PAGE 1 of 2

SUBJECT : BILL OF QUANTITIES

#### PART C2.2.1

#### BILL No. 1 - PRELIMINARIES

14.00				
ltem no.		Fixed	Value Related	Time Related
1	PREAMBLES AND SPECIAL CONDITIONS			
	<u>Note 1</u> Principal building agreement			
	The agreement entered into between the employer and the contractor is the Edition 5.0 - July 2007 Principal Building Agreement prepared by the Joint Building Contracts Committee and recommended by the JBCC Constituents, as amplified and amended by:			
	<ol> <li>1.1 The July 2007 (Code 2103) JBCC Preliminaries.</li> <li><b>1.2 SANS 10139</b></li> <li>1.3 The bills of quantities.</li> <li>1.4 Such other documents as are identified in the schedule to the agreement.</li> </ol>			
	(The documents reterred to in Note 1 above and comprising the principal building agreement, the preliminaries, the bills of quantities, and such other documents as are identified in the schedule shall collectively be referred to as the principal agreement)			
	Note 2 Nominated/selected subcontract agreement. The selected subcontract agreement to be entered into between the contractor and the subcontractor shall be referred to as the N/S agreement and shall:			
	2.1 not conflict with any of the provisions of the principal agreement as defined in Note 1 above; and			
	2.2 conform to and incorporate the July 2007 (Code 2102) Nominated/Selected Subcontract Agreement prepared by the Joint Building Contracts Committee as amplified and/or amended by:			
	2.2.1 these preliminaries;			
	2.2.2 the N/S contract documents as defined in clause 1 of the N/S agreement.			
	Note 3 In the event of a conflict between any provision contained in these preliminaries on the one hand and any provision contained in the N/S agreement on the other hand, the relevant provisions of these preliminaries shall prevail.			

#### PART C2.2.1

## SPECIAL CONDITIONS OF CONTRACT (Refer to Part C1.5 AND C2.3)

			Fixed	Value Related	Time Rela	
Clause 1.0: Defini	tions and interpretations	Sum				
Clause 2.0: Gener	ral	Sum				
Clause 3.0: Drawi	ngs and Submissions	Sum				
Clause 4.0: Work	provided by others	Sum				
Clause 5.0: Comp	liance with Regulations	Sum				
Clause 6.0: Health	n and Safety	Sum				
Clause 7.0: Hoisti	ng and Rigging	Sum				
Clause 8.0: Mater	ials and Workmanship	Sum				
Clause 9.0: Progra	amming	Sum				
Clause 10.0: Contr	ract Management	Sum				
Clause 11.0: Orga	nisation and staff of sub-contractor	Sum				
Clause 12.0: Prote	ection against Damage	Sum				
Clause 13.0: Acce	ss to Equipment and Systems	Sum				
Clause 14.0: Testi Plant & Handover	ing, Balancing, Commissioning, Operating c	of Sum				
Clause 15.0: Guar	rantee	Sum				
Clause 16.0: Qual Inspection	ity Management Systm - Testing and	Sum				
Clause 17.0: Oper	rating and Maintenance Manuals	Sum				
Clause 18.0: One	Year's Maintenance	Sum				
Clause 19.0: Spec	al Attendance	Sum				
Clause 20.0: Exan	nple Checklists	Sum				
Clause 21.0 Exam	ple Checklists	Sum				
Clause 22.0 Exam	ple Checklists	Sum				
	Subtota	als	R -	R -	R	
D					R	
JE RELATED					R	
E RELATED						

#### SUBJECT : PROVISIONAL AMOUNTS

PART	C2.2.2				PAGE	1 OF 1
BILL I	No. 2 - ADDITIONAL PRELIMINARIES					
ITEM	DESCRIPTION	UNIT	QTY	TARRIF	A	MOUNT
2	PROVISIONAL AMOUNTS FOR P&G					
	Provisional Amounts exclude the cost of Overheads, Preliminaries and Profit, as well as any items in the Preambles Tenderers are referred to Spoormaker & Partners' General Technical Specification (Part IV) and Project Technical Specification (Part V.1) for the following Additional Preliminaries:					
2.1	Operating and Maintenance Manuals (Part IV Section 16)	ITEM	3		R	-
2.2	"As Built" Drawings (Part IV Section 16 and Part V.1 Section 2)	ITEM	3		R	-
2.3	Testing and Commissioning (Part V.1 Section 9)	SUM	1		R	-
2.4	Equipment Submissions (Part IV Section 16 and Part V.1 Section 2)	SUM	1		R	-
2.5	1 - Year Maintenance and Guarantee (Part IV Section 13).	SUM	1		R	-
2.6	Operator Training	SUM	1		R	-
2.7	Labels Graflux	SUM	1		R	-
2.8	System Interface Testing with other services	SUM	1		R	-
2.9	Provisional Sum for CSIR Reporting System	ltem	1	R 50 000.00	R	50 000.00
ΤΟΤΑ	L TRANSFERRED TO SUMMARY PAGE - PART C.3				R	50 000.00

tem	Description	Unit	Qty	Tariff	Amount
3.1	CONTROL AND COMMUNICATION Supply and installation of addressable, Category L1 fire detection and alarm system in accordance with SANS 10139 requirements Fire Detection system to be of Ziton Manufacture or equivalent.				
3.1.1	Fire Alarm Control Panels Supply and installation of fire alarm control panel complete, including all necessary mounting brackets glands etc.				
3.1.1.1	4 Loops Addressable fire alarm control panel complete with zone indication matrix, Network Card and 72hr Battery Backup all inclusive	No	1		R
3.1.1.2	Addressable fire Panel Repeater supplied complete with zone indication matrix, Network Card and 72hr Battery Backup all inclusive	No	1		R
3.1.2	Cabling and Terminations				
	2-Core - 1.5mm <sup>2</sup> - Fire retardent cable installed in conduit (conduit measured elsewhere), including terminations.				
3.1.2.1 3.1.2.2		m m	5367 150		R R
<b>3.1.3</b> 3.1.3.1	<b>Power Supplies</b> Allow for electrical supplies from an existing DB to the new fire alarm control panel inclusive of DB alterations for the addition of a dedicated circuit breaker, 15m cable and new isolator above fire alarm control panel	sum	1		R

TOTAL TRANSFERRED TO NEXT PAGE

R

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PART C2	.2.3					
BILL No.	3 - Fire Detection & Alarm System - PHASE 1					
ltem	Description	Unit	Qty	Tariff	An	nount
	TOTAL TRANSFERRED FROM PAGE 1	Sum			R	-
3.2	LINE DEVICES					
	All line devices to be analogue addressable and provided with address labels					
<b>3.2.1</b> 3.2.1.1	<b>Optical point-type smoke detectors</b> Supply and installation of addressable, optical smoke detectors, complete with base surface mounted to concrete slab or ceiling	No	195		R	-
3.2.2	Fixed Temperature Heat Detectors					
3.2.2.1	Supply and installation of addresssable heat detector, complete with base surface mounted to concrete slab/ceiling	No	7		R	-
<b>3.2.3</b> 3.2.3.1	Multisensor (Optical Smoke and Heat) Supply and installation of addressable, optical smoke/heat detector, complete with base surface mounted to ceiling	No	5		R	-
<b>3.2.4</b> 3.2.4.1	<b>Optical Beam Detectors</b> Supply and installation of optical beam detectors complete with detector, power supply, battery, backboard nad I/O Unit	No				
3.2.5	<b>Resettable Break Glass Unit</b> Supply and installation of addressable manual call points complete with resettable elements - surface mounted					
3.2.5.1	Manual Call Point (Red) - supplied complete with clear	No	24		R	-
3.2.5.2		No	5		R	-
3.2.5.3	with clear plastic hinged cover Emergency Door Release (Green) - complete with clear plastic hinged cover	No	25		R	-

PART C2.2.3

## BILL No. 3 - Fire Detection & Alarm System - PHASE 1

ltem	Description	Unit	Qty	Tariff	Amount
	TOTAL TRANSFERRED FROM PAGE 2	Sum	Qty	Tariff	R -
3.2.6	Audible and visual alarms				
3.2.6.1	Supply and installation of surface mounted horn sounder and strobe visual indicator (white) complete with base	No	29		R -
3.2.6.2	Supply and installation of addressable weatherproof Sounder Beacon (Red)	No	5		R -
<b>3.2.7</b> 3.2.7.1 3.2.7.4	Interface and Control Supply and installation of interface units and relays supplied complete with surface mounted single relay box (SMB-DIN1) c/w DIN-35 rails for fixing Input/Output Relay Unit Isolator Base Supplied complete with Cover to suit	No No	31 44		R - R -
3.3	CONDUIT, WIREWAYS & ACCESSORIES				
	Conduit as specified under clause 3.3 of the standard specification including bending, jointing, short lengths, draw boxes, expansion joints, adaptors, round coverplates with chrome screwsbends and conduit ends which are to be allowed for in the conduit per meter rate.				
3.3.1	PVC Conduit				
3.3.1.1 3.3.1.2	Ø25mm PVC conduit built or chased into brick walls Ø25mm PVC conduit on surface against underside of the concrete slab or against brick walls complete with galvanised saddles spaced at 500mm centres	m m	87 1520		R - R -
<b>3.3.2</b> 3.3.2.1		m	150		R -
3.3.3	Draw Wire - Supply and Install by Electrical Contractor				
3.3.3.1	Galvanised draw wire installed in conduits.	m	2300		R -
<b>3.3.4</b> 3.3.4.1	<b>Wire Baskets</b> HDG Wire Mesh Cable Tray 100mm medium duty	m	40		R -
TOTAL T	RANSFERRED TO <b>NEXT PAGE</b>	· · · · ·			R -

#### PROJECT NAME: CSIR - DURBAN

PART C2.2.3

#### BILL No. 3 - Fire Detection & Alarm System - PHASE 1

ltem	Description	Unit	Qty	Tariff	Amou	nt
	TOTAL TRANSFERRED FROM PAGE 2	Sum			R	-
3.4	DOOR AUXILLARY					
3.4.1	Access Control					
	Removal and reinstatement of access control maglocks to facilitate replacement of existing doors.					
	Provision to be made to interlock with the new fire detection and alarm system when reinstating the access control system (fire system relays measured elsewhere)					
3.4.1.1 3.4.1.2	Single Door Double Door	item item	5 20		R R	- -
3.4.2	Magnetic Hold Open Devices					
	Installation of new magnetic hold open devices complete with power supply, battery backup surface mount door holder with release button and Input/Output relay complete					
3.4.2.1		Item	1		R	-
3.4.2.2	Double Door	ltem	6		R	-
TOTAL T	RANSFERRED TO BILL SUMMARY - PART C2.3				R	_

tem	Description	Unit	Qty	Tariff	An	nount
4.1	CONTROL AND COMMUNICATION Supply and installation of addressable, Category L1 fire detection and alarm system in accordance with SANS 10139 requirements Fire Detection system to be of Ziton Manufacture or equivalent.					
4.1.1	Fire Alarm Control Panels Supply and installation of fire alarm control panel complete, including all necessary mounting brackets glands etc.					
4.1.1.1 4.1.1.2	Loop Panel for additional 2 loops	No No	1		R R	
	5					
4.1.2	<b>Cabling and Terminations</b> 2-Core - 1.5mm <sup>2</sup> - Fire retardent cable installed in conduit (conduit measured elsewhere), including terminations.					
4.1.2.1 4.1.2.2		m m	367 210		R R	
<b>4.1.3</b> 4.1.3.1	<b>Power Supplies</b> Allow for electrical supplies from an existing DB to the new fire alarm control panel inclusive of DB alterations for the addition of a dedicated circuit breaker, 15m cable and new isolator above fire alarm control panel	sum				

#### PART C2.2.4 BILL No. 4 - Fire Detection & Alarm System - PHASE 2 Item Description Unit Qty Tariff Amount R **TOTAL TRANSFERRED FROM PAGE 1** Sum \_ LINE DEVICES 4.2 All line devices to be analogue addressable and provided with address labels 4.2.1 Optical point-type smoke detectors 4.2.1.1 Supply and installation of addressable, optical smoke No 4 R detectors, complete with base surface mounted to concrete slab or ceiling 4.2.2 **Fixed Temperature Heat Detectors** 4.2.2.1 Supply and installation of addresssable heat detector, No complete with base surface mounted to concrete slab/ceiling 4.2.3 Multisensor (Optical Smoke and Heat) 4.2.3.1 Supply and installation of addressable, optical No smoke/heat detector, complete with base surface mounted to ceiling 4.2.4 **Optical Beam Detectors** Supply and installation of optical beam detectors set 4.2.4.1 No 2 R complete, supplied with transmitter, receiver, power supply, battery, backboard and I/O Unit 4.2.5 **Resettable Break Glass Unit** Supply and installation of addressable manual call points complete with resettable elements - surface mounted 4.2.5.1 Manual Call Point (Red) - supplied complete with clear No 2 R plastic hinged cover 4.2.5.2 Weatherproof manual call point red supplied complete No with clear plastic hinged cover 4.2.5.3 Emergency Door Release (Green) - complete with clear 2 R No plastic hinged cover TOTAL TRANSFERRED TO NEXT PAGE R

# PART C2.2.4

## BILL No. 4 - Fire Detection & Alarm System - PHASE 2

ltem	Description	Unit	Qty	Tariff	Amount
	TOTAL TRANSFERRED FROM PAGE 2	Sum			R -
4.2.6	Audible and visual alarms				
4.2.6.1	Supply and installation of surface mounted horn sounder and strobe visual indicator (white) complete with base	No			
4.2.6.2	Supply and installation of addressable weatherproof Sounder Beacon (Red)	No	2		R -
<b>4.2.7</b> 4.2.7.1 4.2.7.2	Interface and Control Supply and installation of interface units and relays supplied complete with surface mounted single relay box (SMB-DIN1) c/w DIN-35 rails for fixing Input/Output Relay Unit Isolator Base Supplied complete with Cover to suit	No No	2 5		R - R -
	CONDUIT, WIREWAYS & ACCESSORIES		-		
4.3					
	Conduit as specified under clause 3.3 of the standard specification including bending, jointing, short lengths, draw boxes, expansion joints, adaptors, round coverplates with chrome screwsbends and conduit ends which are to be allowed for in the conduit per meter rate.				
4.3.1	PVC Conduit				
4044					
4.3.1.1 4.3.1.2	Ø25mm PVC conduit built or chased into brick walls Ø25mm PVC conduit on surface against underside of the concrete slab or against brick walls complete with	m m	170		R -
4.3.1.3	galvanised saddles spaced at 500mm centres Ø25mm PVC conduit chased underground complete with sand bedding, top fill and compaction.	m	40		R -
<b>4.3.2</b> 4.3.2.1	<b>Galvanised / Bosal Conduit</b> Ø25mm Galvanized / Bosal Conduit on surface against underside of the concrete slab or against brick walls	m			
4.3.3	Draw Wire - Supply and Install by Electrical Contractor				
4.3.3.1	Galvanised draw wire installed in conduits.	m			
<b>4.3.4</b> 4.3.4.1	<b>Wire Baskets</b> HDG Wire Mesh Cable Tray 100mm medium duty	m	150		R -
TOTAL T	RANSFERRED TO <b>NEXT PAGE</b>				R

#### PROJECT NAME: CSIR - DURBAN

PART C2.2.4	4

## BILL No. 4 - Fire Detection & Alarm System - PHASE 2

ltem	Description	Unit	Qty	Tariff	Amount
	TOTAL TRANSFERRED FROM PAGE 2	Sum	•		R -
4.4	DOOR AUXILLARY				
4.4.1	Access Control				
	Removal and reinstatement of access control maglocks to facilitate replacement of existing doors.				
	Provision to be made to interlock with the new fire detection and alarm system when reinstating the access control system (fire system relays measured elsewhere)				
4.4.1.1 4.4.1.2	0	item item	2		R -
4.4.2	Magnetic Hold Open Devices				
	Installation of new magnetic hold open devices complete with power supply, battery backup surface mount door holder with release button and Input/Output relay complete				
4.4.2.1	0	Item			
4.4.2.2	Double Door	ltem			
	RANSFERRED TO BILL SUMMARY - PART C2.3				R -

#### PART C2.2.5

BILL No. 5 - Fire Doors & Builder's Work

BILL No.	5 - Fire Doors & Builder's Work				
ltem	Description	Unit	Qty	Tariff	Amount
5	Fire Doors and Builders Work				
	Contractor to supply, deliver and install doors complete				
	with fire sealing around frame inclusive of painting the				
	door and its frame.				
	Fire Doors and their installation to be compliant to SANS 10400:T (Relevant parts) and SANS 1253.				
5.1	Fire Door Hardware				
	Rate to be inclusive of brickwork, plaster and paint to				
	<i>new fire doors (assume a maximum wall projection of 300mm either side of frame with a height of 2,8m</i>				
5.1.1	Single leaf Class A fire door c/w painting, hinges and	No	18		R -
5.1.2	frame complete Double leaf ClassA fire door c/w painting, hinges and	No	17		R -
0.1.2	frame complete	NO	17		
5.1.3	<b>o i o</b> , <b>o</b>	No	1		R -
5.1.4	frame complete Double leaf Class B fire door c/w painting, hinges and	No	1		R -
	frame complete				
5.2	Ironmongery				
	Ironmongery rate shall include all necessary fixations,				
5.0.4	screws etc as required for installation				
5.2.1 5.2.2	5	No No	17 17		R - R -
	coordinator, and mounting plates				
5.2.3	Locks c/w escutcheon, thumb turn and key cylinder profile (thumb turn on fire side) and deadlock	No	34		R -
5.2.4		No	34		R -
5.2.5	150x300 SS Push Plate	No	34		R -
5.3					
5.3.1	Removal and reinstatement of existing shopfront doors to	Item	3		R -
	correct the door swing to open in the direction of egress				
5.3.2	Replacement of existing locking mechanisms with new thumb turn locks	Item	5		R -
5.4	Builder's Work	m2	220		R -
5.4.1	Brickwork required around fire new fire doors.	Item	40		R -
5.4.2	Fire Stopping and sealing around fire doors	nom	-		
	Trenching through existing asphalt for installation of new	m	50		R -
5.4.3	cable sleeves. Rate to include for making good layer				
	works, and road surface to match existing	NI-	F		
	Core Drill Ø100 n.e 300mm thick concrete slab. Rate to	No	5		R -
5.4.4	include fire stopping penetration to 120min fire rating				
TOTAL T	RANSFERRED TO BILL SUMMARY - PART C2.3	ı			R -

#### FIRE DETECTION INSTALLATION AUGUST 2024

### SUBJECT : SUMMARY OF TENDER SUMS

#### PART C2.3

PART NO	BILL			Amount	
	ITEM NO	DESCRIPTION	PAGE NO.		Amount
C2.2.1	1	BILL No. 1 - PRELIMINARIES	1-2	R	-
C2.2.2	2	PROVISIONAL AMOUNTS FOR P&G	1-1	R	50 000.00
C2.2.3	3	FIRE DETECTION & ALARM SYSTEM - PHASE 1	1-4	R	-
C2.2.4	4	FIRE DETECTION & ALARM SYSTEM - PHASE 2	1-4	R	-
C2.2.5	5	FIRE DOORS AND BUILDER'S WORK	1-1	R	-
C.3	6	PROVISION FOR CONTINGENCY (10%)	1-1	R	5 000.00
Subtotal to	be transferr	ed to the Form of Tender		R	55 000.00