trowelled to a smooth polished surface to the thickness recommended by the manufacturer.					
9	Rectangular bulkhead, 1695mm wide x 300mm high, including standard steel brandering at 400mm centres, joined with joiner sections and hung with suspension brackets.	m	4			
	GF-E 4					
	Carried to Collection			R		
	Section No. 2			K		
	Bill No. 8					
	Ceilings Partitions And Access Flooring					
	44					

ı	,	Unit	Quantity	Rate	Amount	1 011
10	Rectangular bulkhead, 1800 mm wide x 300mm high, including standard steel brandering at 400mm centres, joined with joiner sections and hung with suspension brackets.	m	2			
11	GF-E 2 Rectangular bulkhead, 2400 mm wide x 300mm high, including standard steel brandering at 400mm centres, joined with joiner sections and hung with suspension brackets.	m	7			
12	GF-W 7 Rectangular bulkhead, 3000 mm wide x 300mm high, including standard steel brandering at 400mm centres, joined with joiner sections and hung with suspension brackets.	m	2			
13	GF-E 2 Extra over ceiling for opening for 210mm diameter downlighter or loudspeaker.	No	5			
14	GF-W 3 GF-E 2 Extra over ceiling for opening for 150mm diameter sprinkler.	No	13			
15	GF-E 2 FF-W 3 I 8	INO	13			
	ventilation / air conditioning diffuser. GF-E 2 FF-W 3 I 3	No	8			
	'Donn' prepainted cornices to suspended ceilings:					
16	47 x 35mm 'SM25' recessed shadowline cornice plugged. (code LSM 25)	m	10			
	RK 10 SUSPENDED CEILINGS.					
	Suspended ceiling panels size 600 x 1200 x 15mm thick to match existing ceiling with tegular (reveal) edge, installed on Tee (Aluminium white-colour Zinc coating, AZ 50 standard) at 1200mm c/c suspended using Hanger Strap 19mm fixed to the Main Tee. Perimeter - T Shadow Line Wall Angle to the wall using fixings at 300mm centres strictly in accordance with the manufacturers instructions:					
17	Ceilings suspended not exceeding 1m below concrete soffits	m²	573			
	GF-W 141 FF-W 432					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 8 Ceilings Partitions And Access Flooring					
	45					

			0 "		DING ALTERATION-
		Unit	Quantity	Rate	Amount
	Acoustic ceiling tiles size 600 x 600mm x 12.5mm to match existing laid onto white powder coated ceiling grid system shadow-line including galvanised main tees, cross tees, hold-down clips, wedges, reinforcement splines, etc., all suspended with galvanised hangers at not exceeding 1200mm centres strictly in accordance with the				
	manufacturers instructions:				
8	Ceilings suspended not exceeding 1m below concrete soffits.	m²	452		
19	GF-W 248 GF-E 94 FF-E 52 4F-W 13 4F-E 12 BF-1 33 Extra over ceiling for opening for 210mm diameter downlighter or loudspeaker.	No	59		
20	GF-W 18 GF-E 2 FF-W 39 Extra over ceiling for opening for 600 x 1200mm light fitting.	No	140		
21	GF-W 30 GF-E 8 FF-W 102 Extra over ceiling for 600 x 600mm opening for ventilation / air conditioning diffuser.	No	92		
	GF-W 30 GF-E 4 FF-W 58 'Gyproc' cornices to suspended ceilings:				
22	45 x 35mm Flush plaster trim cornices for flush plastered ceilings, plugged. (code 1969)	m	423		
23	GF-W 91 GF-E 227 FF-W 19 FF-E 9 SF-W 9 TF-E 5 4F-W 5 4F-E 4 BF-2 54 45 x 35mm Flush plaster trim cornices for flush plastered ceilings, circular on plan, plugged. (code 1969) FF-W 14	m	14		
	Carried to Collection			R	
	Section No. 2			K	
	Bill No. 8 Ceilings Partitions And Access Flooring 46				

		Unit	Quantity	Rate	Amount	
	DADTITIONS FTO (ODAD Wards Occurs No. 400)					
	PARTITIONS ETC (CPAP Work Group No 138) 'Gyproc 3200 - 3620mm high GypWall Ultrasteel Stud					
	Drywall' steel stud partitions, consisting of stud and track system with 70 x 50mm 'Donn Drywall					
	UltraSTEEL™' studs at 600mm centres friction fitted					
	into head track and floor track clad on both sides with one layer of 12,5mm thick Gyproc Rhinoboard					
	fixed with 25mm and 42mm Gyproc RhinoBoard Sharp Point Screws at 220mm centres and resilient					
	bars to one side with all external angles to have natural anodized aluminium channels attached and					
	all joints to be covered with RhinoTape and finished with two layers of 'RhinoGlide' applied and lightly					
	sanded down, skimmed, well painted with three					
	coats, 100mm thick acoustic insulation in blanket form installed vertical, leaving wall surface prepared					
	for painting and 70mm high natural anodised aluminium skirting, all in accordance with the					
0.4	manufacturer's recommendations:					
24	Partitioning 3620mm high with bottom track plugged and top track fixed to concrete soffit, Rhino board to be					
	3700mm high (Partition studs project 150mm above ceiling level).	m	255			
	GF-W 88 GF-E 114 FF-W 9 FF-E 4 SF-W 5 TF-E 3					
	4F-W 3 4F-E 2 BF-2 27					
25	Extra over partition 3620mm high, Rhino board to be 3700mm high for vertical abutment. (Partition studs project 150mm above ceiling level).	NI.	40			
	GF-W 18	No	18			
26	Extra over partition 3600mm high for corner	No	11			
	GF-W 5 GF-E 4 SF-W 1 4F-W 1					
27	Extra over partition 3600mm high for irregular corner	No	2			
28	SF-W 2 Extra over partition 3600mm high for T-intersection	No	12			
29	GF-W 1 GF-E 11 Extra over partition 3600mm high for fair end	No	96			
29	GF-W 28 GF-E 54 FF-W 4	NO	90			
	FF-E 2 SF-W 2 TF-W 2 TF-E 2 4F-E 2					
	Carried to Collection			R		
	Section No. 2 Bill No. 8					
	Ceilings Partitions And Access Flooring					
	47					

1		Unit	Quantity	Rate	Amount	
	Extra over 900 x 2035mm Partitions for 40mm semi-solid flush doors with ? veneer on both sides and hardwood edge strips to vertical edges, hung to and including standard natural anodised aluminium door frame with one pair of 100mm nylon washered aluminium hinges to each hanging stile, including additional studding, trimming, etc to partitions					
30	Door 813 x 2032mm high.	No	1			
				_		
	Carried to Collection Section No. 2			R		
	Bill No. 8					
	Ceilings Partitions And Access Flooring 48					

		Amount
BILL NO. 8		
CEILINGS PARTITIONS AND ACCESS FLOORING		
COLLECTION		
	Page No	
Brought Forward from Page	e 43	
Blought Folward Holli Fage		
	44	
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Carried To Section Summary	R	
Section No. 2		
Bill No. 8 Ceilings Partitions And Access Flooring		
49		

		Unit	Quantity	Rate	Amount
SECTION NO.	2				
BUILDING WO	PRKS				
BILL NO. 9					
FLOOR COVE	DINGS				
	Location Description:				
<u>Key:</u> Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W	FIRST FLOOR-WEST				
FF-E	FIRST FLOOR-EAST				
SF-W	SECOND FLOOR-WEST				
SF-E	SECOND FLOOR-EAST				
TF-W	THIRD FLOOR-WEST				
TF-E	THIRD FLOOR-EAST				
l	Item Location (Auto)				
4F-W	FOURTH FLOOR-WEST				
4F-E	FOURTH FLOOR-EAST				
BF-1 BF-2	BASEMENT FLOOR-01 BASEMENT FLOOR-02				
RK	RECREATIONAL & KITCH				
CWK	COVERED WALKWAY				
Trades' (2008 e	imbles refer to 'Model Preambles for edition) for the full descriptions of material				
to be used and	work to be done in this Bill.				
SUPPLEMENT	ARY PREAMBLES				
Proprietary ite	ms or materials:				
	ns or materials where specified are to be ecified - or other equal approved - by the				
NEEDLE PUNC	CH CARPET SHEETING AND TILES:				
miracle fibreÖ needlepunch l	als« 500 x 500 x 8mm thick stainproof (Polypropylene) structured Nexbac EcoÖ SABS Class 3 fire rating / medium commercial carpet tiles,				
	l , all installed as per manufacturer's				
specifications					
On floors and la	andinas.	m²	1,502		
GF-W 366	GF-E 771 FF-W 159	'''	1,002		
FF-E 29 TF-E 29	SF-W 59 SF-E 89				
	Carried to Collection			R	
		'		K	
Section No. 2	Carried to Collection				
Section No. 2	Carried to Collection				
Bill No. 9					

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VINYL FLOOR COVERINGS, WALL LININGS, ETC	
Supply and fix 2.0mm thick x 2.0m wide Primo SD non-directional static dissipative vinyl sheeting,	
manufactured in accordance with EN 649 and laid in	
pattern over an earthed grid of aluminium tape in	
FloorworX No.27 acrylic conductive adhesive spread using a trowel fitted with an A2 notched blade at a	
rate of between 5.5m2 and 6.5m2 per litre on a	
previously prepared Class 1 sub-floor in accordance	
with SANS 10070, using a reliable self-leveller when required, including all cutting and waste. The	
sheeting must be rolled in both directions with an	
articulated 68kg three-sectional roller immediately after it has been laid into the adhesive. Joins must	
be butted, grooved and heat welded using the	
manufacturer's welding rod, ensuring that the	
welding rod bonds to more than 70% of the sheet thickness. After completing the installation the floor	
must be electrically tested for resistivity in	
accordance with the requirements of SANS 6160.	
2 On floors. m ² 42	
GF-W 10 GF-E 32	
ENTRANCE MATTING, ETC	
'Matco Trio Scraper entrance mats Colour Grey (Code: 2402)' 13mm gauge, consiting of	
polypropylene coarse fibre needle punch alternated	
with polyamide brush and drying strips, fixed in	
sunken mat surround (surround elsewhere measured) in accordance with the manufacturers	
recommendations:	
3 Entrance mat size 1800 x 1200mm wide. (trimmed on	
site to suit recess) No 1	
RK 1	
Epoxy:	
2mm thick "Sikafloor«-381 AS" (or similarlarly approved) highly chemically resistant and	
electrostatic conductive, applied in accordance with	
the manufacturer's instructions using a serrated trowel and roller:	
4 On floors and landings. m ² 55	
"KIRT" aluminium diving strips:	
5 "SQE150" 8 x 15mm stainless steel square edge trim. m 24	
RK 24	
Carried to Collection R	
Section No. 2	
Bill No. 9	
Floor Coverings	
51	

I		I	Amount	ı
BILL NO. 9 FLOOR COVERINGS COLLECTION	Brought Forward from Page	Page No 50 51		
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Section No. 2 Bill No. 9 Floor Coverings	52			

				eMENDI BUIL	DING ALTERATIO
		Unit	Quantity	Rate	Amount
SECTION NO. 2	2				
BUILDING WO	RKS				
BILL NO. 10					
IRONMONGER	Υ				
Key:	Location Description:				
Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W	FIRST FLOOR-WEST				
FF-E SF-W	FIRST FLOOR-EAST SECOND FLOOR-WEST				
SF-W SF-E	SECOND FLOOR-WEST				
TF-W	THIRD FLOOR-WEST				
TF-E	THIRD FLOOR-EAST				
1	Item Location (Auto)				
4F-W	FOURTH FLOOR-WEST				
4F-E	FOURTH FLOOR-EAST BASEMENT FLOOR-01				
BF-1 BF-2	BASEMENT FLOOR-01 BASEMENT FLOOR-02				
RK	RECREATIONAL & KITCH				
CWK	COVERED WALKWAY				
TRADE PREAM	IBLES				
Trade Preamble					
Trades' (2008 e	mbles refer to 'Model Preambles for dition) for the full descriptions of material work to be done in this Bill				
SUPPLEMENT	ARY PREAMBLES				
Finishes to iro	nmongery:				
by suffixes in ac bronze lacquere chromium plate enamelled : AS AG Anodised go	le finishes to ironmongery are indicated cordance with the following list: BS Satin d : CH Chromium plated : SC Satin d : SE Silver enamelled : GE Grey Anodised silver : AB Anodised bronze : old : ABL Anodised black : PB Polished ned and lacquered : PT Epoxy coated.				
	R SPRING HINGES, BOLTS, PANIC				
BOLTS, ETC.	K SPRING HINGES, BOLTS, PANIC				
	R SPRING HINGES, BOLTS, PANIC				
BOLTS, ETC. Dormakaba:	B-SS009' 102 x 75 x 3mm stainless steel				
BOLTS, ETC. Dormakaba:	_	No	15		
BOLTS, ETC. Dormakaba: 'Dormakaba DB hinge.	B-SS009' 102 x 75 x 3mm stainless steel	No	15		
BOLTS, ETC. Dormakaba: 'Dormakaba DB hinge. GF-E 3 A 1040 100mm	B-SS009' 102 x 75 x 3mm stainless steel	No Pairs	15		
BOLTS, ETC. Dormakaba: 'Dormakaba DB hinge. GF-E 3 A 1040 100mm	B-SS009' 102 x 75 x 3mm stainless steel RK 12 Aluminium Sinkless Hinge, Centre Pin				
BOLTS, ETC. Dormakaba: 'Dormakaba DB hinge. GF-E 3 A 1040 100mm With Standard A	B-SS009' 102 x 75 x 3mm stainless steel RK 12 Aluminium Sinkless Hinge, Centre Pin Alignment Grooving For Easy Fitment. GF-E 6			D	
BOLTS, ETC. Dormakaba: 'Dormakaba DB hinge. GF-E 3 A 1040 100mm With Standard A GF-W 30	B-SS009' 102 x 75 x 3mm stainless steel RK 12 Aluminium Sinkless Hinge, Centre Pin klignment Grooving For Easy Fitment.			R	
BOLTS, ETC. Dormakaba: 'Dormakaba DB hinge. GF-E 3 A 1040 100mm With Standard A GF-W 30 Section No. 2	B-SS009' 102 x 75 x 3mm stainless steel RK 12 Aluminium Sinkless Hinge, Centre Pin Alignment Grooving For Easy Fitment. GF-E 6			R	
BOLTS, ETC. Dormakaba: 'Dormakaba DB hinge. GF-E 3 A 1040 100mm With Standard A GF-W 30	B-SS009' 102 x 75 x 3mm stainless steel RK 12 Aluminium Sinkless Hinge, Centre Pin Alignment Grooving For Easy Fitment. GF-E 6			R	

1		Unit	Quantity	Rate	Amount	1 011
3	'Dormakaba DFB-SC-180' 153mm satin chrome manual flush bolt with heel.	No	4			
4	FF-W 4 'Dormakaba DFB-SC-180' 153mm satin chrome manual flush bolt with heel with keep let into concrete.	No	4			
5	FF-W 4 Galvanised Barrel Bolt, 150mm Long Fitted To Bottom Of Inactive Doorleaf.	No	3			
	GF-E 1 FF-W 2 Alufab:					
6	'Alufab 2040' 200mm aluminum anodised sickless hinges, centre pin.	No	66			
7	GF-W 15 GF-E 30 FF-E 3 SF-W 9 4F-E 3 BF-1 6 'Alufab M1519N' 150mm natural anodised aluminium flush bolt.	No	24			
	GF-W 12 GF-E 9 RK 3 CATCHES, CABIN HOOKS, ETC.					
	Halstead:					
8	'Halstead 166' 200mm Stain Chrome on brass cabin hook and eye including 100 x 100 x 75mm chamfered hardwood block twice oiled and plugged.	No	23			
	GF-W 5 GF-E 10 FF-W 1 FF-E 1 SF-W 3 4F-E 1 BF-1 2					
9	'Halstead' 200mm satin chromed cabin hook and eye, including 100 x 100 x 75mm chamfered meranti block twice oiled and plugged.	No	3			
	GF-E 1 FF-W 2 LOCKS.					
	Dormakaba:					
10	'Dormakaba D037D SS' stainless steel cylinder deadlock, case dimensions 116.5 x 78mm, forend dimesions 168 x 22mm, backset 57mm.	No	6			
11	GF-W 2 GF-E 3 FF-W 1 'Dormakaba D038RNP' Rebate conversion kit for europrofile locks D036S, D037D.	No	2			
12	GF-E 1 FF-W 1 'Dormakaba D036S SS' stainless steel cylinder sash lock, case dimensions 116.5 x 78mm, forend dimesions 168 x 22mm, backset 57mm, centres 61mm.	No	51			
	GF-W 13 GF-E 15 FF-W 11 FF-E 2 SF-W 3 4F-W 1 4F-E 3 BF-1 2 RK 1					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 10					
	Ironmongery					
	54					[

I		Unit	Quantity	Rate	Amount	
13	'Dormaka DHK004201' Satin nickel 43mm half knob cylinder.	No	23			
	GF-W 5 GF-E 10 FF-W 1 FF-E 1 SF-W 3 4F-E 1 BF-1 2					
14	'Dormaka DCE-002 SS' Stainless Steel round cylinder escutcheon.	Pairs	22			
	GF-W 5 GF-E 9 FF-W 3 FF-E 1 SF-W 2 4F-E 1 BF-1 1					
15	'Dormakaba DSC104301MK' Satin nickel 43mm five pin Euro-profile knob cylinder master keyed, cylinders stamped accordingly with corresponding door numbers, three keys with tags required per cylinder.	No	3			
	GF-E 1 FF-W 2	NO				
16	'Dormakaba DKC106601' 66mm five pin Euro-profile knob cylinder master keyed, cylinders stamped accordingly with corresponding door numbers, three keys with tags required per cylinder.	No	13			
	GF-W 2 GF-E 3 FF-W 3	110				
17	FF-E 1 SF-E 2 TF-E 1 RK 1 Dermakaha FMC 1200 ALH sinks electromagnetic leak					
17	'Dormakaba EMC 1200 ALH' sinlge electromagnetic lock with 1200 ibf (5338N) holding force, surface-mounted, with lock status sensor and red/ gree LED indicator (19860504).	No	4			
18	GF-W 2 GF-E 1 FF-W 1 'Dormakaba DDC106601MK' Satin nickel 66mm five pin Euro-profile knob cylinder master keyed, cylinders					
	stamped accordingly with corresponding door numbers, three keys with tags required per cylinder.	No	28			
	GF-W 9 GF-E 5 FF-W 9 FF-E 1 4F-W 1 4F-E 2					
19	RK 1 'Dormakaba DDC106600MK' Brass 66mm five pin Euro- profile double cylinder master keyed, cylinders stamped accordingly with corresponding door numbers, three					
	keys with tags required per cylinder.	No	1			
20	GF-W 1 'Basket' iseo ISEO 35mm Backset Hooklock.	No	11			
	GF-W 2 GF-E 1 FF-W 3 FF-E 1 SF-E 2 TF-E 1 RK 1					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 10					
	Ironmongery 55					

ı		Unit	Quantity	Rate	Amount	I
21	'Dormakaba 'PHA3 L DD' Three point locking panic bar -double door - door leaf 1000mm wide x 3400mm high (2101.2104.2104.2201.PHX02.PHX05).	No	4			
	GF-E 4 HANDLES					
	Equally approved od Dormakaba:					
22	'Dormakaba TH120 BP Cyl SS' Stainless steel lever handle on rose with cylinder escutcheons.	Sets	23			
	GF-W 7 GF-E 4 FF-W 7 FF-E 1 4F-W 1 4F-E 2 RK 1					
23	'Dormakaba TH120 Cyl SS' Stainless steel lever handle on rose with cylinder escutcheons.	Sets	2			
24	GF-W 1 FF-W 1 'Dormakaba TH120 Latch SS' Stainless steel lever handle on rose with latch.	Sets	25			
	GF-W 5 GF-E 11 FF-W 2 FF-E 1 SF-W 3 4F-E 1 BF-1 2					
25	'Dormakaba DCE-105 SS' stainless steel narrow stile cylinder escutcheons	Pairs	11			
	GF-W 2 GF-E 1 FF-W 3 FF-E 1 SF-E 2 TF-E 1 RK 1					
26	'Dormakaba DPH207 BTB' 500 x 25mm stainless steel straight tubular pull handle fixed back to back (BTB fixing sets included).	Pairs	15			
	GF-W 4 GF-E 6 FF-W 2 RK 3	, and				
27	'Dormakaba DFP-SS-025' Stainless Steel 120x40mm Rectangular Flush Pull Handle.	No	26			
	GF-W 4 GF-E 2 FF-W 10 FF-E 2 SF-E 4 TF-E 2 RK 2					
28	'Dormakaba TH120 WC LH SS' Stainless steel lever handle on rose with bathroom funirture with cylinder cut out prepared for padlock.	Sets	1			
	FF-W 1					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 10					
	Ironmongery 56					
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1		Unit	Quantity	Rate	Amount	
	DOOR CLOSERS					
	Dormakaba:					
29	'Dormakaba TS91B' Non hold open cam action side action door closer, closing force EN3, hydrualic speed control, pull side door leaf fixing (standard), push side transom fixing. Door closer compliant with EN 1154. Door closer is CERTI FIRE approved (Certificate No. CF 119) for door types ITT 120	No	7			
	FF-W 4 RK 3					
30	'Dormakaba TS91B-SL' Non hold open cam action side action door closer, closing force EN3, hydrualic speed control, pull side door leaf fixing (standard), push side transom fixing. Door closer compliant with EN 1154. Door closer is CERTI FIRE approved (Certificate No. CF 119) for door types ITT 120	No	6			
31	GF-W 3 FF-W 3 'Dormakaba TS91B HO-SL' Mechanical hold open cam action slide channel door closer, closing force EN3, hydrualic speed control, pull side door leaf fixing (standard), push side transom fixing. Door closer					
	compliant with EN 1154. Door closer is CERTI FIRE approved (Certificate No. CF 119) for door types ITT 120	No	4			
32	GF-E 4 'Dormakaba TS90-SL' Silver Non hold open cam action slide channel door closer, closing force EN3/4, hydrualic speed control, pull side door leaf fixing (standard), push side transom fixing. EN3 850-950, EN4 950-1100	No	33			
33	GF-W 12 FF-W 21 'Dormakaba TS92B - SL' Non hold open cam action slide channel door closer, closing force EN2-4V, hydrualic speed control, pull side door leaf fixing (standard), push side transom fixing. Door closer compliant with EN 1154. Door closer is CERTI FIRE					
	approved (Certificate No. CF 119) for door types ITT 120	No	7			
34	GF-W 2 GF-E 4 FF-W 1 'Dormakaba TS83 PA + Parallel arm bracket' EN 3-6 parallel arm non hold open door closer, fixed strength, hydraulic speed control, push side fixing (parallel arm included), EN3 850-950, with and including EN4 950-1100, EN5 1100-1250, EN6 1250-1400., Door Closer tested to EN 1154. Approved to AS1905 Part 1					
	Fire Resistant Doors. Certified manufacturer to ISO 9001 FF-W 3	No	3			
35	'Dormakaba TS83' Drop plate. FF-W 1	No	1			
	Carried to Collection			R		
	Section No. 2 Bill No. 10					_
	Ironmongery					
	57					

1		Unit	Quantity	Rate	Amount	ı
	PUSH PLATES AND KICK PLATES					
	Dormakaba:					
36	'Dormakaba DKP-430-200 screw fixed' 813 x 920 x 1,2mm thick Grade 430 stainless steel kick plate with 10No countersunk holes for screw fixing with and including stainless steel screws.	No	3			
	FF-W 3 LETTERS, NAMEPLATES, ETC.					
	Dormaka:					
37	'Dormakaba DSS-130M/ 131F' 150 x 150mm MALE/ FEMALE sign.	No	3			
38	RK 3 'Dormakaba DSS-133P' 150 x 150mm DISABLED PERSON sign.	No	4			
39	GF-W 1 FF-W 3 'Dormakaba DSS-152 C' 150 x 150mm CLEANER sign.	No	2			
40	GF-W 1 RK 1 'Dormakaba DSS-135 TC' 150 x 150mm TEA CUP sign.	No	4			
	GF-W 1 FF-W 3 BLINDS, PELMETS AND CURTAIN TRACKS					
	BLINDS.					
41	1500 X 3000mm Roller blinds to meet the existing including rails, adjustable cable, screws, top hung to ceiling.	No	69			
	GF-W 61 FF-E 2 SF-W 1 SF-E 3 4F-W 2 BATHROOM FITTINGS.					
	Franke:					
42	'Franke Stratos STRX 672' satin stainless steel double toilet roll holder, with cylinder lock, plugged to wall with stainless steel screws.	No	2			
	RK 2					
43	'Franke sensor operated hand dryer HF2400HD, plugged to wall with stainless steel screws.	No	2			
44	PK 2 'Franke Stratos STRX 618' Stainless steel soap dispenser plugged to wall with stainless steel screws.	No	2			
45	GF-W 2 600mm Long 'Franke' stainless steel towel rail bolted. (code 359933)	No	2			
	GF-W 2					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 10					
	Ironmongery					
	58					

		Unit	Quantity	Rate	Amount	
46	Kimberly-Clark®: 'Kimberly-Clark® (code SA426135)' Professional Plus wall mounted waste bin, plugged to wall with stainless steel screws.	No	2			
	GF-W 2 Chairman Industries:		_			
47	'Franke' CNTXBR 750 x 260mm stainless steel disabled grab rail. (code 359912)	No	4			
48	GF-W 1 FF-W 3 'Franke' CNTX700A Stainless steel angle disabled grab rail. (code 359877)	No	4			
	GF-W 1 FF-W 3 SUNDRIES.					
	Dormakaba:					
49	'Dormakaba L + Z Bracket 1200' for EMC 1200 ALH (19860525).	No	4			
50	GF-W 2 GF-E 1 FF-W 1 'Dormakaba DDS-SS-017' floor mounted door stop plugged.	No	79			
	GF-W 25 GF-E 12 FF-W 38 FF-E 1 4F-W 1 4F-E 2					
51	'Dormakaba DDH-SS-020' stainless steel wall buffer plugged.	No	8			
52	GF-W 1 FF-W 3 RK 4 'Dormakaba DPS-SS-032' Dust proof strike.	No	21			
53	GF-W 6 GF-E 6 FF-W 9 6mm Diameter steel dowel 100mm long in and including mortice in timber and brickwork or concrete.	No	41			
	GF-W 6 GF-E 1 FF-W 26 RK 8					
	Arufab:		_			
54	'Alufab H469' 600mm extension rod.	No	8			
	GF-W 2 GF-E 4 FF-W 2					
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	Section No. 2 Bill No. 10			K		
	Ironmongery					
	59					

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BILL NO. 10				
IRONMONGERY				
COLLECTION		Page No		
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Bill No. 10				
Ironmongery	60			

		Unit	Quantity	Rate	Amount
SECTION NO.	<u>. 2</u>				
BUILDING WO	<u>ORKS</u>				
BILL NO. 11					
STRUCTURA	<u>L STEELWORK</u>				
<u>Key:</u>	Location Description:				
Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W	FIRST FLOOR-WEST				
FF-E SF-W	FIRST FLOOR-EAST SECOND FLOOR-WEST				
SF-E	SECOND FLOOR-EAST				
TF-W	THIRD FLOOR-WEST				
TF-E	THIRD FLOOR-EAST				
1	Item Location (Auto)				
4F-W	FOURTH FLOOR-WEST				
4F-E	FOURTH FLOOR-EAST				
BF-1	BASEMENT FLOOR-01				
BF-2	BASEMENT FLOOR-02				
RK CWK	RECREATIONAL & KITCH COVERED WALKWAY				
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Trade Preamb					
For Trade Prea Trades' (2008	ambles refer to 'Model Preambles for edition) for the full descriptions of material work to be done in this Bill.				
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					DING ALTERATION	I-PON
	!	Unit	Quantity	Rate	Amount	
	SHOP DRAWINGS					
	The Sub-Contractor shall prepare his own shop details. Immediately on receipt of the Engineer's drawings, the Sub-Contractor shall satisfy himself that the design drawings contain all the information required for the preparation of the shop details. The said shop details and other drawings shall be submitted in duplicate to the Engineer for approval at least 1 week before commencement of fabrication. The Sub-Contractor's drawings shall be complete in every respect (including welding details which shall be fully described) and shall be checked by the Sub-Contractor prior to submission. One copy of each drawing will be retained by the Engineer and, within 1 week after the date of receipt by the Engineer, the other copy will be returned to the Sub-Contractor with the Engineer's comments or written approval, as the case may be. Before the commencement of fabrication, the Sub-Contractor shall obtain from the Engineer approval of the shop drawings, in writing. The approval given by the Engineer relates to structural adequacy and does not absolve the Sub-Contractor from the responsibility for dimensional accuracy.					
1	Preparation and approval of shop drawings	Item				
2	l 1 Galvanising testing.	Item				
	HOT DIPPED GALVANISED STEEL COLUMNS AND BEAMS					
	Welded columns in single lengths with flat section base, top, bearer, stiffner and connection plates bolted to steel and concrete:					
3	100 x 100 x 6mm Square hollow section columns.	Tonnes	1.16			
4	RK 1.16 205mm Diameter x 6mm Rolled Circular hollow section trusses including cleats, etc.	Tonnes	1.02			
5	RK 1.02 200 x 150 x 6mm Rectengular hollow section columns.	Tonnes	1.32			
6	CWK 1.32 100 x 100 x 6mm Square hollow section beams.	Tonnes	3.23			
7	RK 3.23 200 x 150 x 6mm Rectengular hollow section beams.	Tonnes	1.32			
	CWK 1.32					
	Bolts to columns, beams, etc:					
8	Grade 4.8 bolts RK 2	Tonnes	2.00			
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	Carried to Collection Section No. 2			R		
	Bill No. 11					
	Structural Steelwork					
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eMENDI BUILDING ALTERATION-PoN

					DING ALTERATION	-FUN
		Unit	Quantity	Rate	Amount	
	High tanaile Chade 0.0 b - th-	T	0.00			
9	High tensile Grade 8.8 bolts	Tonnes	2.00			
10	RK 2 M20 holding down bolt 606mm long with 70 x 70 x 12mm					
10	plate welded 10mm up on one end with two nus and					
	washers.	No	108			
	RK 108					
11	M20 Anchor bolts.	No	22			
4.0	RK 22					
12	M16 150mm long chemical anchor.	No	8			
13	RK 8 M20 150mm long chemical anchor.	No	6			
13	RK 6	INO				
	Bolts to trusses, purlins, beams, etc:					
14	Grade 4.8 bolts.	Tonnes	0.95			
	RK 0.95	1011103	0.55			
15	High tensile Grade 8.8 bolts.	Tonnes	1.23			
	RK 1.23					
	HOT DIPPED GALVANISED STEEL PURLINS, GIRTS,					
	BRACING, ETC.					
	Purlins and girts bolted to steel:					
16	100 x 100 x 6mm Lid channel purlins.	Tonnes	3.23			
4-7	RK 3.23	_	4.00			
17	150 x 75 x 6mm Lipped channel section purlins.	Tonnes	1.00			
18	RK 1 200 x 75 x 6mm Lipped channel section purlins.	Tonnes	9.45			
.0	CWK 9.45	10111100	0.10			
	Welded bracing etc with flat section connection					
	plates bolted to steel:					
19	Angle section bracing.	Tonnes	1.60			
	FF-E 0.82 CWK 0.78					
20	High tensile Grade 8.8 bolts.	Tonnes	0.86			
	FF-E 0.86					
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	Bill No. 11					
	Structural Steelwork					
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BILL NO. 11 STRUCTURAL STEELWORK COLLECTION		Page No		
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		Unit	Quantity	Rate	Amount
SECTION NO	<u>. 2</u>				
BUILDING WO	ORKS				
BILL NO. 12					
METALWORK	(
Key:	<u>Location Description:</u>				
Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W	FIRST FLOOR-WEST				
FF-E	FIRST FLOOR-EAST				
SF-W SF-E	SECOND FLOOR FAST				
SF-E TF-W	SECOND FLOOR-EAST THIRD FLOOR-WEST				
TF-E	THIRD FLOOR-EAST				
I	Item Location (Auto)				
4F-W	FOURTH FLOOR-WEST				
4F-E	FOURTH FLOOR-EAST				
BF-1	BASEMENT FLOOR-01				
BF-2	BASEMENT FLOOR-02				
RK	RECREATIONAL & KITCH				
CWK	COVERED WALKWAY				
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	Unit	Quantity	Rate	Amount
Powder coating				
All powder coating shall be executed only by applicators approved by the powder manufacturers & shall be executed strictly in conformance with sabs 1796 manufacturer to provide powder coat samples for architect's approval prior to ordering.				
General				
Glazing shall be executed in strict conformance with glass manufacturer's recommendations & all in accordance with the national building Regulations Part N, SABS 0137, SABS 1263 & AAAMSA selection guide for safety glazing materials.				
Structural glazing				
In case of structural glazing written proof is to be provided that all stages of fabrication & installation have been executed with disciplined quality assurance in accordance with the relevant parts of SABS ISO 9000.				
Safety glazing				
All safety glazing materials (individual panes) shall be permanently marked. Such marking to be visible after glazing.				
Compliance				
All materials, glazing & sealing to comply with SANS 10400.				
Prior to the commencement of any site work, the following certificates should be provided:				
A copy of relevant AAAMSA performance certificate from the manufacturer / contractor supplying the architectural aluminium product.				
2. A certificate of conformance confirming that all anodizing or powder coating has been processed in strict accordance with SABS 999:1998 and SABS 1976:2001 respectively.				
3. A powder guarantee of no less than 15 years issued by the powder manufacturer. The specific conditions contained in this guarantee shall form part of the powder coating process and may only be applied by an approved powder applicator.				
4. A certificate of conformance that glazing has been installed in accordance with SABS 0137 ensuring that safety glass glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing material has been permanently marked.				
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Bill No. 12 Metalwork				
Metalwork 66				

1		Unit	Quantity	Rate	Amount	1 011
	5. A warranty from the manufacturer of the laminated safety glass and / or hermetically sealed glazing units warranting the products against delamination and colour degradation for a period of not less than 5 years					
	6. Shop drawings must be provided to the architect for approval					
	SUNDRY GALVANIZED STEELWORK					
	Corner protectors, bollards etc:					
	NATURAL ANODISED ALUMINIUM LOUVRE UNITS					
	Louvre units fixed to timber doors:					
1	501 x 560mm fixed louvre six times holed and fitted to door with six 30mm counter sunk stainless steel screws	No	2			
	RK 2 HOT DIPPED GALVANISED SCREENS, GATES, ETC.					
	Galvanised screens, gates to brickwork or concrete:					
2	Double swing gate size 1600 x 2100mm high over all, each leaf size 800 x 2100mm high consisting of 76 x 50 x 3,5mm rectangular hollow section frame, one 76 x 50 x 3,5mm vertical rail and filled in with 'Steeldale' Specimesh Ref. No. M126 mesh with 100 x 100 x 3,15mm thick wire and 25 x 25 x 3mm flat bar border, 100 x 75 x 5mm locking plate with one 15mm diameter hole for padlock (padlock elsewhere measured), 25 x 50 x 6mm flat bar barrel bolt catch, 50 x 245 x 10mm diameter barrel bolt slotted into 175mm long 10mm internal diameter circular hollow section welded to frame					
	for barrel bolt and two heavy duty hinges, installed					
	complete.	No	1			
	BF-2 1					
	ALUMINIUM ROLLER SHUTTERS ETC.					
	Epoxy powder coated aluminium push-up roller shutters fixed to brickwork:					
3	Motorized operated slatted roller shutter door for size 4765 x 1400mm high opening size locked side and base, locks to be fitted on both sides internally at 1600mm above finish floor level, powder coated ancillary components including end plates, guide rails, etc. with slide bolt and 457mm high canopy cover, all as per the manufacturers specification and recommendation.	No	1			
	RK 1					
	Carried to Collection			R		
	Section No. 2			• •		
	Bill No. 12					
	Metalwork					
	67					

	I	Unit	Quantity	Rate	Amount	
	SHOP DRAWINGS					
	The Sub-Contractor shall prepare his own shop details immediately on receipt of the Architect's drawings, the Sub-Contractor shall satisfy himself that the design drawings contain all the information required for the preparation of the shop details. The said shop details and other drawings shall be submitted in duplicate to the Architect for approval at least 1 week before commencement of manufacturing. The Sub-Contractor's drawings shall be complete in every respect and shall be checked by the Sub-Contractor prior to submission. One copy of each drawing will be retained by the Architect and, within 1 week after the date of receipt by the Architect, the other copy will be returned to the Sub-Contractor with the Architect's comments or written approval, as the case may be. Before the commencement of manufacturing, the Sub-Contractor shall obtain from the Architect approval of the shop drawings, in writing. The approval given by the Architect relates to designl adequacy and does not absolve the Sub-Contractor from the responsibility for dimensional accuracy.					
4	Preparation and approval of shop drawings for aluminium windows and shopfronts.	Item				
5	1 Preparation and approval of shop drawings for curtain walls.	Item				
	I 1 ALUMINIUM WINDOWS, DOORS, ETC					
	Solarvue Neutral HL" safety glass in accordance with SANS 10160:2020, SANS 10137:2002, SANS 10400:2010 (Part N of Section 3) and SANS 1263:2006, all in accordance with AAMSA Selection Guide for glazed Aluminium Architectural Products. All glazing sizes as per specialist specification. All safety glass to display name of glazing company as well as class and number of glass."					
6	Window size 600 x 900mm high top hung including self-adhesive, sandblast vinyl (plain), etc., installed complete	No	6			
	RK 6					
	Carried to Collection			R		
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Solarvue Neutral HL' safety glass in accordance with SANS 10160:2020, SANS 10137:2002, SANS 10400:2010 (Part N of Section 3) and SANS 1263:2006, all in accordance with AAMSA Selection Guide for glazed Aluminium Architectural Products. All glazing sizes as per specialist specification. All safety glass to display name of glazing company as well as class and number of glass." Powder Coated Aluminium Doors, ETC Powder coated aluminium doors, with 6.38mm clear laminated safety glass and plugged to dry wall partition including aliminium frame: Single door and frame to suit opening size 900 x 2100mm high including self-adhesive, sandblast vinyl (plain). No 11 GF-W 3 GF-E 4 FF-E 1 4F-W 1 4F-E 2 Double door and frame to suit opening size 1600 x 2100mm high including self-adhesive, sandblast vinyl	
SANS 10160:2020, SANS 10137:2002, SANS 10400:2010 (Part N of Section 3) and SANS 1263:2006, all in accordance with AAMSA Selection Guide for glazed Aluminium Architectural Products. All glazing sizes as per specialist specification. All safety glass to display name of glazing company as well as class and number of glass." Powder Coated Aluminium Doors, ETC Powder coated aluminium doors, with 6.38mm clear laminated safety glass and plugged to dry wall partition including aliminium frame: 7 Single door and frame to suit opening size 900 x 2100mm high including self-adhesive, sandblast vinyl (plain). No 11 GF-W 3 GF-E 4 FF-E 1 4F-W 1 4F-E 2 8 Double door and frame to suit opening size 1600 x	
Powder coated aluminium doors, with 6.38mm clear laminated safety glass and plugged to dry wall partition including aliminium frame: 7 Single door and frame to suit opening size 900 x 2100mm high including self-adhesive, sandblast vinyl (plain). GF-W 3 GF-E 4 FF-E 1 4F-W 1 4F-E 2 8 Double door and frame to suit opening size 1600 x	
Iaminated safety glass and plugged to dry wall partition including aliminium frame: 7 Single door and frame to suit opening size 900 x 2100mm high including self-adhesive, sandblast vinyl (plain). GF-W 3 GF-E 4 FF-E 1 4F-W 1 4F-E 2 8 Double door and frame to suit opening size 1600 x	
2100mm high including self-adhesive, sandblast vinyl (plain). GF-W 3 GF-E 4 FF-E 1 4F-W 1 4F-E 2 8 Double door and frame to suit opening size 1600 x	
4F-W 1 4F-E 2 8 Double door and frame to suit opening size 1600 x	
(plain).	
RK 1 ALUMINIUM SLIDING FOLDING WINDOWS:	
Powder coated sliding folding doors as per the system complete with subframes, ironmongery, glass, sealing, etc and fixing to brickwork or concrete or steel frame, etc.	
9 Purpose made sliding folding window, 1500 x 1200mm high. No 1	
ALUMINIUM SHOPFRONTS: Self-adhesive, sandblast vinyl (plain) at 2100mm	
high etc to existing shopfronts and doors: 10 On existing shopfronts and doors. m² 185	
GF-E 38 SF-W 32 TF-W 24 4F-W 69 4F-E 22	
Carried to Collection R	
Section No. 2 Bill No. 12	
Metalwork 69	

				eMENDI BUIL	DING ALTERATION	-PoN
		Unit	Quantity	Rate	Amount	
	60 - 80 micron aluminium epoxy powder coated shopfronts complete with head, bottom rails, mullions, side rails, frames, sub frames, ironmongery, glass, sealing, etc and fixing to brickwork or concrete as per the manufacturer's instructions:					
	Ground Floor work area 0.1:					
11	Shopfront size 2440 x 3400mm high with single door size 950 x 2100mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-sdhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	6			
12	GF-E 6 Shopfront 4320 x 3400mm high with single door size 950 x 2325mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
13	GF-E 1 Shopfront 1805 x 3400mm high with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	2			
	GF-E 2 Ground Floor work area 0.2:					
14	Shopfront 7700 x 3400mm high with single door size 950 x 2325mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
15	GF-E 1 Shopfront 10 000 x 3400mm high with 2 x single doors, each door size 950 x 2090mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm highetc., installed complete.	No	1			
	GF-E 1 Ground Floor work area 0.4:	110	'			
16	Shopfront 3010 x 3400mm high with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	GF-W 1					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 12 Metalwork					
	70					

ı	I	Unit	Quantity	Rate	Amount	
17	Shopfront 3795 x 3400mm high with single door size 950 x 2325mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
18	GF-W 1 Shopfront 4000 x 3400mm high with single door size 950 x 2325mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
19	GF-W 1 Shopfront 7920 x 3400mm high with one double swing door size 1246 x 2325mm high overall in two equal leaves, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc.	No	1			
20	GF-W 1 Shopfront 5000 x 3400mm high with one double swing door size 1800 x 2100mm high overall in two equal leaves, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc.	No	1			
	GF-W 1					
21	Basement work area B1: Shopfront 4390 x 2200mm high with single door size 950 x 2100mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	2			
22	BF-1 2 Shopfront 6600 x 2100mm high glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed					
	complete. BF-1 1	No	1			
23	Ground Floor work area 0.5: Shopfront 2540 x 3400mm high with single door size 950 x 2090mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	GF-W 1					
	Carried to Collection Section No. 2 Bill No. 12 Metalwork			R		
	71					

ı	1	Unit	Quantity	Rate	Amount	
24	Shopfront 5510 x 3400mm high with 2 x single doors, each door size 950 x 2090mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	GF-W 1					
25	Ground Floor work area 0.6: Shopfront 5300 x 3400mm high with one double swing door size 1246 x 2325mm high overall in two equal leaves, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc.	No	1			
	GF-W 1					
	Fourth Floor work area 4.2:					
26	Shopfront 3268 x 3400mm high with single door size 950 x 2090mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	4F-E 1					
27	Shopfront 3661 x 3400mm high glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	4F-E 1 Third Floor work area 3.2:					
28	Shopfront 2222 x 3400mm high with one double swing door size 1607 x 2040mm high overall in two leaves, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	TF-E 1					
29	Shopfront 5020 x 3400mm high glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	TF-E 1	NO	'			
	Second Floor work area 2.1:					
30	Shopfront 7602 x 3400mm high with single door size 950 x 2090mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	N.				
		No	1			
	SF-W 1					
	Carried to Collection			R		_
	Section No. 2			K		
	Bill No. 12					
	Metalwork					
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1	ı	Unit	Quantity	Rate	Amount	
	Second Floor work area 2.2:					
31	Shopfront 2222 x 3400mm high with one double swing door size 1637 x 2040mm high overall in two leaves, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
32	SF-E 1 Shopfront 5015 x 3400mm high glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete	No	1			
	SF-E 1					
	Second Floor work area 2.3:					
33	Shopfront 3660 x 3400mm high glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete	No	1			
34	SF-E 1 Shopfront 2435 x 3400mm high glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete	No	1			
35	SF-E 1 Shopfront 1500 x 3400mm high with one double swing door size 1500 x 2325mm high overall in two leaves, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	SF-E 1	140	'			
36	Second Floor work area 2.4: Shopfront 3470 x 3400mm high glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete	No	1			
37	SF-W 1 Shopfront 3575 x 3400mm high with single door size 950 x 2325mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	SF-W 1					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 12					
	Metalwork 73					

1	1	Unit	Quantity	Rate	Amount	I
38	Shopfront 4425 x 3400mm high with single door size 950 x 2325mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	SF-W 1 First Floor work area 1.1:					
39	Shopfront 7985 x 3400mm high glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete	No	1			
	FF-W 1					
40	Shopfront 1500 x 3400mm high with one double swing door size 1500 x 2325mm high overall in two leaves, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	FF-W 1 First Floor work area 1.2:					
41	Shopfront 4120 x 3400mm high glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete	No	1			
	FF-E 1					
42	Shopfront 3515 x 3400mm high formed of two (2) pannels as per plan with single door size 950 x 2325mm high overall, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	FF-E 1					
43	Shopfront 1500 x 3400mm high with one double swing door size 1500 x 2325mm high overall in two leaves, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	FF-E 1					
44	Recreational Facility and Kitchen: Shopfront 3700 x 2300mm high with a folding window size 3700 x 1500 mm high overall, shopfront and window glazed with Clear laminated safety glass, including self-					
	adhesive, sandblast vinyl (plain) etc., installed complete.					
	RK 2	No	2			
	Carried to Collection			R		
	Section No. 2					
	Bill No. 12					
	Metalwork					
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I		Unit	Quantity	Rate	Amount	I
45	Shopfront 5100 x 2300mm high with a folding window size 5100 x 1500 mm high overall, shopfront and window glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) etc., installed complete.	No	4			
46	RK 1 Shopfront 3700 x 1650mm high glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) etc., installed complete	No No	2			
47	Shopfront 1000 X 2300mm high glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) etc., installed complete	No	3			
48	Shopfront 3818 x 3400mm high with one double swing door size 1500 x 2100mm high overall in two leaves, shopfront and door glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	No	1			
	RK 1					
	Carried to Collection			R		
	Section No. 2 Bill No. 12 Metalwork			K		
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	I	Amount	
BILL NO. 12 METALWORK COLLECTION	Page No		
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Section No. 2 Bill No. 12 Metalwork			
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	Unit	Quantity	Rate	Amount
SECTION NO. 2				
BUILDING WORKS				
BILL NO. 13				
PLASTERING				
Key: Location Description:				
Un/A Unallocated				
GF-W GROUND FLOOR-WEST				
GF-E GROUND FLOOR-EAST				
FF-W FIRST FLOOR-WEST				
FF-E FIRST FLOOR-EAST				
SF-W SECOND FLOOR-WEST				
SF-E SECOND FLOOR-EAST				
TF-W THIRD FLOOR-WEST				
TF-E THIRD FLOOR-EAST				
I Item Location (Auto)				
4F-W FOURTH FLOOR-WEST 4F-E FOURTH FLOOR-EAST				
4F-E FOURTH FLOOR-EAST BF-1 BASEMENT FLOOR-01				
BF-2 BASEMENT FLOOR-02				
RK RECREATIONAL & KITCH				
CWK COVERED WALKWAY				
TRADE PREAMBLES				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Model Preambles for Trades' (2008 edition) for the full descriptions of material to be used and work to be done in this Bill.				
SCREEDS:				
Screeds on concrete:				
30mm Thick on floors and landings.	m²	587		
SUITINI THICK OH HOUS AND IANDINGS.		20/		
•	111			
GF-W 248 GF-E 94 FF-E 52	""			
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28	'''			
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55				
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents.	m²	63		
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63				
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls	m²	63		
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents.				
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls	m²	63		
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents.	m²	63		
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents.	m²	63		
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents.	m²	63		
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents.	m²	63		
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents.	m²	63		
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents.	m²	63		
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents.	m²	63		
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents. RK 57	m²	63		
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents. RK 57 Carried to Collection	m²	63	R	
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents. RK 57	m²	63	R	
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents. RK 57 Carried to Collection	m²	63	R	
GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 36 4F-E 28 BF-1 33 RK 55 Average 75mm thick on floors to falls and currents. RK 63 Average 75mm thick on roofs with upper surface to falls and currents. RK 57 Carried to Collection Section No. 2	m²	63	R	

I		Unit	Quantity	Rate	Amount
	'Tal Screedmaster' Self levelling screeds on existing concrete floors applied as per manufacturers instructions:				
4	4mm Thick on floors and landings, including 'Tal X-calibur X-Shield VapourStop HB' two component solvent free epoxy primer applied to concrete prior to self leveling screed.	m²	1,423		
	GF-W 347 GF-E 791 FF-W 55 FF-E 29 SF-W 59 SF-E 89 TF-E 41 4F-E 12 INTERNAL PLASTER				
	Cement plaster steel trowelled, on brickwork				
5	On narrow widths not exceeding 300mm wide	m²	11		
	4F-W 3 RK 8 Cement plaster steel trowelled, on concrete				
6	On narrow widths not exceeding 300mm wide	m²	13		
	SF-E 5 4F-E 6 RK 2 GRANOLITHIC				
	Untinted granolithic, on concrete:				
7	25mm Thick on floors and landings.	m²	9		
	FF-W 7 RK 2 INTERNAL PLASTER				
	Cement plaster on brickwork:				
8	On walls.	m²	752		
	GF-W 327 GF-E 70 FF-W 6 FF-E 8 SF-W 12 SF-E 17 BF-1 33 RK 279				
9	On walls (Textured)	m²	100		
	RK 100				
10	On narrow widths.	m²	61		
	GF-W 7 GF-E 1 FF-W 45 RK 8				
	Cement plaster on concrete:				
11	On walls	m²	32		
	Un/A 32				
12	On columns	m²	2		
13	GF-E 2 On soffit of concrete slabs.	m²	57		
	RK 57				
14	On narrow widths.	m²	11		
	FF-W 11				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 13				
	Plastering 78				
I	70		ı İ		II I

1		Unit	Quantity	Rate	Amount	-i OIN
	China agat an magatanad buishnoodh					
15	Skim coat on plastered brickwork: Rhinolite to plastered walls.	m²	1,295			
13	GF-W 181 GF-E 328 FF-W 28		1,293			
	FF-E 40 SF-W 61 SF-E 84					
	TF-E 46 4F-W 32 4F-E 12 RK 483					
16	Rhinolite to plastered soffits of slab.	m²	57			
	RK 57					
17	Rhinolite to rhino board dry wall partitioning walls.	m²	1,524			
	GF-W 328 GF-E 818 FF-W 68 FF-E 31 SF-W 33 TF-E 19					
	4F-W 19 4F-E 13 BF-2 195					
	EXTERNAL PLASTER.					
	Cement plaster on brickwork:					
18	On walls.	m²	708			
19	GF-E 51 FF-W 558 RK 99 On walls in foundations	m²	127			
19	GF-E 61 FF-W 45 RK 21	'''	121			
20	On narrow widths.	m²	1			
	RK 1					
21	On sloping top, front edge and projecting soffit of sills 357mm girth	m	4			
	RK 4	1111	4			
	CORNER PROTECTORS, DIVIDING STRIPS, ETC					
	Corner protectors, dividing strips, etc:					
22	3 x 57mm Flat section brass water bar.	m	2			
	RK 2					
	Carried to Collection			R		
	Section No. 2			•		
	Bill No. 13					
	Plastering					
	79				l	

1		I	Amount	ı
BILL NO. 13 PLASTERING COLLECTION	Brought Forward from Page	Page No 77 78 79		
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		Unit	Quantity	Rate	Amount
SECTION NO	<u>. 2</u>				
BUILDING WO	<u>orks</u>				
BILL NO. 14					
TILING					
Key:	Location Description:				
Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W	FIRST FLOOR-WEST				
FF-E	FIRST FLOOR-EAST				
SF-W	SECOND FLOOR-WEST				
SF-E	SECOND FLOOR-EAST				
TF-W TF-E	THIRD FLOOR-WEST THIRD FLOOR-EAST				
1 F-E	Item Location (Auto)				
4F-W	FOURTH FLOOR-WEST				
4F-E	FOURTH FLOOR-EAST				
BF-1	BASEMENT FLOOR-01				
BF-2	BASEMENT FLOOR-02				
RK	RECREATIONAL & KITCH				
CWK	COVERED WALKWAY				
to be used and SUPPLEMEN Descriptions:	edition) for the full descriptions of material d work to be done in this Bill. TARY PREAMBLES				
concrete walls 1:4 cement pla concrete floors plaster beddin NOSINGS, JC Wall edge pro Type ETR 608	DINT COVERS, PROTECTORS, ETC.	m	52		
concrete walls 1:4 cement pla concrete floors plaster beddin NOSINGS, JO Wall edge pro Type ETR 608 6mm high with	here), descriptions of tiling on brick or a columns, etc., shall be deemed to include aster backing and descriptions of tiling on setc. shall be deemed to include 1:3 g. DINT COVERS, PROTECTORS, ETC. DIECTORS: B PVC regular tiling trim 21mm wide x a type 01 finish. FF-W 31 Carried to Collection		52	R	

1	I	Unit	Quantity	Rate	Amount	
	'M Trim' Stainless Steel straight edge trim:					
2	'M Trim' Stainless Steel straight edge trim 12mm high (code SSE120) to suit tiling 8 to 9mm thick, fixed with adhesive to treads and risers.	m	38			
	GF-W 18 TF-E 10 RK 10 CERAMIC WALL TILING					
	Allow the prime cost of R450.00 (Four Hundred and Fifty Rand) net per square metre for ceramic tiles supplied and delivered to site and add for taking delivery, storage, fixed with adhesive and flush pointed with tinted jointing compound mortar, waste and profit. (plaster elsewhere measured)					
3	On walls.	m²	79			
	GF-W 8 TF-E 10 RK 61					
4	On narrow widths.	m²	5			
5	RK 5 Fair exposed cutting and fitting around pipe etc not exceeding 100mm internal diameter.	No	21			
	GF-W 3 TF-E 3 RK 15 PORCELAIN FLOOR TILING					
	Allow the prime cost of R500.00 (Five Hundred Rand) net per square metre for porcelain tiles supplied and delivered to site and add for taking delivery, storage, fixed with adhesive and flush pointed with tinted jointing compound mortar, waste and profit. (plaster elsewhere measured)					
6	On floors and landings.	m²	634			
0	GF-W 248 GF-E 94 FF-E 52 SF-W 41 4F-W 13 4F-E 13	m-	634			
	BF-1 33 RK 140					
	Carried to Collection			R		
	Section No. 2 Bill No. 14					
	Tiling					
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	I	Amount	Ì
BILL NO. 14 TILING COLLECTION	Page No		
Brought Forward from Page	81		
	82		
Carried To Section Summary Section No. 2	R		
Bill No. 14 Tiling			
83			

		Unit	Quantity	Rate	Amount
SECTION NO.	<u>. 2</u>				
BUILDING WO	<u>ORKS</u>				
BILL NO. 15					
	ND DRAINAGE				
Key:	Location Description:				
Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W	FIRST FLOOR-WEST				
FF-E	FIRST FLOOR-EAST				
SF-W	SECOND FLOOR-WEST				
SF-E	SECOND FLOOR-EAST				
TF-W TF-E	THIRD FLOOR-WEST THIRD FLOOR-EAST				
	Item Location (Auto)				
ı 4F-W	FOURTH FLOOR-WEST				
4F-E	FOURTH FLOOR-EAST				
BF-1	BASEMENT FLOOR-01				
BF-2	BASEMENT FLOOR-02				
RK	RECREATIONAL & KITCH				
CWK	COVERED WALKWAY				
THANKS I MINK	edition) for the full descriptions of material				
to be used and	edition) for the full descriptions of material work to be done in this Bill.				
to be used and					
to be used and SUPPLEMEN	I work to be done in this Bill.				
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MENDI BUILDING ALTERATION				
Rate Amount	Rate	Quantity	Unit	
				Pipes shall be firmly fixed to walls etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.
				All pipe diameters are nominal external.
				'Polylink' polypropylene pipes:
				Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron 'Supraclamp' running joints.
				Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.
				Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double X joint couplers.
				Branch tees shall include flanged and bolted joints to 'Polycop' branch pipes in addition and for brass compression male iron to copper straight couplers.
				Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reduces shall be of sufficient overall length to accommodate same.
				All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.
				All pipe diameters are nominal external.
				Concrete pipes:
				Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings.
				Vitrified clay pipes etc:
				Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid.
				uPVC pipes and fittings.
				Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings.
				Soil, waste and vent pipes and fittings shall be solvent weld jointed.
				uPVC pressure pipes and fittings:
				Pipes for water supply shall be of the class stated.
				Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.
R	R			Carried to Collection
				Section No. 2
				Bill No. 15
				Plumbing And Drainage
				Bill No. 15

	Unit	Quantity	Rate	Amount
Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.				
Copper pipes:				
Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.				
Fixing of pipes				
Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level.				
Lead pipes and traps:				
All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.				
Reducing fittings:				
Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.				
Wire gratings:				
Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.				
Septic tanks:				
Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions.				
Exposed concrete surfaces:				
Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.				
Carried to Collection			R	
Section No. 2			1	
Bill No. 15				
Plumbing And Drainage				
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	Unit	Quantity	Rate	Amount
Evenyational				
Excavations: No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.				
'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.				
Laying, backfilling, bedding, etc of pipes:				
Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.				
Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L: Medium pressure pipelines LD: Sewers LE: Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.				
Flush pans:				
Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.				
Descriptions of WC pans and bidets are deemed to include setting in silicone sealant and screwing to timber or plugging and screwing to concrete floor. Cisterns are to be plugged and brass screwed to walls.				
Stainless steel basins, sinks, wash troughs, urinals, etc:				
Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.				
Waste unions:				
Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
Steel sectional water tanks:				
Tanks shall comply with SABS CKS 114.				
'Densyl' petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd:				
Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied with minimum 15mm lap per spiral unless otherwise described.				
Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including all mastic, tape, 'Layflat' sheeting, securing of same, etc.				
Prices for wrapping of pipes shall include for all work as described to couplings in the length.				
Carried to Collection			R	
Section No. 2				
Bill No. 15				
Plumbing And Drainage				
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				eMENDI BUIL	DING ALTERATION	I-PON
		Unit	Quantity	Rate	Amount	
	DAINWATER RICHOCAL (CRAR Work Crown No. 440)					
	RAINWATER DISPOSAL (CPAP Work Group No 148)					
	'Watertite' pre painted externally and internally with 'Color-Tech G4' high performance non-fluorinated					
	polymer modified long chain hydro-carbon paint					
	<u>aluminium concealed fixed in strict accordance with</u> the manufacturer's instructions:					
	Covered Walkway.					
1	150 x 125mm x 0,8mm thick ogee seamless eaves					
	gutters.	m	100			
	CWK 100					
2	Extra over 150 x 125mm eaves gutter for stop end.	No	10			
2	CWK 10 Extra over 150 x 125mm eaves gutter for angle.	No	10			
3	CWK 10	INO	10			
4	75 x 100mm x 0,6mm Thick rainwater pipes.	m	15			
	CWK 15					
5	Extra over 75 x 100mm rainwater pipe for shoe.	No	10			
	CWK 10					
	Recreational Building					
6	3mm Thick x 862mm girth rectanuglar shaped box gutter including stiffener's, four times bent along length fixed to					
	steel purlins and structural steel support in strict					
	accordance with the manufacturer's instructions.	m	14			
_	RK 14					
7	Extra over 862mm girth rectangular-shaped gutter for 350 x 350 x 150mm deep drop out box with outlet for					
	outlet for 250 x 250mm aluminium rainwater pipe including joining to rainwater pipe.					
		No	1			
8	RK 1 3mm Thick x 250 x 250mm Rectuangular rainwater					
	pipes.	m	3			
	RK 3					
9	Extra over 250 x 250mm rectangular rainwater pipes for shoes.	No	1			
	RK 1	140	'			
	Saint-Gobain Fullbore cast iron outlets:					
10	80mm Vertical outlet with dome grating.	No	4			
	RK 4					
11	100mm Vertical outlet with dome grating.	No	3			
40	RK 3	.				
12	80mm 45 Degree outlet with dome grating.	No	2			
	RK 2					
	Coming to Collection			5		
	Carried to Collection Section No. 2			R		
	Bill No. 15					
	Plumbing And Drainage					
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1	ı	Unit	Quantity	Rate	Amount	
13	100mm 45 Degree outlet with dome grating.	No	2			
14	RK 2 150mm Vertical outlet with dome grating.	No	4			
	RK 4 SANITARY FITTINGS					
	'Geberit Sanitaryware' wash hand basins:					
15	'Geberit Selnova' (GEB-500.305.01.1) wall-hung white washhand basin size 800 x 240 x 550mm colour white with one centre taphole integrated overflow and chainstay hole, mounted to wall on and including two bolts (Code: 8448Z0).	No	1			
	RK 1 'Geberit Sanitaryware' urinals:					
16	'Geberit' (Code: GEB-500.344.01.1) wall hung back inlet urinal for concealed control rear entry colour white with chromium plated back inlet spreader (Code: 7054Z2), 38mm chromium plated domical grating (Code: 8787Z0) hung on and including two hanger brackets (Code: 8127Z0)	No	2			
	RK 2					
17	'Geberit' (Code: SKU-115.211.TD.1) wall hung glass urinal division colour white with brushed and anodised brackets fixed to walls.	No	4			
	GF-W 1 FF-W 3	NO	-			
	'Geberit Sanitaryware' WC suites:					
18	'Geberit' white vitreous china wall hung washdown suite (product code GEB-204000000) comprising 90° outlet open rim pan with back inlet with Geberit icon soft close toilet seat with metal hinges (product code GEB-574130000) and 'Geberit Kombifix' element for wall hung wc, 108cm, 'Sigma' concealed cistern 12cm (product code GEB-110.360.00.5), 'Geberit' dual flush 'Sigma 01' actuator plate (Article No 115.770.21.5) in shiny chrome finish, fitments, etc., concealed flush valve, protection cover for service opening and flush pipe, fitted on and including bolt-throughthe- wall bracket (product code 8084Z0) bolted to brick wall	No	1			
	RK 1	NO	I			
	'Blanco' stainless steel domestic inset sinks:					
19	'Blanco' LAR-BL00204059 double end bowl inset sink (Code LAR-BL00204059) and drainer unit, size 1160 x 500mm overall with two bowls 410 x 343 x 167mm, including two 90mm waste outlets (Code 3000651), built into worktop. (Worktop elsewhere)	No	3			
	GF-W 1					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 15 Plumbing And Drainage					
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	,	Unit	Quantity	Rate	Amount	1 011
20	'Blanco' LAR-BL00204059 Single end bowl inset sink (Code LAR-BL00204059) and drainer unit, size 1160 x 500mm overall with one bowls 410 x 343 x 167mm, including one 90mm waste outlets (Code 3000651), built into worktop. (Worktop elsewhere)	No	1			
	TF-W 1					
21	Kubus or similar approved: 'Kubus' Single bowl 367 x 480 x 220mm undermount sink (Code FRA-1250003) complete with waste union.	No	1			
	RK 1 WASTE UNIONS ETC.					
	'Cobra Watertech' waste unions etc:					
22	'Blanco' 38mm Chromium plated brass slotted sink waste outlet with plug, chain and chain stay.	No	6			
	GF-W 2 TF-E 2 RK 2 TRAPS ETC.					
	PVC traps, etc:					
23	38mm PVC SPAZA F/2 double bowl plumbing kit, 50/90mm outlet (product code FRA-1120009).	No	3			
	GF-W 1					
	'Cobra Watertech' traps etc:					
24	'Geberit' Chrome plated concealed trap and waste for wash hand basin (product code GEB-151.122.21.1).	No	4			
	RK 4 Stainless steel floor drains:					
25	'RO125V NW50' square floor drain including connections to 50mm PVC pipe in concrete floor with 7mm tile finish, removable grid to be secured to main body of trap with 300mm length 3mm diameter stainless steel braided wire rope	No	2			
	RK 2					
	TAPS, VALVES, ETC.					
	'GIO Watertech' angle regulating valves:					
26	15mm ' GIO 5188' Ball type angle regulating valve.	No	10			
	GF-W 2 TF-E 2 RK 6 'Cobra Watertech' elbow action pillar taps:					
27	'Hansgrohe' 15mm Chrome plated décor care 70 basin mixer (product code HG-31910223).	No	4			
	RK 4					
				_		
	Carried to Collection Section No. 2			R		
	Bill No. 15					
	Plumbing And Drainage					
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				eMENDI BUILI	DING ALTERATION	N-PoN
I		Unit	Quantity	Rate	Amount	I
	'Hensgrohe' mixers:					
28	'Hansgrohe' 15mm Chromium plated single-hole sink					
	mixer with S-041/10 overarm swivel outlet, mounting kit,					
	angle valves and 234mm long flexible inlets (product		_			
	code HG-71832003)	No	2			
	RK 2					
	'Cobra Watertech' toilet and urinal flushvalves:					
29	'Geberit' Urinal electronic flush act plate mains					
	operations Sigma 10 black/ bright chrome/ block with actuator plates (product code GEB-116.025.KM.1)					
	complete with flush pipe for urinal flush control universal					
	(product code GEB-116.003.00.1) including connection					
	to electricity.	No	2			
	RK 2					
	SANITARY PLUMBING.					
	uPVC pipes:					
30	40mm Pipes.	m	51			
	GF-W 1 FF-W 48 TF-E 1					
	RK 1					
31	50mm Pipes.	m	52			
	FF-W 40 RK 12					
32	50mm Pipes cast in concrete (concrete elsewhere					
	measured).	m	60			
	FF-W 60					
33	50mm Pipes laid in trenches not exceeding 1m deep (Class 34).	m	34			
	· · · · · · · · · · · · · · · · · · ·	m	34			
34	FF-W 34 110mm Pipes.	m	28			
34	·	m	20			
35	GF-W 6 FF-W 18 RK 4 110mm Pipes cast in concrete (concrete elsewhere					
33	measured)	m	103			
	FF-W 103					
36	110mm Pipes laid in trenches not exceeding 1m deep					
	(Class 34).	m	15			
	FF-W 15					
37	40mm Pipes chased into brick walls.	m	21			
	GF-W 1 FF-W 18 TF-E 1					
	RK 1					
	Extra over uPVC pipes for fittings:					
38	50mm Straight reducer.	No	8			
	RK 8					
	O			_		
	Carried to Collection			R		
	Section No. 2					
	Bill No. 15					
	Plumbing And Drainage					
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		1.124	0		DING ALTERATION-PON
		Unit	Quantity	Rate	Amount
00	40mm Dand	NI.	04		
39	40mm Bend.	No	21		
	GF-W 1 FF-W 18 TF-E 1 RK 1				
40	50mm Bend.	No	8		
	RK 8				
41	110mm Bend.	No	14		
	GF-W 3 FF-W 9 RK 2				
42	40mm Access bend.	No	21		
	GF-W 1 FF-W 18 TF-E 1				
40	RK 1	NI.			
43	50mm Access bend.	No	4		
44	RK 4 40mm Junction.	No	4		
44	FF-W 4	NO	4		
45	110mm Junction.	No	4		
	FF-W 4				
46	110mm Access bend.	No	14		
	GF-W 3 FF-W 9 RK 2				
47	40mm Access junction.	No	21		
	GF-W 1 FF-W 18 TF-E 1				
40	RK 1	NI.			
48	-	No	4		
49	RK 4 110mm Access junction.	No	2		
43	FF-W 2	NO			
50	110mm Double junction.	No	4		
	FF-W 4	110			
51	110mm Rodding eye.	No	3		
	FF-W 3				
52	110mm Access bend with anti-syphon horn.	No	4		
	FF-W 4				
53	50 x 40mm Access reducing junction.	No	4		
	RK 4				
54	110 x 50mm Access reducing junction.	No	6		
	FF-W 6				
55	110mm Pan connector.	No	14		
50	GF-W 3 FF-W 9 RK 2	NI.			
56	50mm Air release vent valve.	No	4		
57	RK 4 110mm Air release vent valve.	No	5		
51	FF-W 5	110			
	III-VV U				
	Carried to Collection			_	
	Section No. 2			R	
	Bill No. 15				
	Plumbing And Drainage				
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					DING ALTERATION-PON
1		Unit	Quantity	Rate	Amount
58	50mm Vent cowl.	No	2		
	RK 2				
59	110mm Vent cowl.	No	8		
	FF-W 8				
	Sundries:				
60	Testing waste pipe system.	Item			
	FF-E 1				
	WATER SUPPLIES. (CPAP Work Group No 148)				
	High density black polyethylene (HDPE) pipes with				
	and including compression fittings:				
61	25mm Piping laid in trenches not exceeding 1m deep.	m	6		
	FF-W 6				
	Extra over HDPE pipes for polypropylene				
	compression fittings:				
62	25mm Fittings.	No	6		
	FF-W 6				
	Class 2 copper pipes:				
63	15mm Pipes.	m	90		
	GF-W 10 GF-E 2 FF-W 54				
64	TF-E 4 RK 20 22mm Pipes.	m	32		
04	GF-W 6 FF-W 18 RK 8	•••	02		
65	28mm Pipes.	m	42		
	FF-W 42				
66	15mm Pipes chased into brick walls.	m	264		
	GF-W 22 GF-E 8 FF-W 162				
	TF-E 16 RK 56				
67	22mm Pipes chased into brick walls.	m	32		
	GF-W 6 FF-W 18 RK 8				
68	28mm Pipes chased into brick walls.	m	21		
	FF-W 21				
	Extra over class 2 copper pipes for capillary fittings:				
69	15mm Fittings.	No	280		
	GF-W 25 GF-E 8 FF-W 171				
70	TF-E 16 RK 60 22mm Fittings.	No	48		
70	GF-W 9 FF-W 27 RK 12	INU	40		
71	28mm Fittings.	No	63		
	FF-W 63	110			
	Carried to Collection			R	
	Section No. 2				
	Bill No. 15				
	Plumbing And Drainage				
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		Unit	Quantity	Rate	Amount	
	Extra over class 2 copper pipes for brass compression fittings:					
72	15mm Fittings.	No	280			
73	GF-W 25 GF-E 8 FF-W 171 TF-E 16 RK 60 22mm Fittings.	No	48			
74	GF-W 9 FF-W 27 RK 12 28mm Fittings.	No	63			
	FF-W 63 Copper overflow and service pipes:					
75	15mm Braided flexible connector 350mm girth.	No	60			
	GF-W 4 GF-E 2 FF-W 36 TF-E 4 RK 14					
76	15mm Braided flexible connector 500mm girth.	No	14			
	GF-W 3 FF-W 9 RK 2 Sundries:					
77	Cut into existing 28mm copper or polycarb pipe and join new 25mm HDPE pipe including all necesarry fittings etc.	No	1			
	GF-W 1 TESTING.					
	Testing:					
78	Testing water pipe system.	Item				
	FF-E 1 WATER HEATERS:					
	Franke or equal approved					
79	Zip stainless steel 5 litre Hydroboil, size 318 x 150 x 460mm high with instant boiling water, two way tap control, connected to 15mm cold water supply and 220 volt 15 amp electrical power supply, plugged and screwed to wall	No	4			
	GF-W 1 GF-E 1 TF-E 1 RK 1					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 15					
	Plumbing And Drainage					
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				eMENDI BUIL	DING ALTERATION-PON	4
1		Unit	Quantity	Rate	Amount	
	Kwikot or equal approved					
	Electric domestic water heater, c/w all pipe work, valves, gauges, drip tray, vacuum breakers, shut-off					
	valve on cold water side, multi valve (pressure-					
	temperature control valve c/w piping to drain),					
	thermostat, self sacrificing anode, power wiring from isolator. Installed according to the specifications of					
	the manufacturer.					
80	200L Electric Water Heater	No	4			
	GF-W 1 GF-E 1 TF-E 1					
	RK 1					
	FIRE APPLIANCES ETC.					
	'Chubb':					
81	4,5kg Chemical dry powder fire extinguisher including					
	backing board.	No	16			
	Un/A 16 SLEEVES.					
	Plastic sleeves for pipes not exceeding 100mm diameter.					
82	Sleeve exceeding 250mm and not exceeding 500mm					
02	long cast into concrete beam.	No	21			
	FF-W 21					
	Plastic sleeves for pipes exceeding 100mm and not					
	exceeding 200mm diameter:					
83	Sleeve exceeding 250mm and not exceeding 500mm long cast into concrete beam.	No	21			
	FF-W 21	INO	21			
	HOLES ETC.					
	Core drilling of hole for pipe not exceeding 50mm					
	diameter:					
84	270mm Reinforced concrete slab, beam, wall, etc.	No	2			
	FF-W 2					
	Core drilling of hole for pipe exceeding 50mm and					
	not exceeding 100mm diameter:					
85	270mm Reinforced concrete slab, beam, wall, etc.	No	2			
	FF-W 2					
	Core drilling of hole for pipe exceeding 100mm and not exceeding 150mm diameter:					
86	270mm Reinforced concrete slab, beam, wall, etc.	No	2			
00	FF-W 2	INO				
	11-44 2					
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	Carried to Collection			R		
	Section No. 2					_
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	Plumbing And Drainage					
	95					

ı		I	Amount	
BILL NO. 15 PLUMBING AND DRAINAGE COLLECTION	≣	Page No		
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Section No. 2	amou to occion outlinary			
Bill No. 15 Plumbing And Drainage				
J	96			

				eMENDI BUIL	DING ALTERATIO	N-P
		Unit	Quantity	Rate	Amount	
SECTION NO.	<u>2</u>					
BUILDING WO	ORKS					
BILL NO. 16						
GLAZING						
Key:	Location Description:					
Un/A	Unallocated					
GF-W	GROUND FLOOR-WEST					
GF-E FF-W	GROUND FLOOR-EAST FIRST FLOOR-WEST					
FF-E	FIRST FLOOR-WEST FIRST FLOOR-EAST					
SF-W	SECOND FLOOR-WEST					
SF-E	SECOND FLOOR-EAST					
TF-W	THIRD FLOOR-WEST					
TF-E	THIRD FLOOR-EAST					
1	Item Location (Auto)					
4F-W	FOURTH FLOOR-WEST					
4F-E	FOURTH FLOOR-EAST					
BF-1	BASEMENT FLOOR-01					
BF-2	BASEMENT FLOOR-02					
RK	RECREATIONAL & KITCH					
CWK	COVERED WALKWAY					
TRADE PREA	MBLES					
Trade Preamb	iles.					
For Trade Prea	ambles refer to 'Model Preambles for edition) for the full descriptions of material work to be done in this Bill.					
TOPS, SHELV	ES, DOORS, MIRRORS, ETC.					
6mm float gla	ss copper backed mirrors with 10 mm polished edges fixed with chrome					
	nead mirror screws to wall:					
Mirror 600 x 60	00mm high.	No	4			
RK 4						
	Carried To Section Summary			R		
Section No. 2						+
Bill No. 16						
Ola !			1		1	
Glazing	97					

		Unit	Quantity	Rate	Amount
SECTION NO					
BUILDING W	<u>ORKS</u>				
<u>BILL NO. 17</u>					
PAINTWORK					
Key:	Location Description:				
Un/A	Unallocated				
GF-W	GROUND FLOOR-WEST				
GF-E	GROUND FLOOR-EAST				
FF-W	FIRST FLOOR-WEST				
FF-E	FIRST FLOOR-EAST				
SF-W	SECOND FLOOR-WEST				
SF-E	SECOND FLOOR-EAST				
TF-W	THIRD FLOOR-WEST				
TF-E I	THIRD FLOOR-EAST				
ı 4F-W	Item Location (Auto) FOURTH FLOOR-WEST				
4F-VV 4F-E	FOURTH FLOOR-WEST FOURTH FLOOR-EAST				
BF-1	BASEMENT FLOOR-01				
BF-2	BASEMENT FLOOR-02				
RK	RECREATIONAL & KITCH				
CWK	COVERED WALKWAY				
TRADE PREA					
For Trade Pre Trades' (2008	AMBLES cambles refer to 'Model Preambles for edition) for the full descriptions of material d work to be done in this Bill.				
For Trade Pre Trades' (2008 to be used and	ambles refer to 'Model Preambles for edition) for the full descriptions of material				
For Trade Pre Trades' (2008 to be used and SUPPLEMEN All work to be specifications systems are a	ambles refer to 'Model Preambles for edition) for the full descriptions of material d work to be done in this Bill.				
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For Trade Pre Trades' (2008 to be used and SUPPLEMEN All work to be specifications systems are a Products' unle Primers and fi with the paint the absorption	cambles refer to 'Model Preambles for edition) for the full descriptions of material d work to be done in this Bill. TARY PREAMBLES executed in strict accordance with the of ICI Dulux (Pty) Ltd. The coating s per Dulux's 'List of Decorative Paint less otherwise specified. rst coats may be thinned in accordance specifications of ICI Dulux (Pty) Ltd to aid of the paint. lust be sound, clean and have a moisture				
For Trade Pre Trades' (2008 to be used and SUPPLEMEN All work to be specifications systems are a Products' unle Primers and fi with the paint the absorption All surfaces m content of less Where surface coat must be r	cambles refer to 'Model Preambles for edition) for the full descriptions of material d work to be done in this Bill. TARY PREAMBLES executed in strict accordance with the of ICI Dulux (Pty) Ltd. The coating s per Dulux's 'List of Decorative Paint less otherwise specified. rst coats may be thinned in accordance specifications of ICI Dulux (Pty) Ltd to aid of the paint. lust be sound, clean and have a moisture				
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For Trade Pre Trades' (2008 to be used and SUPPLEMEN All work to be specifications systems are a Products' unle Primers and fi with the paint the absorption All surfaces m content of less Where surface coat must be r	cambles refer to 'Model Preambles for edition) for the full descriptions of material d work to be done in this Bill. TARY PREAMBLES executed in strict accordance with the of ICI Dulux (Pty) Ltd. The coating s per Dulux's 'List of Decorative Paint less otherwise specified. rst coats may be thinned in accordance specifications of ICI Dulux (Pty) Ltd to aid of the paint. Just be sound, clean and have a moisture is than 12%. Less of plaster etc are sandy / friable, the first replaced with 'Dulux Trade Bonding Liquid' and must be overcoated within 48 hours.				
For Trade Pre Trades' (2008 to be used and SUPPLEMEN All work to be specifications systems are a Products' unle Primers and fi with the paint the absorption All surfaces m content of less Where surface coat must be r plaster primer	cambles refer to 'Model Preambles for edition) for the full descriptions of material d work to be done in this Bill. TARY PREAMBLES executed in strict accordance with the of ICI Dulux (Pty) Ltd. The coating s per Dulux's 'List of Decorative Paint ess otherwise specified. rst coats may be thinned in accordance specifications of ICI Dulux (Pty) Ltd to aid of the paint. Just be sound, clean and have a moisture is than 12%. Les of plaster etc are sandy / friable, the first replaced with 'Dulux Trade Bonding Liquid' and must be overcoated within 48 hours. Carried to Collection			R	
For Trade Pre Trades' (2008 to be used and SUPPLEMEN All work to be specifications systems are a Products' unle Primers and fi with the paint the absorption All surfaces m content of less Where surface coat must be r	cambles refer to 'Model Preambles for edition) for the full descriptions of material d work to be done in this Bill. TARY PREAMBLES executed in strict accordance with the of ICI Dulux (Pty) Ltd. The coating s per Dulux's 'List of Decorative Paint ess otherwise specified. rst coats may be thinned in accordance specifications of ICI Dulux (Pty) Ltd to aid of the paint. Just be sound, clean and have a moisture is than 12%. Les of plaster etc are sandy / friable, the first replaced with 'Dulux Trade Bonding Liquid' and must be overcoated within 48 hours. Carried to Collection			R	
For Trade Pre Trades' (2008 to be used and SUPPLEMEN All work to be specifications systems are a Products' unle Primers and fi with the paint the absorption All surfaces m content of less Where surface coat must be r plaster primer	cambles refer to 'Model Preambles for edition) for the full descriptions of material d work to be done in this Bill. TARY PREAMBLES executed in strict accordance with the of ICI Dulux (Pty) Ltd. The coating s per Dulux's 'List of Decorative Paint ess otherwise specified. rst coats may be thinned in accordance specifications of ICI Dulux (Pty) Ltd to aid of the paint. Just be sound, clean and have a moisture is than 12%. Les of plaster etc are sandy / friable, the first replaced with 'Dulux Trade Bonding Liquid' and must be overcoated within 48 hours. Carried to Collection			R	
For Trade Pre Trades' (2008 to be used and SUPPLEMEN All work to be specifications systems are a Products' unle Primers and fi with the paint the absorption All surfaces m content of less Where surface coat must be r plaster primer Section No. 2	cambles refer to 'Model Preambles for edition) for the full descriptions of material d work to be done in this Bill. TARY PREAMBLES executed in strict accordance with the of ICI Dulux (Pty) Ltd. The coating s per Dulux's 'List of Decorative Paint ess otherwise specified. rst coats may be thinned in accordance specifications of ICI Dulux (Pty) Ltd to aid of the paint. Just be sound, clean and have a moisture is than 12%. Les of plaster etc are sandy / friable, the first replaced with 'Dulux Trade Bonding Liquid' and must be overcoated within 48 hours. Carried to Collection			R	

				eMENDI BUILI	DING ALTERATION	I-PoN
ı	1	Unit	Quantity	Rate	Amount	I
	ON FLOATED PLASTER.					
	Prepare surfaces and remove all loose material,					
	apply one coat 'Dulux Trade Moisture Tolerant					
	Plaster Primer' and two coats 'Dulux Wallguard'					
	paint:					
1	On exterior walls.	m²	838			
	GF-W 110 GF-E 11 FF-W 558 SF-E 38 RK 121					
2	SF-E 38 RK 121 On exterior walls in foundations.	m²	106			
_	GF-E 61 FF-W 45		100			
	One coat professional gypsum and plaster primer					
	and two coats Plascon (or equally approved)					
	Professional Superior low sheen (Code: Y4-E2-3)					
	with evasive white colour or equal approved for interior use					
3	On interior walls.	m²	626			
3		111	020			
	GF-W 293 GF-E 7 BF-1 33 RK 293					
4	On interior textured walls	m²	100			
	RK 100					
5	On interior feature walls	m²	31			
	RK 31					
	ON PLASTER BOARD.					
	One coat professional gypsum plaster primer and					
	two coats Plascon (or equally approved)					
	Professional Superior low sheen (Code: NEU 08) with worn wood colour or equal approved for					
	interior use					
6	On interior partitions.	m²	1,524			
	GF-W 328 GF-E 818 FF-W 68					
	FF-E 31 SF-W 33 TF-E 19					
	4F-W 19 4F-E 13 BF-2 195					
	Remove any loose and flaking residue by means of wire brushing, wash with 'Polycell Sugar Soap' or					
	weak spirits of salts, open up cracks and make good					
	with 'Polycell Mendall 90' or 'Polycell Polyfilla					
	Exterior' filler sanded smooth, apply one coat 'Dulux Trade Moisture Tolerant Plaster Primer' and two					
	coats "Dulux Trade 65 Matt PVA" paint:					
7	On ceilings.	m²	151			
•	GF-W 151					
8	On soffits of slab.	m²	57			
	RK 57					
					-	
	Carried to Collection			R		
	Section No. 2					
	Bill No. 17					
	Paintwork					
	99					

1	1	Unit	Quantity	Rate	Amount	
9	On bulkheads.	m²	42			
	GF-E 14 FF-W 28					
	Remove any loose and flaking residue by means of					
	wire brushing, wash with 'Polycell Sugar Soap' or weak spirits of salts, open up cracks and make good					
	with 'Polycell Mendall 90' or 'Polycell Polyfilla					
	Exterior' filler sanded smooth, apply one coat 'Dulux Trade Moisture Tolerant Plaster Primer' and two					
	coats 'Dulux Trade 65 Matt PVA' paint:					
	ON FIBRE-CEMENT, ETC.					
	Prepare surface and remove any loose material,					
	apply one coat 'Dulux Trade Moisture Tolerant Plaster Primer' and two coats "Dulux Luxurious Silk"					
	paint:					
10	On interior cills not exceeding 300mm girth.	m	1			
	RK 1					
	ON METAL					
	Clean down with galvanised iron cleaner and apply one coat galvanised iron primer, one universal under					
	coat and two coats of 'Plascon' or equally approved					
	super enamel paint:					
	Prepare surfaces, apply two coats 'Dulux Galvanised					
	Iron Cleaner' and two coats 'Dulux Primer fro Galvanised Iron' paint:					
11	On back of door frames.	m²	2			
	GF-W 2					
	Clean down with galvanised iron cleaner and apply					
	one coat galvanised iron primer, one universal under coat and two coats of "Plascon" or equally approved					
	super enamel paint:					
12	Columns and beams.	m²	211			
4.0	FF-W 28 RK 101 CWK 82					
13	On gates, grilles, burglar screens, balustrades, etc. (both sides measured over the full flat area).	m²	4			
	BF-2 4					
	ON WOOD, WOOD BOARD					
	Two coats 'Dulux Primer' for wood:					
14	On backs of frames, linnings, etc. not exceeding 300mm					
	wide.	m	6			
	RK 6					
	Carried to Collection			R		
	Section No. 2 Bill No. 17					
	Paintwork					
	100					
ı	· ·		1	ı	ı I	

ı		Unit	Quantity	Rate	Amount
15	On skirting not exceeding 300mm girth.	m	473		
	GF-W 136 GF-E 227 FF-W 19 FF-E 9 SF-W 9 TF-E 5 4F-W 5 4F-E 4 BF-1 4 BF-2 54 RK 1 Stop, fill, sand down and prepare wood surfaces and apply one coat 'Dulux Primer', one coat 'Dulux Trade Universal Undercoat' and two coats 'Dulux Pearlglo				
	Waterbased Enamel' paint:				
16	On doors. GF-W 43	m²	259		
17	RK 14 On door frames.	m²	81		
	GF-W 15 GF-E 1 FF-W 60 RK 5 PREPARATORY WORK TO PREVIOUSLY PAINTED				
	SURFACES				
	Generally:				
	All work to be executed in strict accordance with the specifications of ICI Dulux (Pty) Ltd. The coating systems are as per Dulux's 'List of Decorative Paint Products' unless otherwise specified.				
	Primers and first coats may be thinned in accordance with the paint specifications of ICI Dulux (Pty) Ltd to aid the absorption of the paint.				
	All surfaces must be sound, clean and have a moisture content of less than 12%.				
	Where surfaces of plaster etc are sandy / friable, the first coat must be replaced with 'Dulux Trade Bonding Liquid' plaster primer and must be overcoated within 48 hours.				
	ON FLOATED PLASTER				
	Remove any loose and flaking residue by means of wire brushing, wash with 'Polycell Sugar Soap' or weak spirits of salts, open up cracks and make good with 'Polycell Mendall 90' or 'Polycell Polyfilla Exterior' filler sanded smooth apply one coat 'Dulux Trade Moisture Tolerant Plaster Primer' and two coats 'Dulux Luxurious Silk' paint:				
18	On interior walls.	m²	1,541		
	GF-W 824 GF-E 314 FF-W 28 FF-E 40 SF-W 61 SF-E 84 TF-E 46 4F-W 85 4F-E 12 RK 47				
	Carried to Collection Section No. 2 Bill No. 17 Paintwork			R	
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					DING ALTERATION	-PON
1		Unit	Quantity	Rate	Amount	
	Remove any loose and flaking residue by means of wire brushing, wash with 'Polycell Sugar Soap' or					
	weak spirits of salts, open up cracks and make good with 'Polycell Mendall 90' or 'Polycell Polyfilla Exterior' filler sanded smooth apply one coat 'Dulux					
	<u>Trade Moisture Tolerant Plaster Primer' and two</u> <u>coats 'Dulux Wallguard' paint:</u>					
19	On exterior walls.	m²	20			
	RK 20 ON EXISTING INTERNAL FLOATED PLASTER SURFACES					
	Two coats premium quality polyurethane enamel paint					
20	Walls	m²	10			
	GF-W 1 SF-E 5 4F-W 3 4F-E 6 RK -5					
	4F-E 6 RK -5 ON EXTERNAL TEXTURED PLASTER SURFACES					
21	Remove any loose and flaking residue by means of wire brushing, wash with 'Polycell Sugar Soap' or weak spirits					
	of salts, open up cracks and make good with 'Polycell Mendall 90' or 'Polycell Polyfilla Exterior' filler sanded					
	smooth apply one coat 'Dulux Trade Moisture Tolerant Plaster Primer' and two coats 'Dulux Wallguard' paint:	m²	55			
	RK 55 ON INTERNAL GYPSUM PLASTER SURFACES					
	One coat professional gypsum plaster primer and two coats Plascon (or equally approved) Professional Superior low sheen (Code: NEU 08) with worn wood colour or equal approved for interior use					
22	Dry wall partitioning.	m²	6			
	4F-E 6 ON WOOD SURFACES					
	Stop, fill, sand down and prepare wood surfaces and apply one coat 'Dulux Primer', one coat 'Dulux Trade Universal Undercoat' and two coats 'Dulux Pearlglo Waterbased Enamel' paint:					
23	Skirtings, rails, etc not exceeding 300mm girth.	m	500			
	GF-W 123 GF-E 197 FF-W 23 FF-E 23 SF-W 29 SF-E 50					
	TF-E 33 4F-W 15 4F-E 7					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 17					
	Paintwork 102					

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	BUILDING WORKS			
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2	EARTHWORKS	19		
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5	WATERPROOFING	33		
6	ROOF COVERINGS	37		
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11	STRUCTURAL STEELWORK	64		
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SECTION NO. 3 EXTERNAL WORKS

		l lmit	Ouantitu		DING ALTERATION-PON
		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	EXTERNAL WORKS				
	BILL NO. 1				
	ROADS, PAVING ETC				
	TRADE PREAMBLES				
	Trade Preambles:				
	For Trade Preambles refer to 'Model Preambles for Trades' (2008 edition) for the full descriptions of material to be used and work to be done in this Bill.				
	Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent of each item				
	Excavation in existing bitumen paving:				
	Note: The removal of bitumen paving has not been measured, and forms part of the relevent excavations. No payment will be made for the removal of bitumen pavings when it forms part of areas to be excavated.				
	ROADS, PAVING, ETC				
	DEMOLITIONS ETC				
	Breaking up and removing				
1	125mm Thick unreinforced concrete surface beds, paving, etc	m²	12		
2	150mm Thick average mesh reinforced concrete ramp, etc	m²	3		
3	60mm Paving blocks including all unneccessary underlayers	m²	55		
4	30mm Thick average tarmac, etc	m²	15		
5	75 x 150mm Unreinforced concrete kerbs	m	65		
6	Rodding eye including all sundry items, etc.	No	1		
7	Grease trap and cage including all sundry items, etc.	No	1		
	ALTERATIONS.				
	Saw cuts:				
8	Neatly saw cut edge of existing asphalt surface to				
	facilitate part removal thereof.	m	24		
	Carried to Collection			R	
	Section No. 3 Bill No. 1				
	Roads, Paving Etc				
	106				
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ı	I	Unit	Quantity	Rate	Amount	
	EXCAVATION OTHER THAN BULK					
	Excavation not exceeding 2m deep:					
9	Over site between buildings, retaining walls, etc to reduce levels and depositing excavated material in prescribed stock piles on site.	m³	72			
	Extra over excavations other than bulk in earth for excavation in:					
10	Soft rock.	m³	4			
11	Hard rock.	m³	2			
	Keeping excavations free of water:					
12	Keeping excavations free of all water other than subterranean water.	Item				
	CARTING AWAY.					
	Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance					
13	made for increase in bulk): Off site to a dumping site to be found by the Contractor.	m³	72			
13	. •	111	12			
	MASONRY. Brick Paving:					
	Paving of Corobrik® Corocobble or Equally					
	Approved Bevel Grey concrete paving brick manufactured in accordance with SANS 1058, size 200 x 100 x 50 x 50mm thick laid in accordance with SANS 1200 MJ and CMA Concrete Block Paving Manuals on and including 50mm thick river sand bed with dry filler sand swept and vibrated into joints, including treatment with weed killer all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I:					
14	Paving in Herringbone pattern or running bond.	m²	92			
15	Fair circular cutting and waste to paving.	m	55			
	PRECAST CONCRETE KERBS.					
	Precast concrete kerbing (complying with SABS 927) in 1m lengths, wet presses, placed in position, bedded and jointed in (3:1) cement mortar and flush pointed on exposed faces, including 15MPa/19mm unreinforced concrete haunching at back of each joint, excavation, backfilling, ramming, etc.:					
16	Barrier kerb (Figure 4) 150 x 250mm high.	m	41			
	Carried to Collection Section No. 3 Bill No. 1			R		_
	Roads, Paving Etc					
	107					

ı		Unit	Quantity	Rate	Amount	
17	Barrier kerb (Figure 4) 150 x 250mm high circular on					
	Barrier kerb (Figure 4) 150 x 250mm high circular on plan not exceeding 4m radius formed with 330mm lengths of straight kerb.		26			
	lengths of straight Korb.	m	26			
	Carried to Collection			R		
	Section No. 3					
	Bill No. 1					
	Roads, Paving Etc					
	108					

1		I	Amount	
BILL NO. 1 ROADS, PAVING ETC COLLECTION	Brought Forward from Page	Page No 106 107 108		
Section No. 3 Bill No. 1 Roads, Paving Etc	Carried To Section Summary	R		
	109			

	Unit	Quantity	Rate	Amount
SECTION NO. 3				
EXTERNAL WORKS				
BILL NO. 2				
STORMWATER DRAINAGE				
TRADE PREAMBLES				
Trade Preambles:				
For Trade Preambles refer to 'Model Preambles for Trades' (2008 edition) for the full descriptions of material to be used and work to be done in this Bill.				
SUPPLEMENTARY PREAMBLES				
Proprietary items or materials:				
Proprietary items or materials where specified are to be of the brand specified - or other equal approved - by the Principal Agent.				
Note:				
Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent of each item				
SUPPLEMENTARY PREAMBLES				
Concrete pipes:				
Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings.				
Exposed concrete surfaces:				
Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.				
Excavations:				
No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.				
'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.				
Laying, backfilling, bedding, etc of pipes:				
Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.				
Carried to Collection			R	
Section No. 3			•	
Bill No. 2				
Stormwater Drainage				
110				

1	Unit	Quantity	Rate	Amount
Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L: Medium pressure pipelines LD: Sewers LE: Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB: Earthworks (Pipe trenches) Clause 5.7.2 will only be applicable if authorised by the Engineer in writing.				
Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB: Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding.				
Descriptions of pipes laid in trenches:				
Descriptions of pipes laid in trenches shall be deemed to include for carting away all surplus excavated material to a dumping site located by the contractor. Note minimium width of trench is 500mm on either side of pipe.				
<u>Descriptions of catchpits, junction boxes, manholes, etc:</u>				
Descriptions of catchpits, junction boxes, manholes, etc, shall be deemed to include for compaction, disposal of surplus excavated material to a dumping site located by the contractor, risk of collapse and keeping excavations free from water.				
Existing services:				
There are a number of existing services within the site boundaries, some of these are shown on the drawings. This information is not exhaustive and does not relieve the contractor of the responsibility of locating all existing services prior to construction. There are existing water, storm water, telephone, communications and electrical services on the site. Work is to be carried out without any disruption to existing services, this includes instances where newly constructed services are to be connected to existing 'live' services.				
Brickwork in Manholes:				
Brickwork in manholes to be 28 MPa in accordance with the engineers specifications.				
Couried to Collection				
Carried to Collection Section No. 3 Bill No. 2			R	
Stormwater Drainage				
111				

		Unit	Quantity	Rate	Amount
	STORMWATER CHANNELS.				
	Precast or in-situ reinforced concrete (30Mpa) with				
	mesh Ref 395, V- shaped stormwater channels, finished smooth on all exposed surfaces and with				
	angles rounded, cast in suitable lengths (not				
	exceeding 2 000mm), with bitumen applied to one edge at joints, and reinforced as necessary for				
	handling if precast, including all formwork, reinforecing, moulds, shallow excavation, filling and				
	ramming, laying to falls, bedding and pointing in				
	(3:1) cement mortar:				
1	300 x 150mm concrete V-Channel.	m	28		
2	Extra for angles, intersections, ends, dressing into sides of catchpits, etc.	No	12		
	STORMWATER DRAINAGE.				
	Sumps, catchpits, inspection chambers, etc.:				
3	Excavate for and build catchpit size 1250 x 640mm exceeding 1,0m and not exceeding 1.50m deep over all				
	formed of 150mm thick cement concrete (25MPa) bottom projecting 75mm all round, mass concrete				
	(15Mpa) benching, hard burnt one brick sides with				
	galvanised brickforce between each course, rendered internally in 1:3 cement plaster, including all necessary				
	fittings, excavations, formwork, holes through sides for pipes etc, as per stormwater catchpit typical details on				
	BVI drawing number 34306_123_01 attached to these				
	Bills of Quantities.	No	1		
	Gratings, covers, etc:				
4	610 x 640mm Heavy duty grating and frame.	No	3		
5	1250 x 640mm double grating heavy duty manhole cover and frame.	No	1		
	Sundries:				
6	Cutting into side of existing inspection chamber for and				
	connecting 450mm pipe including making good concrete benching.	No	2		
	Prescribed tests on filling:				
7	Modified AASHTO Density test.	No	1		
8	DCP test.	No	1		
9	Compactibility test.	No	4		
				_	
	Carried to Collection Section No. 3			R	
	Bill No. 2				
	Stormwater Drainage				
	112				

1		Unit	Quantity	Rate	Amount	
	Testing:					
10	Testing drainage pipe system.	Item				
	rooming aramage pipe cyclerin.	itom				
	Carried to Collection			R		
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	Bill No. 2					
	Stormwater Drainage					
	113					

		1	Amount
BILL NO. 2 STORMWATER DRAINAGE COLLECTION	Brought Forward from Page	Page No	
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Section No. 3 Bill No. 2 Stormwater Drainage	114		
	114		

	Unit	Quantity	Rate	Amount
SECTION NO. 3				
EXTERNAL WORKS				
BILL NO. 3				
SOIL DRAINAGE				
TRADE PREAMBLES				
Trade Preambles:				
For Trade Preambles refer to 'Model Preambles for Trades' (2008 edition) for the full descriptions of material to be used and work to be done in this Bill.				
SUPPLEMENTARY PREAMBLES				
Proprietary items or materials:				
Proprietary items or materials where specified are to be of the brand specified - or other equal approved - by the Principal Agent.				
Note:				
Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent of each item.				
SUPPLEMENTARY PREAMBLES				
uPVC pipes and fittings:				
Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings.				
Soil, waste and vent pipes and fittings shall be solvent weld jointed.				
Vitrified clay pipes etc:				
Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid.				
Excavations:				
No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.				
'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.				
Carried to Collection			R	
Section No. 3				
Bill No. 3				
Soil Drainage				

			1
Laying, backfilling, bedding, etc of pipes:			
Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.			
Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB: Earthworks (Pipe trenches) Clause 5.7.2 will only be applicable if authorised by the Engineer in writing.			
Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB: Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding.			
Descriptions of pipes laid in trenches:			
Descriptions of pipes laid in trenches shall be deemed to include for carting away all surplus excavated material to a dumping site located by the contractor.			
Descriptions of catchpits, junction boxes, manholes,			
etc: Descriptions of catchpits, junction boxes, manholes, etc, shall be deemed to include for compaction, disposal of surplus excavated material to a dumping site located by the contractor, risk of collapse and keeping excavations free from water.			
Precast concrete manoles:			
Precast concrete manholes shall be constructed using dolomitic aggregate.			
Step irons:			
Calcamite step irons are to be cast into the manhole walls as specified.			
Existing services:			
There are a number of existing services within the site boundaries, some of these are shown on the drawings. This information is not exhaustive and does not relieve the contractor of the responsibility of locating all existing services prior to construction. There are existing water, storm water, telephone, communications and electrical services on the site. Work is to be carried out without any disruption to existing services, this includes instances where newly constructed services are to be connected to existing 'live' services.			
Carried to Collection		R	
Section No. 3			
Bill No. 3			
Soil Drainage			

				eMENDI BUILI	DING ALTERATION	N-PoN
		Unit	Quantity	Rate	Amount	
	SOIL DRAINAGE					
	Excavation, etc. for soil drainage:					
1	Carefully excavate by hand in small sections, to expose existing services, including backfilling to 90% Mod AASTHO density on completion.	m³	10			
2	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in concrete, hard rock, etc.	m³	16			
3	Backfilling to pipe trenches, chambers, etc with G7 material supplied by the contractor compacted to 90% Mod AASHTO density and stabalised with 3 percent cement.	m³	23			
4	Granular material in bedding under and filling around pipes supplied by the contractor in accordance with SABS 1200 LB 3.1 and 3.4.2. (Bedding cradle)	m³	32			
	uPVC Class PN16 Socketed sewer piping with bedding and filling in accordance with SABS 1200LB:					
5	110mm Pipes vertically or ramped to cleaning eyes etc (no excavation).	m	43			
6	110mm Pipes laid in and including trenches not exceeding 1m deep.	m	110			
	Extra over uPVC pipes for fittings:					
7	50mm Bend.	No	6			
8	110mm Bend.	No	7			
9	110mm Junction.	No	4			
10	110 x 160mm Access reducing junction.	No	6			
11	110mm Access bend.	No	8			
12	110mm Access junction.	No	6			
13	110 x 50mm Access reducing junction.	No	5			
14	PVC gulleys: 110mm Gulley not exceeding 1m deep with and including precast concrete gully head surround.	No	1			
	Carried to Collection Section No. 3			R		_
	Bill No. 3					
	Soil Drainage					

ı		Unit	Quantity	Rate	Amount
	Manholes:				
15	Precast concrete inspection chamber size 1000mm internal diameter exceeding 0,5m and not exceeding 1m deep internally to invert level, including 150mm thick (25MPa/19mm) concrete cover slab with Y12 bars at 150mm centres, finished smooth with a steel float and rebated for and fitted with cast iron double seal cover and frame (cover and frame elsewhere) in accordance with SABS 558, bedded in 1:2 cement mortar and 1300mm diameter x 350mm thick (20Mpa/19mm) unreinforced concrete bottom, including cast iron step irons, concrete benching, uPVC channels and fittings, sealing joints between manhole rings with Bitu-Joint sealer, backfilling and ramming, carting away surplus excavated material, formwork, holes through sides for pipes, etc complete.	No	2		
	Gratings, covers, etc:				
16	550mm Diameter x 75kg type 4A medium duty manhole cover and frame.	No	2		
	Sundries:				
17	Unreinforced concrete encasing to 110mm horizontal pipe.	m	18		
	Desludging				
18	Clean out septic tank by desludging including removal of all debris and waste including solid waste as per Health and Safety requirements and make good on completion including disposing of all debris and waste at an authorised municipal waste disposal facility or designated area	Item			
19	Issue of Certificate of Waste Disposal.	Item			
20	Backfilling to pipe trenches, chambers, etc with G7 material supplied by the contractor compacted to 90% Mod AASHTO density and stabalised with 3 percent cement. (provisional)	m³	12		
21	100mm Cast iron 'ABC' cleaning eye.	No	6		
	Prescribed tests on filling:				
22	Modified AASHTO Density test.	No	2		
23	DCP test.	No	2		
24	Compactibility test.	No	2		
	Carried to Collection Section No. 3			R	
	Bill No. 3				
	Soil Drainage				
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1		Unit	Quantity	Rate	Amount	
	Testing:					
25	Testing drainage pipe system.	Item				
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	Section No. 3					
	Bill No. 3					
	Soil Drainage					
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I		I	Amount	ı
BILL NO. 3 SOIL DRAINAGE COLLECTION		Page No		
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Soil Drainage	120			

	Unit	Quantity	Rate	Amount
SECTION NO. 3				
EXTERNAL WORKS				
BILL NO. 4				
WATER SUPPLY IN GROUND				
TRADE PREAMBLES				
Trade Preambles:				
For Trade Preambles refer to 'Model Preambles for Trades' (2008 edition) for the full descriptions of material to be used and work to be done in this Bill.				
SUPPLEMENTARY PREAMBLES				
Project particular specifications:				
The specifications particular to this project are included in C3.2 Particular Specifications included in Envelope A Volume 1 of 2 of the tender documents. The Contractor is to take cognisance of them when pricing the relevant items in the Bill of Quantities as no extras arising out of their failure to do so will be entertained.				
Proprietary items or materials:				
Proprietary items or materials where specified are to be of the brand specified - or other equal approved - by the Principal Agent.				
Note:				
Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent of each item				
SUPPLEMENTARY PREAMBLES				
uPVC pressure pipes and fittings:				
Pipes for water supply shall be of the class stated.				
Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.				
Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.				
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Section No. 3				
Bill No. 4				
Water Supply In Ground				
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	Unit	Quantity	Rate	Amount
Copper pipes:				
Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.				
Reducing fittings:				
Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.				
Laying, backfilling, bedding, etc of pipes:				
Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.				
Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L: Medium pressure pipelines LD: Sewers LE: Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.				
Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB: Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding.				
Excavations:				
No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.				
'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.				
Descriptions of pipes laid in trenches:				
Descriptions of pipes laid in trenches shall be deemed to include for carting away all surplus excavated material to a dumping site located by the contractor.				
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Carried to Collection Section No. 3			R	
Bill No. 4				
Water Supply In Ground				
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	Unit	Quantity	Rate	Amount
<u>Descriptions of catchpits, junction boxes, manholes, etc:</u>				
Descriptions of catchpits, junction boxes, manholes, etc, shall be deemed to include for compaction, disposal of surplus excavated material to a dumping site located by the contractor, risk of collapse and keeping excavations free from water.				
Thrust Blocks:				
Thrust blocks for pressure pipes to be formed of Class B concrete shaped for fittings with notchings of suitable size to take fittings and with sinkings and flanges of short collar detachable joints of suitable size to allow for removing of coupling when necessary including necessary formwork, excavation, etc				
Existing services:				
There are a number of existing services within the site boundaries, some of these are shown on the drawings. This information is not exhaustive and does not relieve the contractor of the responsibility of locating all existing services prior to construction. There are existing water, storm water, telephone, communications and electrical services on the site. Work is to be carried out without any disruption to existing services, this includes instances where newly constructed services are to be connected to existing 'live' services.				
Corrosion Protection:				
All steel and cast iron fittings, specials and valves shall be fusion bonded epoxy lined and coated, film thickness 300 microns. Steel pipes and fittings shall be hot dipped galvanised and Fusion Bonded Epoxy coated and lined. The film thickness shall be 300 microns. Galvanising shall be in accordance with SABS 763. Fusion Bonded Epoxy lining and coating to be to SABS 1217, and strictly in accordance with the manufacturer's specifications. All pipes shall be inspected before and after laying, and any damage shall be made good with cold galvanising and the appropriate epoxy paint. Any on-site cutting and jointing of pipes shall be similarly treated.				
Corrosive Soil:				
All nuts, bolts, couplings, screwed threads and saddles are to be treated with a compatible primer, packed with a bitumen or tar based mastic and wrapped with 'Denso Tape'. The cost of this work shall be included in the rates tendered for supplying and fixing fittings, specials and valves.				
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Water Supply In Ground				
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					DING ALTERATION	-FUIN
		Unit	Quantity	Rate	Amount	
	Bolts for Flanges:					
	All cast iron valves are to be class 16 waterworks pattern with wedge gate to SABS 664 and 665, clock-wise closing with non-rising spindle, and fitted with a valve cap. Valves are to be embossed with the SABS mark, operating class and size. Flanged valves are to be drilled according to SABS 1123 (1977) table 16.					
	Valves:					
	Bolts and nuts shall comply with the standards of SABS 136 and shall be hot dipped galvanised to SABS 763 (1977)					
	WATER SUPPLIES IN GROUND.					
	Excavation, etc. for water supplies:					
1	Carefully excavate by hand in small sections, to expose existing services, including backfilling to 90% Mod AASTHO density on completion.	m³	15			
2	Excavation in earth not exceeding 2m deep for pipe trenches.	m³	9			
3	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock.	m³	3			
4	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock.	m³	1			
5	Extra over excavation for pipe trenches, chambers, etc for carting away surplus material to a dumping site to be located by the Contractor.	m³	8			
6	Backfilling to pipe trenches with material from the excavations including haulage of a maximum of 350m from perimeter of excavations or stock piles compacted to 90% Mod AASHTO density.	m³	7			
7	Backfilling to pipe trenches, chambers, etc with G7 material supplied by the contractor compacted to 90% Mod AASHTO density.	m³	4			
8	Backfilling to pipe trenches, chambers, etc with G7 material supplied by the contractor compacted to 90% Mod AASHTO density and stabalised with 3 percent cement.	m³	3			
9	Selected backfilling to pipe trenches with material from the excavations including haulage of a maximum of 350m from perimeter of excavations or stock piles in accordance with SABS 1200 LB 3.2 and 3.4.1 compacted to 90% Mod AASHTO density. (Fill blanket)	m³	4			
	Carried to Collection			R		
	Section No. 3					
	Bill No. 4					
	Water Supply In Ground					
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		Unit	Quantity	Rate	Amount	
10	Backfilling to pipe trenches supplied with material by the contractor in accordance with SABS 1200 LB 3.2 and 3.4.2 compacted to 90% Mod AASHTO density. (Fill blanket)	m³	3			
11	Selected granular material in bedding under and filling around pipes with material from the excavations including haulage of a maximum of 350m from perimeter of excavations or stock piles in accordance with SABS 1200 LB 3.1 and 3.4.1. (Bedding cradle)	m³	2			
12	Granular material in bedding under and filling around pipes supplied by the contractor in accordance with SABS 1200 LB 3.1 and 3.4.2. (Bedding cradle)	m³	3			
13	Sand filling in bedding under and filling around pipes supplied by the contractor.	m³	3			
	Class 10 High density black polyethylene (HDPE) pipes:					
14	32mm Pipes laid in trenches (trenches elsewhere).	m	15			
15	50mm Pipes laid in trenches (trenches elsewhere).	m	8			
16	63mm Pipes laid in trenches (trenches elsewhere).	m	3			
	Extra over Class 10 HDPE pipes for plasson fittings:					
17	32mm to 22mm Reducer.	No	4			
18	32mm to 28mm Reducer.	No	3			
19	50mm to 32mm Reducer.	No	4			
20	63mm to 50mm Reducer.	No	2			
21	32mm 90 Degree elbow.	No	4			
22	50mm 90 Degree elbow.	No	3			
23	63mm 90 Degree elbow.	No	4			
24	32mm 45 Degree elbow.	No	2			
25	50mm 45 Degree elbow.	No	3			
26	63mm 45 Degree elbow.	No	2			
27	32mm Tee.	No	3			
28	50mm Tee.	No	4			
29	63mm Tee.	No	1			
30	32mm Male adapter.	No	2			
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		Unit	Quantity	Rate	Amount	
31	50mm Male adapter.	No	3			
32	63mm Male adapter.	No	4			
33	32mm Female adapter.	No	4			
34	50mm Female adapter.	No	1			
35	63mm Female adapter.	No	2			
36	75 x 50mm Male adapter.	No	2			
	Galvanised steel pipes with screwed and socketed joints:					
37	20mm Pipes.	m	20			
	Extra over Galvanised steel pipes with screwed and socketed joints for malleable steel fittings:					
38	20mm Fittings.	No	12			
	Clean all surfaces with a high pressure waterwasher using a mixuture of water and 'Plascon Aquasolve' degreaser, apply two inner layers with a 50 percent overlay of 'Canusa Wrapid' tape and single outer wrap with a 50 percent overlay of 'Wrapid Bond':					
39	20mm Pipes.	m	12			
40	20mm Fittings.	No	3			
41	75 x 50mm Reducing tee.	No	4			
42	75 x 63mm Reducing tee.	No	3			
43	75mm Equal tee.	No	2			
	Valves, meters etc:					
44	20mm Plain rough brass bibtap.	No	3			
45	28mm Brass gate valve.	No	2			
46	20mm Brass male/female Dole 10l/min flow contoller.	No	2			
47	'Kent Helix 4000' 100mm Water meter with flanged couplings to 110mm uPVC pipe.	No	1			
	Sundries:					
48	Unreinforced concrete in thrust blocks in trenches at bends, tees, etc., including extra excavation, formwork, etc.	m³	7			
	Carried to Collection			R		
	Section No. 3					
	Bill No. 4					
	Water Supply In Ground 126					
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1		Unit	Quantity	Rate	Amount	
49	Cut into and temporarily stop off 75mm diameter water pipe, insert reducing tee and joint to new 50mm uPVC pipe.	No	3			
	Prescribed tests on filling:					
50	Modified AASHTO Density test.	No	3			
51	DCP test.	No	3			
52	Compactibility test.	No	3			
	Testing:					
53	Testing water pipe system.	Item				
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	Water Supply In Ground					
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	EXTERNAL WORKS			
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	SECTION SUMMARY			
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SECTION NO. 4 ELECTRICAL INSTALLATION

TENDER NUMBER: TNPA/2023/02/0009/22520/RFP

DESCRIPTION OF WORKS: ALTERATIONS AND PARTITIONING OF THE EMENDI BUILDING INCLUDING DESIGN

SUPPLY, INSTALLATION AND COMMISINING OF ELECTRICAL, MECHNANICAL, CIVIL & STRUCTURAL

ENGINEERING WORKS AT THE PORT OF NGQURA



ELECTRICAL WORKS BOQ

ELECTRICAL WORKS - BILL OF QUANTITIES

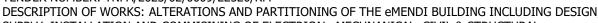


ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	ELECTRICAL INSTALLATION				
	PREAMBLES				
	Tou Dung replace refer to MAndal Dung replace for Tradeol				
	For Preambles refer to "Model Preambles for Trades"				
	SUPPLEMENTARY PREAMBLES				
	OUT ELIMENTARY TREAMBLES				
	Working Conditions:				
	The contractor is hereby made aware that the proposed work is to be				
	executed in confined spaces				
	The contractor is to allow for all costs in this regard in the tender price				
	The contractor is to allow for all costs in this regard in the tender price				
	Specifications, drawings, etc:				
	Tenderers are referred to the specification accompanying these bills				
	of quantities for the electrical work, for the full descriptions of the				
	following items which are to be read and priced in conjunction with the said specification				
	Said Specification				
	Site Establishment				
1	Site Establishment and clearance at the end of the contract	Sum			
2	GUARANTEE AND MAINTENANCE				
	Guarantee and maintenance for the complete installation of electrical	Sum			
	installation.	Sulli			
3	REMOVAL OF WASTE				
	Tenderer to allow for all costs associated with cleaning the site of all	Sum			
	rubbish and waste caused by this contract	-			
4	COMMISSIONING AND TESTING				
4					
	Allow for testing and commissioning the whole of the Electrical Installation as laid down in the specification and for re-testing as may				
	be required after the making good of all defective work to the	Sum			
	satisfaction of the Engineer.				
5	CERTIFICATE FOR COMPLIANCE				
	Provision for the Certificate of Compliance to be issued on completion	Sum			
	of the project.	Sulli			
6	BUILDERS WORK DRAWINGS				
	Provision of Builders work layouts on AutoCAD to indicate exact	Sum			
	positions of openings and power points.				
7	CONTRACTORS SHOP DRAWINGS				+
'	Contract shop drawings prepared in accordance with co-ordinated				1
	Architectural, Structural & Service layouts.	Sum			
	in the same of the				
8	PROGRAMMING OF WORKS				
	Programming of the works to run concurrently with the Builders	Sum			
	programme.	Sum			
9	EQUIPMENT APPROVAL				
	Equipment Procurement Submissions for Engineers Approval.	Sum			
4.0	OOAFFOLDING	ļ			
10	SCAFFOLDING				-
	Provision of Scaffolding for installation of lights, etc at high level.	sum			-

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11	DISTRIBUTION BOARDS				
11.1	Modifications to the existing distribution boards,addition of circuit breakers including all other accessories. Refer to TPD-002-DBSPEC and Electrical Drawing	item	5		
12	LUMINAIRES AND LAMPS				
12.1	Supply,delivery and install 30W 600mmx600mm LED recessed light fitting (mounted onto the ceiling)	item	150		
12.2	Supply,delivery and install 130W Pandent light fitting	item	54		
12.3	Supply,delivery and install 2x9W LED downlighter	item	10		
13	POWER SUPPLY POINTS				
13.1	Supply,delivery and install equal or similar approved to Crabtree 20A 1Ø CORDGRIP isolator	item	4		
13.2	Supply,delivery and install equal or similar approved to Crabtree 20A 1Ø isolator	item	6		
13.4	Supply,delivery and install equal or similar approved to crabtree 60A 3Ø isolator	item	2		
13.5	Supply,delivery and install 16A Double socket outlet (installed 300mm above ground)	item	20		
13.6	Supply,delivery and install 16A Double socket outlet (installed 1350mm above ground)	item	20		
13.7	Supply,delivery and install socket box,2x16A standard socket,LAN point and data point (installed on top of the table)	item	6		
13.8	Supply,delivery and install 5A single socket outlet (installed in ceiling)	item	200		
13.9	Supply,delivery and install 16A single socket outlet (installed in power skirting)	item	115		
13.10	Supply,delivery and install 16A dedicated socket outlet (installed in power skirting)	item	115		
14	SWITCHING				
14.1	Supply,delivery and install 16A PIR occupancy sensor	item	60		
15	CABLE MANAGEMENT				
15.1	40mm Ø PVC conduit complete with all fittings and accessories	m	400		
15.2	25mm Ø PVC conduit complete with all fittings and accessories	m	1000		
16	CARLING AND WIDING				
16	CABLING AND WIRING				
16.1	Low Voltage 2.5 mm² stranded house wiring for internal wiring - red	m	1500		
16.2	Low Voltage 2.5 mm ² stranded house wiring for internal wiring - white	m	1500		
16.3	Low Voltage 2.5 mm ² stranded house wiring for internal wiring - blue	m	1500		
16.4	Low Voltage 2.5 mm ² stranded house wiring for internal wiring - black	m	1500		

16.5	Low Voltage 2.5 mm ² stranded house wiring for internal wiring - green/yellow	m	1500		
16.7	2,5mm ² draw wire	m	200		
16.8	4mm ² , 2 core cable, ECC, SWA, PVC copper cable	m	400		
17	CABLE TERMINATIONS				
17.1	4mm ² , 4core, ECC, SWA, PVC copper cable terminations complete with accessories	item	5		
17.2	Wiring consumable accessories including lugs, ferrules, glands, tags etc	sum	1		
18	EARTHING AND LIGHTNING				
18.1	Design, supply and installation of earthing and lighting protection	sum	1		
19	TESTING AND COMMISSIONING				
19 19.1	TESTING AND COMMISSIONING Testing and commissioning of complete installation in accordance to SANS 10142-1 including the issuing of certificate of compliance	sum	1		
	Testing and commissioning of complete installation in accordance to SANS	sum	1		
	Testing and commissioning of complete installation in accordance to SANS 10142-1 including the issuing of certificate of compliance	sum	1		
19.1	Testing and commissioning of complete installation in accordance to SANS 10142-1 including the issuing of certificate of compliance TOTAL	sum	1		
19.1	Testing and commissioning of complete installation in accordance to SANS 10142-1 including the issuing of certificate of compliance TOTAL GENERAL Allow a provisional sum of R200 000.00 for Sundry electrical work not covered above, to be used as directed by the Engineer and be deducted				
19.1 20 20.1	Testing and commissioning of complete installation in accordance to SANS 10142-1 including the issuing of certificate of compliance TOTAL GENERAL Allow a provisional sum of R200 000.00 for Sundry electrical work not covered above, to be used as directed by the Engineer and be deducted				
19.1 20 20.1	Testing and commissioning of complete installation in accordance to SANS 10142-1 including the issuing of certificate of compliance TOTAL GENERAL Allow a provisional sum of R200 000.00 for Sundry electrical work not covered above, to be used as directed by the Engineer and be deducted wholly or in part as required				
19.1 20 20.1 Total: To	Testing and commissioning of complete installation in accordance to SANS 10142-1 including the issuing of certificate of compliance TOTAL GENERAL Allow a provisional sum of R200 000.00 for Sundry electrical work not covered above, to be used as directed by the Engineer and be deducted wholly or in part as required				

SECTION NO. 5 MECHANICAL INSTALLATION



SUPPLY, INSTALLATION AND COMMISINING OF ELECTRICAL, MECHNANICAL, CIVIL & STRUCTURAL

ENGINEERING WORKS AT THE PORT OF NGQURA



MECHANICAL WORKS BOQ

					TRANSNE
ncludi Item	ng: Supply, Delivery, Installation and commissioning)	l	T T	_	
No.	Description	Unit	Quantity	Rate	Amount
	MECHANICAL INSTALLATION				
	PREAMBLES				
	For Preambles refer to "Model Preambles for Trades"				
	SUPPLEMENTARY PREAMBLES				
	Working Conditions:				
	The contractor is hereby made aware that the proposed work is to be executed in confined spaces				
	The contractor is to allow for all costs in this regard in the tender price				
	Specifications, drawings, etc:				
	Tenderers are referred to the specification accompanying these bills of quantities for the mechanical work, for the full descriptions of the following items which are to be read and priced in conjunction with the said specification				
	Ductwork: Where transformations or reducers occur the larger size ductwork has been measured through the fitting. Descriptions of ductwork shall be deemed to include stiffeners, jointing materials, sealants, couplers in the running length and access/inspection panels in accordance with the specification				
1	Site Establishment Site Establishment and clearance at the end of the contract	Sum			
2	GUARANTEE AND MAINTENANCE Guarantee and maintenance for the complete installation of mechanical installation including materials and workmanship for a period of TWELVE MONTHS after date of completion	Sum			
3	REMOVAL OF WASTE Tenderer to allow for all costs associated with cleaning the site of all rubbish and waste caused by this contract	Sum			
4	COMMISSIONING AND TESTING Allow for testing and commissioning the whole of the Mechanical Installation as laid down in the specification and for re-testing as may be required after the making good of all defective work to the satisfaction of the Consulting Engineer.	Sum			
5	CERTIFICATE FOR COMPLIANCE Provision for the Certificate of Compliance to be issued on completion of the project.	Sum			
6	BUILDERS WORK DRAWINGS Provision of Builders work layouts on AutoCAD to indicate exact positions of openings and power points.	Sum			
7	CONTRACTORS SHOP DRAWINGS Contract shop drawings prepared in accordance with co-ordinated Architectural, Structural & Service layouts.	Sum			
8	PROGRAMMING OF WORKS Programming of the works to run concurrently with the Builders programme.	Sum			
9	EQUIPMENT APPROVAL Equipment Procurement Submissions for Engineers Approval.	Sum			
11	SCAFFOLDING Provision of Scaffolding for installation of equipment at high level.	sum			

			Brought	TOT Ward.	
12	OPERATION AND MAINTENANCE MANUALS Provision of Operating and Maintenance Manuals as per the Technical Specification.	Sum			
13	Project Hand-over	Sum			
	Basement 2				
22	Air conditioning indoor unit as per specification Supply, deliver, rig into position if necessary, install and commision air conditioning units into place with all its components	sum			
	Indoor air conditioning units to be repositioned to align with Architectects latest partioning drawings, System to be design, supplied, retested and recommissioned to comply to new layout and movement of equipment in identified areas.	sum			
24	Accessories All accessories needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum			
25	Air Terminals All air terminals needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum			
26	Ductwork All ductwork needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum			
27	Air Conditioning Outdoor Units				
	Capacity of outdoor unites needed to be confirmed to handle new partitioned areas, tested and commissioned and confirmed with engineer.	sum			
28	Drainage piping All drainage needed to be repositioned, supplied, installed, tested and commissioned and confirmed with engineer.	sum			
29	Branch Pipes All branch pipes needed to be repositioned, supplied, installed, tested and commissioned and confirmed with engineer.	sum			
	All above mentioned equipement shall be of an independent acoustic sensitive ventilation and cooling system for the work area B2.2 as depicted on the Employers drawings. This system shall not exceed the 25 decibels sound level as described in 2007 AHSHRAE Handbook – HVAC Applications – Chapter 47 – Table 42: Design Guidelines for HVAC – Related to Background Sound in Rooms, for Drama theatres, concert hall and recital halls. The Contractor shall ensure that on completion the entire room with all systems on does not exceed the sound level mentioned within this paragraph.				
	END OF FIRST FLOOR MEASUREMENT				

		1	ыоидпі		
	Basement 1				
22	Air conditioning indoor unit as per specification Supply, deliver, rig into position if necessary, install and commision air conditioning units into place with all its components	sum			
	Indoor air conditioning units to be repositioned to align with Architectects latest partioning drawings, System to be design, supplied, retested and recommissioned to comply to new layout and movement of equipment in identified areas.	sum			
24	Accessories All accessories needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum			
25	Air Terminals All air terminals needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum			
26	Ductwork All ductwork needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum			
27	Air Conditioning Outdoor Units				
2,	Capacity of outdoor unites needed to be confirmed to handle new partitioned areas, tested and commissioned and confirmed with engineer.	sum			
28	Drainage piping All drainage needed to be repositioned, supplied, installed, tested and commissioned and confirmed with engineer.	sum			
29	Branch Pipes All branch pipes needed to be repositioned, supplied, installed, tested and commissioned and confirmed with engineer.	sum			
	END OF FIRST FLOOR MEASUREMENT		Carried	<u> </u>	

			Brought	forward:	
	Ground Floor				
14	Air conditioning indoor unit as per Conceptual Drawings				
	Supply, deliver, rig into position if necessary, install and commission air				
	conditioning units into place with all its components				
	Concealed Ceiling Air Conditioning Indoor Unit: GF-E13	No.	1		
	Concealed Ceiling Air Conditioning Indoor Unit: GF-W34	No.	1		
	Concealed Ceiling Air Conditioning Indoor Unit: GF-E35	No.	1 1		
	4-way Ceiling Cassette Indoor Unit: GF-E14a 4-way Ceiling Cassette Indoor Unit: GF-E14b	No. No.	1 1		
	4-way Ceiling Cassette Indoor Unit: GF-E14c	No.			
	4-way Ceiling Cassette Indoor Unit: GF-E14d	No.	1		
	4-way Ceiling Cassette Indoor Unit: GF-W-36	No.	1		
	Heat Recovery Unit BC-03	No	,		
	BC-03 BC-04	No. No.			
10.2		140.			
16	Accessories				
16.1	Wired Remote Controllers	No.	8		
47	Ata Tanasta ala				
	Air Terminals SAD-01				
	Fresh Air Diffuser with plenum box, mounting frame and adjustable	<u> </u>			
	damper. 200mm diameter, 600x600	No.	5		
	·				
	SLD-05				
	Fresh Air Long Slot Diffuser with plenum box, mounting frame and	No.	2		
	adjustable damper. 150mm diameter, 900mm long				
17.2	RAG-02				
17.2	Return air grille, mounting frame and adjustable damper. 300mm diameter				
	connection, 600x600	No.	1		
	RAG-01				
	Return air grille, mounting frame and adjustable damper. 250mm diameter	No.	2		
	connection, 600x600				
18	Ductwork				
	All Ductwork to be manufactured from galvanised sheet metal and				
	installed in accordance with SABS 1238 and SABS 0173. Round				
	ducting to be of the spiral wound type unless indicated otherwise:				
18.1	Ø150 mm	m	20		
		m No.	4		
	Transformation piece Ø250 mm to Ø150 mm - 300 mm Long		1 '		
	Ø200 mm	m	39		
	Ø250 mm	M	18		
	Transformation piece Ø250 mm to Ø200 mm - 300 mm Long Ø300 mm	No.	6		
	Ø350 mm	m m	0 ⊿		
	Transformation piece Ø350 mm to Ø200 mm - 300 mm Long	No.	1		
	Air Conditioning				
	Refrigerant Copper Piping. Size to be according to suppliers design	m No	40		
	90 degree bends Stopper valves	No. No.	40 10		
10.2	Cioppoi vaivoo				
20	Drainage piping				
	PVC Piping. Size to be according to suppliers design, shall be included	per m			
	with all fittings and mountings, and seals and valves.				
21	Branch Pipes				
	Supply, deliver and install Y-Branch pipe (Outdoor)	No	4		
	Supply, deliver and install Y-Branch pipe (indoor)	No.	16		
	End of First Floor Massurament				
	End of First Floor Measurement				
		<u>I</u>	Carried		

				Brought forward:		
	Main Administration Building					
	First Floor					
22	Air conditioning indoor unit as per specification Supply, deliver, rig into position if necessary, install and commision air conditioning units into place with all its components	sum				
	Indoor air conditioning units to be repositioned to align with Architectects latest partioning drawings, System to be design, supplied, retested and recommissioned to comply to new layout and movement of equipment in identified areas.	sum				
24	Accessories All accessories needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum				
25	Air Terminals All air terminals needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum				
26	Ductwork All ductwork needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum				
07						
27	Air Conditioning Outdoor Units Capacity of outdoor unites needed to be confirmed to handle new partitioned areas, tested and commissioned and confirmed with engineer.	sum				
28	Drainage piping All drainage needed to be repositioned, supplied, installed, tested and commissioned and confirmed with engineer.	sum				
29	Branch Pipes All branch pipes needed to be repositioned, supplied, installed, tested and commissioned and confirmed with engineer.	sum				
	END OF FIRST FLOOR MEASUREMENT	<u> </u>	Carried	<u> </u>		

	Second Floor			
	Second Floor			
30	Air conditioning indoor unit as per specification Supply, deliver, rig into position if necessary, install and commision air conditioning units into place with all its components			
	Indoor air conditioning units to be repositioned to align with Architectects latest partioning drawings, System to be design, supplied, retested and recommissioned to comply to new layout and movement of equipment in identified areas.	sum		
33	Accessories All accessories needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum		
34	Air Terminals All air terminals needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum		
35	Ductwork All ductwork needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum		
36	Air Conditioning			
	Capacity of outdoor unites needed to be confirmed to handle new partitioned areas, tested and commissioned and confirmed with engineer.	sum		
37	Drainage piping All drainage needed to be repositioned, supplied, installed, tested and commissioned and confirmed with engineer.	sum		
38	Branch Pipes All branch pipes needed to be repositioned, supplied, installed, tested and commissioned and confirmed with engineer.	sum		
	END OF SECOND FLOOR MEASUREMENT			

	Third Floor	I	Бюидиі	ioiwara.	
	Third Floor				
39	Air conditioning indoor unit as per specification				
	Supply, deliver, rig into position if necessary, install and commision air				
	conditioning units into place with all its components				
	Indoor air conditioning units to be repositioned to align with Architectects				
	latest partioning drawings, System to be design, supplied, retested and				
	recommissioned to comply to new layout and movement of equipment in	sum			
	identified areas.				
	Accessories				
	All accessories needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum			
	and commissioned and commined with engineer.				
42	Air Terminals				
	All air terminals needed to be repositioned, , supplied, installed, tested	sum			
	and commissioned and confirmed with engineer.				
	Ductwork All ductwork needed to be repositioned, , supplied, installed, tested and				
	commissioned and confirmed with engineer.	sum			
	3				
44	Air Conditioning				
	Capacity of outdoor unites needed to be confirmed to handle new	sum			
	partitioned areas, tested and commissioned and confirmed with engineer.	Journ			
45	Drainage piping				
	All drainage needed to be repositioned, supplied, installed, tested and	sum			
	commissioned and confirmed with engineer.				
46	Branch Pipes				
	All branch pipes needed to be repositioned, supplied, installed, tested	sum			
	and commissioned and confirmed with engineer.	Sum			
	END OF THIRD FLOOR MEASUREMENT				
			Carried	formuords	

	Forth Floor		Бгоидпі	
47				
4/	Air conditioning outdoor unit as per specification Supply, deliver, rig into position if necessary, install and commision air conditioning units into place with all its components			
	Indoor air conditioning units to be repositioned to align with Architectects latest partioning drawings, System to be design, supplied, retested and recommissioned to comply to new layout and movement of equipment in identified areas.	sum		
50	Accessories All accessories needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum		
51	Air Terminals All air terminals needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum		
52	Ductwork All ductwork needed to be repositioned, , supplied, installed, tested and commissioned and confirmed with engineer.	sum		
53	Air Conditioning Capacity of outdoor unites needed to be confirmed to handle new partitioned areas, tested and commissioned and confirmed with engineer.	sum		
54	Drainage piping			
55	All drainage needed to be repositioned, supplied, installed, tested and commissioned and confirmed with engineer. Branch Pipes	sum		
	All branch pipes needed to be repositioned, supplied, installed, tested and commissioned and confirmed with engineer.	sum		
	END OF FORTH FLOOR MEASUREMENT		Carried	

Brought forward: Fifth Floor 56 Air conditioning outdoor unit as per specification Supply, deliver, rig into position if necessary, install and commision air conditioning units into place with all its components Indoor air conditioning units to be repositioned to align with Architectects latest partioning drawings, System to be design, supplied, retested and recommissioned to comply to new layout and movement of equipment in identified areas. 57 Air Conditioning Capacity of outdoor unites needed to be confirmed to handle new sum partitioned areas, tested and commissioned and confirmed with engineer. 58 Drainage piping All drainage needed to be repositioned, supplied, installed, tested and sum commissioned and confirmed with engineer. 59 **Branch Pipes** All branch pipes needed to be repositioned, supplied, installed, tested sum and commissioned and confirmed with engineer. END OF FIFTH FLOOR MEASUREMENT

Brought forward: Filter, fittings, meters and all other acessories as per SANS specifications sum and manufacturer requirements Design, drawings and documentation as per Works Information sum Testing and Commissioning as per Works Information sum Design, supply, installation, testing and commission of all of the above systems, as per required modification by architects drawings, shall be review by Employees Engineer for acceptance once design process has been completed. All equipment specified shall be of the same OEM as what is currently installed in the building.

END OF MAIN ADMINISTRATION BUILDING MEASUREMENT

			Brought	forward:	
	Canteen Building				
	HVAC System				
00					
60	Air conditioning outdoor unit as per Conceptual Drawings				
	Supply, deliver, rig into position if necessary, install and commision, and test air conditioning units into place with all its components				
	lest all conditioning units into place with all its components				
60.1	Outdoor Unit: AC4	No.	1		
61	Air conditioning indoor unit as per Conceptual Drawings				
	Supply, deliver, rig into position if necessary, install and commission air				
	conditioning units into place with all its components				
	g arms are prace man as no compensation				
61.1	Concealed Ceiling Air Conditioning Indoor Unit: AC1	No.	1		
61.2	Concealed Ceiling Air Conditioning Indoor Unit: AC2	No.	2		
61.3	4-way Ceiling Cassette Indoor Unit: AC3	No.	5		
00					
62 62.1	Accessories Wired Remote Controllers	No.	2		
02.1	Whed Remote Controllers	INO.			
63	Air Terminals				
63.1	D1				
	Fresh Air Diffuser with plenum box, mounting frame and adjustable	No.	2		
	damper. 250mm diameter, 600x600	INO.			
63.2	D2				
	Fresh Air Diffuser with plenum box, mounting frame and adjustable	No.	2		
	damper. 270mm diameter, 600x600				
63.3	D3				
00.0	Fresh Air Diffuser with plenum box, mounting frame and adjustable				
	damper. 285mm diameter, 600x600	No.	2		
63.4	RAG				
	Return air grille, mounting frame and adjustable damper. 120mm diameter	No.	2		
	connection, 300x150				
63.5					
03.5	Door/Wall louvre, 600x150 mm	No.	12		
	Bool/ vvali louvic, odox 100 mm	140.	'2		
63.6	L2				
	Door/Wall louvre, 400x400 mm	No.	2		
64	Ductwork				
	All Ductwork to be manufactured from galvanised sheet metal and				
	installed in accordance with SABS 1238 and SABS 0173. Round ducting to be of the spiral wound type unless indicated otherwise.				
	to be of the spiral wound type unless indicated otherwise.				
64.1	Ductwork for fresh air intake fan	m	3		
64.2	Transformation piece fan duct to 500x450 mm - 400mm long	No.	1		
64.3	600x500 mmm	m	1		
64.4	Ø365 mm	m	7		
64.5	300x300 mm	m	4		
64.6 64.7	Ø255 mm Transformation piece 600x500 mm to 500x450 mm 0 - 300mm long	m No.	8		
64.8	500x450	m	2		
64.9	Ø385 mm	m	4		
64.10	330x300 mm	m	1		
64.11	Transformation piece 330x300 mm to 250x250 mm - 300mm long	No.	1		
64.12	250x250 mm	m	6		
	Ø270 mm	m No	4		
	Transformation piece 500x450 mm to 400x350 mm - 300mm long 400x350 mm	No.	1 7		
	350x300 mm	m	'1		
64.17	Transformation piece 350x300 mm to 360x200 mm - 300mm long	No.	1		
	360x200 mm	m	4		
64.19	Ø285 mm	m	2		
65	Air Conditioning (Refrrigeration)				
65.1	Refrigerant Copper Piping. Size to be according to suppliers design 90 degree elbow fittings	m No.	42 8		
65.2	Tee fittings	No.	6		
65.3	Stopper valves	No.	6		

66.1 PVC Piping. Size to be according to suppliers design m 40 No. 8	
66.1 PVC Piping. Size to be according to suppliers design m 40 No. 8	
66.2 90 degree bends No. 8	
66.3 Tee fittings No. 6	
66.4 Stopper valves No. 6	
Tito.	
67 Kitchen Ventilation	
The ventilation for the kitchen must comply with SANS 1850.	
67.1 Installation of the existing kitchen canopy/hood and installing a ventilation Sum	
system for extraction	
67.2 Design, supply, and Installation of make up air ventilation system.	
68 Ventilation Fans	
Supply, delivery, and installation of supply and extraction fans	
68.1 F1	
Extractor fan with 68 L/s capacity No. 1	
Extractor fair with 66 L/S capacity	
68.2 F2	
Extractor fan with 171 L/s capacity No. 2	
68.3 F3	
Fresh air supply fan with minimum of 1370 L/s capacity No.	
Filter, fittings, meters and all other acessories as per SANS specifications	
and manufacturer requirements	
Design, drawings and documentation as per Works Information sum 1	
Design, drawings and documentation as per Works Information sum 1	
Testing and Commissioning as per Works Information sum 1	
END OFCANTEEN BUILDING HVAC MEASUREMENT	

			Brought	forward:
	Canteen Building Fire suppression and Detection			
69	Fire Protection System			
	Supply, deliver and install the following fire protection system, complete			
	with fire extinguishers, hose reel, hydrant, and all related signage,			
	brackets, supports and all necessary accessories, as per the,			
	manufacturer's recommendations.			
	Fire extinguishers (4.5 kg dry chemical powder) and timber backing	ĺ		
69.1	board, supports and all necessary accessories, as per the,	No.	5	
00.1	manufacturer's recommendations.	110.		
	Fire Extinguisher (9L Wet Chemical) and timber backing board, supports			
69.2		No.	1	
09.2	and all necessary accessories, as per the, manufacturer's	INO.	'	
	recommendations			
69.3	Swing Type Hose Reel with (30m hose) with supports and all necessary	No.	1	
	accessories, as per the, manufacturers recommendations			
	Fire hydrant (Tamper proof with fire cabinet to house 30m hose) with			
69.4	supports and all necessary accessories, as per the, manufacturers	No.	1	
	recommendations			
	150x150 mm Fire equipment signages and Photoluminescent emergency			
69.5	exit signages as per fire drawings including all necessary fixing	No.	14	
	accessories.	[
69.6	XP 95 optical smoke detector with mounting supports and all necessary	No.	11	
09.0	accessories, as per the, manufacturers recommendations	INO.] ''	
00.7	XP 95 muti-sensor optical heat detector with mounting supports and all	No	_	
69.7	necessary accessories, as per the, manufacturers recommendations	No.	2	
	Intelligent manual call points with mounting supports and all necessary	[. .	_	
69.8	accessories, as per the, manufacturers recommendations	No.	2	
	XP95 open area sounder beacon (SONOS) with mounting supports and	l		
69.9	all necessary accessories, as per the, manufacturers recommendations	No.	3	
	an nooceeary accessories, as per the, manufacturers recommendations			
	Valves filter fittings motors and all other acceptains as per SANS			
69.10	Valves, filter, fittings, meters and all other acessories as per SANS	sum	1	
	specifications and manufacturer requirements			
69.11	Design, drawings and documentation as per Works Information	sum	1	
69.12	Testing and Commissioning as per Works Information	sum	1	
	End of Canteen Buidling Fire Suppression and DetectionMeasurement			
		•	Carried	

			Brought	forward:
70	Canteen Building Fire suppression and Detection Water Reticulation System:			
70.1	For the design, supply, delivery, installation testing and Commissioning of the Water reticulation system including connection pipework, supports, hangers, pipe fittings, valves, pumps and control systems as per the manufacturer's specification and recommendations. Provision shall also be made for all plinths/foundations required under the relevant plant.			
71.1 71.2 71.3	Pipe Lengths Pipe, DN 18: copper pipe Pipe, DN 28: copper pipe Pipe, DN 22: copper pipe Pipe, DN 15: copper pipe	m m m m m	3 5 10 7	
72 72.1 72.2 72.3	Tee fittings Tee, DN 28 x DN 22 x DN 15: copper pipe Tee, DN 22 x DN 15 x DN 22: copper pipe Tee, DN 15 x DN 15 x DN 15: copper pipe	No No No	2 2 2	
73.1 73.2	90 Degrees Fittings DN 28 x 22, 90 degree bends DN 22 x 15, 90 degree bends DN 15 x 15, 90 degree bends	No No No	1 1 1	
74.1 74.2	Isolating valves Isolating valve, DN 22 Isolating valve, DN 28 Isolating valve, DN 15	No No No	5 1 5	
	Reducers Reducer, DN 22 x DN 15	No	1	
76	Hydroboil 15 L	No	1	
78	Filter, fittings, meters and all other acessories as per SANS specifications and manufacturer requirements	sum	1	
79	Design, drawings and documentation as per Works Information	sum	1	
80	Supply, installation, Testing and Commissioning as per Works Information	sum	1	
	End of Canteen Buidling Water Reticulation Sytem			
NET TO	TAL OF MECHANICAL BOQ CARRIED TO SECTION 5 OF THE MAIN BO	DQ		

SECTION NO. 6 STUDIO

		Unit	Quantity	Rate	Amount	
	CECTION NO. C					
	SECTION NO. 6					
	STUDIO BILL NO 4					
	BILL NO. 1 STUDIO					
	DESIGN, SUPPLY AND BUILDING/ INSTALLATION					
	OF STUDIO:					
	Before submitting this tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done in the studio. 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.					
	Studio:					
1	Design, supply, building/ installation, commissioning, testing, and handover of studio complete as detailed in the scope of works, page 5, work areas B2.2. The drawing for the size of the studio is also attached to these Bills of Quantities. Contractor to provide shop drawings for approval by the Employer before commencement of the works. (refer to Drawing No.:					
	XHOE0006-1-100-A-LA-0001-Ò1).	Item				
	Carried to Final Summary			R		
	Section No. 6					
	Bill No. 1 Studio					
	135					

SECTION NO. 7 FURNITURE

١	1	Unit	Quantity	Rate	Amount	ı
	SECTION NO. 7					
	SECTION NO. 7 FURNITURE					
	BILL NO. 1 FURNITURE					
	TRADE PREAMBLES					
	Trade Preambles:					
	For Trade Preambles refer to 'Model Preambles for Trades' (2008 edition) for the full descriptions of material to be used and work to be done in this Bill.					
	Open plan desks should not be designed as clusters to allow for flexibility in placement. Desks and Cabinets to be delivered in parts and assembled in their final locations to avoid damage during the move.					
	Each desk cluster should include the following:					
	• 1x plug units consisting of 1 Red 3-pin; 1 Regular 3-pin; 1 regular 2-pin; 1 Network point.					
	1x cable for Red plugs plus a cable to connect to the power supply					
	• 1x cable for Regular plugs (shared by 3-pin and 2-pin) plus a cable to connect to the power supply					
	1x round openings with beige pvc lining.					
	1x cable trunking unit					
	1x hook for Kensington Cables (Laptop locking)					
	• 1 set of steel legs					
	 1x privacy screen - screen fabric Weavers World, Vulcan, Colour TBC; Desk-based screens are not to exceed 1500mm from floor level 					
	FURNITURE FITTINGS:					
	Desks, Cabinet and Chairs:					
	Supply, delivery and installation of new Open Plan Workstations see attached drawing no.: XHOE0006-1-900-A-LA-0001-01. (Tables with screens, Cabinets and Chairs):.					
	Desk:					
1	Open plan office systems desk with 1600 x 750 top, finished in Coimbra laminate (or similar approved) with silver pvc edging supported on 50mmx50mm glossy white epoxy coated rectangular steel leg system. Desk system should include:					
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		Unit	Quantity	Rate	Amount	
	Supply 4x4 plug unit consisting of 1 Red 3-pin; 1 Regular 3-pin; 1 regular 2-pin; 1 Network point; Cut-out for plug unit to be done in factory; 1 round opening with beige pvc lining. Cut-out to be done in factory; Supply under-desk fixing plates and trunking for cables; Hook for Kensington Cables (Laptop locking); Privacy Screens - Screen fabric Weavers World, Vulcan, Teal 27; Desk-based screens are not to exceed 1200mm from floor level; Number of legs depending on clustering method. Work surfaces to be manufactured from 32mm thick high-density particles board complying with SABS Standards (SANS 1763:2015 Ed 1.2), finished with					
	0.6mm low glare continuous decorative laminate Coimbra (or similar approved). Underside finished with quality 0.3mm balancing backer, not paper. Steel Legs to be 50mm X 50mm glossy white powder	Na	00			
	coated.	No	90			
2	Cabinet: 400w x 750d x 1500h lockable pull-out cabinet with shelves as per drawing. Include 1 lockable compartment with hinged door and 1 drawer 1 with roll-out pen tray. Finished in Coimbra laminate top (or similar approved) with silver pvc edging and glossy white body and front. Include vertical 300mm stainless steel handle.					
	Cabinet Tops to be manufactured from 22mm thick high-density particles board complying with SABS Standards (SANS 1763:2015 Ed 1.2), finished with 0.6mm low glare continuous decorative laminate Coimbra (or similar approved). Underside finished with quality 0.3mm balancing backer, not paper. Cabinet sides and inside (carcass) to be manufactured from 16mm thick high-density particles board complying with SABS Standards, finished with 0.6mm glossy white melamine.					
	Both locks must preferably be of the removable cylinder type. The cabinet locks must be master-keyed.	No	90			
	Chairs:					
3	Waltons 542099 Foam Highback Chair - Forward Knee Tilt Symchron - Chrome Height Base - 4D Height Adjustable Arms Boded Leather Black	No	90			
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