



SUNDUMBILI MAGISTRATE OFFICE: ADDITIONAL ACCOMMODATION

FINAL SUMMARY PAGE

SUNDUMBILI MAGISTRATE COURT: ADDITIONAL ACCOMMODATION, UPGRADING AND RENOVATIONS OF EXISTING BUILDING, INCLUDING SECURITY MEASURES, FENCING AND LIGHTING.

FINAL SUMMARY PAGE

SUNDUMBILI MAGISTRATE OFFICE: ADDITIONAL ACCOMMODATION

FINAL SUMMARY PAGE

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	Carried to Form of Offer and Acceptance (DPW-07)			R
	FINAL SUMMARY CARRIED TO FORM OF OFFER AND ACCEPTANCE (DPW-07)			



SUNDUMBILI MAGISTRATE OFFICE: ADDITIONAL ACCOMMODATION

**RETURNABLE DOCUMENTS:
ELECTRICAL & ELECTRONIC WORKS**

NOTE: The following returnable documents are included in
BOOK 4 of 4 but are to be completed in **BOOK 1 of 4**.

5. RETURNABLE SCHEDULES

RETURNABLE SCHEDULES
ELECTRICAL WORK
MATERIAL SCHEDULE

The contractor shall complete the following schedules and submit them with his tender.

The schedules will be scrutinised by the Representative/Agent and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

NB: **Only one manufacturer's name to be inserted for each item.**

Item	Material	Make or trade name	Supplier
1.	Distribution boards		
2.	Circuit breakers 1P, 2P, 3P		
3.	On load isolators without trips		
4.	Contractors 1P, 2P, 3P		
5.	Earth leakage relays 2 & 3 phase		
6.	Current transformers		
7.	Voltmeter		
8.	Maximum demand ammeter		
9.	Daylight sensitive switch		
10.	Conduit		
11.	Conduit boxes		
12.	Power skirting		
13.	Ducting		
14.	Surface switches		
15.	Watertight switches		
16.	16A flush socket outlets		
17.	16A surface socket outlets		
18.	16A watertight socket outlets		
19.	Internal surface mounted isolators		
20.	External surface mounted isolators		
21.	Luminaries		
	Type A1		
	Type B1		
	Type B2		
	Type C1		
	Type C2		
	Type D1		
	Type E1		
	Type E2		

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ELECTRICAL SCOPE OF WORKS

	Type E3		
	Type E4		
	Type F1		
	Type J1		
22	PVC cables		
23	Access Control System		
24	Biometric Readers		
25	Building Management System		
26	CCTV System		
27	Camera's		
28	Fire Detection system		
29	Fire Cabling		
30	Intercom System		
31	PA System		
32	Speakers		
33	Standby Generator		
34	UPS		
35	Hybrid Backup System with Grid Tie And Solar Charging		

NOTE:

Should the contractor wish to supply materials other than that originally offered, prior written approval must be obtained from the Representative/Agent before any orders are placed

CONTRACTOR: _____

SIGNED: _____

DATE: _____

21. RETURNABLE DISTRIBUTION BOARD DATA SHEET

DB: SCHEDULE OF INFORMATION / COMPLIANCE DOCUMENT
(RETURNABLE DOCUMENT)

The tenderer must sign and return the compliance document. Failure to do so will automatically lead to dis-qualification of the tenderer and his/her tender will not be considered regardless of tendered value

<u>Item</u>	<u>Description</u>	<u>Required</u>	<u>Offered</u>
Enclosure	Supplier	Rittal or approved equivalent	
Enclosure	Type testing	TTA to IEC 61439-1	
Enclosure	Type testing	Internal-arc rated TR 61641 (400V, 50kA, 300ms)	
Enclosure	Material	Mild steel	
Enclosure	Door thickness	2mm	
Enclosure	Mounting plate thickness	3mm	
Enclosure	Colour	RAL 7035	
Enclosure	Voltage rating	690V	
Enclosure	Current rating	800A	
Enclosure	1s kA rating	20kA	
Enclosure	IP rating	54	
Enclosure	Fire protection	4 x 250g Stat-x unit c/w bracket & thermal head	
Switchgear	Circuit breakers & MCB's	ABB	
Switchgear	Circuit breakers for change-over	ABB	
Switchgear	Contactors	ABB	
Switchgear	Surge protection	ABB	
Switchgear	LED indication lights	ABB	
Switchgear	Terminals	ABB	
Switchgear	Timers & control relays	ABB	
Switchgear	Electronic products	ABB	
Switchgear	Fuse holders	ABB	
Switchgear	Ammeters & CT's	PCI	
Switchgear	Voltmeters	PCI	
Copper	Copper	Copalcor	
Wiring	Wiring	Abedare / Alvern	

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DISTRIBUTION BOARDS STANDARD

Date

Tenderer authorised signature

Name & Surname

Position

13. RETURNABLE POWER FACTOR CORRECTION DATA SHEET

SCHEDULE OF INFORMATION / COMPLIANCE DOCUMENT
(RETURNABLE DOCUMENT)

The tenderer must sign and return the compliance document. Failure to do so will automatically lead to dis-qualification of the tenderer and his/her tender will not be considered regardless of tendered value

<u>Item</u>	<u>Description</u>	<u>Required</u>	<u>Offered</u>
Enclosure	Supplier	Rittal or approved equivalent	
Enclosure	Type testing	to IEC 61439-1	
Enclosure	Material	Mild steel	
Enclosure	Door thickness	2mm	
Enclosure	Mounting plate thickness	3mm	
Enclosure	Colour	RAL 7035	
Enclosure	Voltage rating	400V	
Enclosure	Current rating	320A	
Enclosure	1s kA rating	15kA	
Enclosure	IP rating	54	
Enclosure	Fire protection	2 x 100g Stat-x unit c/w bracket & thermal head	
Switchgear	Circuit breaker	ABB	
Switchgear	PFC racks	Schneider	
PFC Racks	Configuration	6 x 25kVAR	
Reactors	Tuning	14%	
Reactors	Temp class	H	
Controller	PFC Controller	Schneider	
Other	Fans	Rittal	
Other	Filters	Rittal	
Other	Thermostats	Rittal	
Other	Siren	Eagle S2	
Other	Control transformer	1000VA (400V/230V)	
Copper	Copper	Copalcor	
Wiring	Wiring	Abedare / Alvern	
Enclosure	Dimensions	1200w x 2100h x 600d	

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POWER FACTOR CORRECTION PANEL

Date

Tenderer authorised signature

Name & Surname

Position

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GENERATOR SPECIFICATION

18. RETURNABLE GENERATOR DATA SHEET

SCHEDULE OF INFORMATION / COMPLIANCE DOCUMENT
(RETURNABLE DOCUMENT)

The tenderer must sign and return the compliance document. Failure to do so will automatically lead to dis-qualification of the tenderer and his/her tender will not be considered regardless of tendered value.

<u>Component</u>	<u>Description</u>	<u>Required</u>	<u>Offered</u>
Generating set	Output	500kVA @ 0.8PF - Prime	
Generating set	One step loading	65%	
Generating set	Second step loading	35% within 4s	
Generating set	Overloading	10% for 1 hour every 12 hours	
Room	Inlet sound attenuation	Trox	
Room	Outlet sound attenuation	Trox	
Room	Single acoustic door	Trox	
Room	Double acoustic door	Trox	
Engine	Make	Volvo / Perkins / Iveco	
Engine	Governor	Electronic	
Engine	Cooling system	Water cooled	
Engine	Injection system	Direct	
Engine	Cycles	4 cycle	
Engine	Speed	1500 rpm	
Engine	Exhaust	Flexible bellows	
Alternator	Make	Marelli / Syncro	
Alternator	Bearing	Single	
Alternator	Pitch	2/3 pitch winding	
Alternator	Insulation class	H	
Alternator	Voltage regulation	1.50%	
Alternator	IP rating	21	

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GENERATOR SPECIFICATION

Fuel tank	Capacity	800 litre	
Fuel tank	Fuel gauge	Electronic	
Fuel tank	Filler cap	included	
Fuel tank	Dished bottom	included	
Fuel tank	Drain	included	
Fuel tank	Plug	included	
Control panel	Controller	Deepsea 7320 c/w Modbus RS485	
Control panel	Switchgear	ABB	
Control panel	Alternator circuit breaker	ABB	
Control panel	MCB's & relays	ABB	
Control panel	Current transformers	on load side of change-over	
Component	Description	Required	Offered
Control panel	Emergency stop	included	
Control panel	Battery charger	3A c/w short-cct protection	
Control panel	Battery	maintenance free lead calcium	
Control panel	Battery	ampere / hour rating	
General	Manufacturer in RSA	Yes	
General	Back-up	24h, 7 days a week in KZN	

Date

Tenderer authorised signature

Name & Surname

Position

TECHNICAL SPECIFICATION
FOR
METAL DETECTOR

CLAUSE	DESCRIPTION	STATE DETAILS OF OFFER
3.1	GENERAL	
3.1.1	In addition to complying with the specification, the metal detector shall meet the requirements of the S.A. Police Security Advisory Board, Pretoria (Liaison officer: Dir. B Barnard Tel.: 082 778 9254. Name and tel. no. of the tenderer's contact person to make arrangements with: Name: _____ Tel. No.: _____	_____
3.1.2	The metal detector shall consist of a free standing walk-through frame with an integral control unit, and shall be suitable to detect metallic objects on a person by means of the magnetic field principle.	_____
3.1.3	The metal detector shall be suitable to detect ferrous and non-ferrous metals.	_____
3.1.4	The metal detector shall be equipped to eliminate false alarms.	_____
3.1.5	The metal detector shall scan the entire area of the walk through area and detect metal objects on a person passing through to the levels as specified.	_____
3.1.6	The metal detector shall incorporate self test button to confirm that the system is operating correctly.	_____
3.1.7	The metal detector shall be completely tamper proof.	_____
3.1.8	The programme and sensitivity push buttons shall be so arranged that tampering by unauthorised persons is entirely eliminated.	_____
3.1.9	The metal detector shall not be adversely affected by stationary metal bars or structures in the vicinity of the unit or moving metal near the archway.	_____
3.1.10	The metal detector shall be capable of operating adjacent to an X-Ray inspection unit.	_____
3.1.11	The detector is intended for indoor use at an altitude of up to 1800m above sea level.	_____
3.1.12	The detector shall be capable of operating in the following conditions:	
3.1.12.1	Min. temperature: 0°C	_____

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METAL DETECTOR SPECIFICATION

- 3.1.12.2 Max. temperature: 40°C _____
- 3.1.12.3 Max. relative humidity:80% _____
- 3.1.13 The operation of the metal detector shall not be adversely affected by repositioning of the frame within certain limits of its original adjusted position. _____
- 3.1.14 The metal detector shall have multi-zone vertical detection zones for the full height of a person. Each zone shall have a display bar with proportional indication on the vertical sides of the metal detector. _____

3.2 CONSTRUCTION

- 3.2.1 The metal detector shall comprise a free standing walk-through frame containing the detector coils and the control unit, complete with a 5m length of flexible cable and 16A 3-pin plug top. The cord and plug top shall comply with the relevant SABS specifications. _____
- 3.2.2 The frame and the control unit shall be of robust construction and the base of the frame shall be designed to ensure rigidity. _____
- 3.2.3 The unit shall be able to execute a full body scan and detect metal objects down to the lower feet level within the settings specified. _____
- 3.2.4 The finish shall be durable and maintenance free. _____
- 3.2.5 The type of material used for the construction of the frame and control unit must be stated by tenderers. _____
- 3.2.6 The colour range in which the metal detectors are available must be stated by tenderers. The Department will select a colour finish to suit the environment. _____
- 3.2.7 All material consisting of metal shall be treated against corrosion. _____
- 3.2.8 The approximate internal dimensions of the frame shall be as follows:
 - 3.2.8.1 Walk-through height : 2m _____
 - 3.2.8.2 The walk through width: 720mm. _____

3.3 CONTROL SYSTEM

- 3.3.1 The system shall operate by means of automatic level control adjustable to environmental changes, Without the need to reset. _____
- 3.3.2 The control unit shall be equipped with the following:
 - 3.3.2.1 "ON-OFF" main switch and "MAINS ON" indicator light. _____

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METAL DETECTOR SPECIFICATION

3.3.2.2 Selector switch with at least ten sensitivity settings, with a maximum sensitivity to consistently detect metal at least the size of a R5,00 coin.

The sensitivity settings shall be consistent at average walking speed.

3.3.2.3 Visual indication in the form of vertical display bars shall give an indication of the volume of metal on a person in accordance with the sensitivity settings. When the "ALARM" zone is activated it shall simultaneously activate an audible alarm having a continuous tone and adjustable volume. The alarm system will automatically reset after the metal has passed through the frame.

3.3.2.4 The system shall be modular to facilitate maintenance and repairs.

3.4 SAFETY FEATURES

3.4.1 All electronic and electrical components shall be protected by lockable panels.

3.4.2 The detectors shall not have any effect on heart pacemakers.

3.4.3 The detector shall not affect magnetic storage media or camera film.

3.5 ELECTRICAL SUPPLY SYSTEM

3.5.1 The detectors shall be designed for connection to a 230V +/-5%, 50Hz, single phase, three wire (phase, neutral and earth) power supply.

3.5.2 The existing connection points on site comprises standard 16A, 3-pin, socket outlets.

3.5.3 A suitable and efficient battery back-up system to facilitate power failures of up to 45 minutes must be incorporated in the detectors.

3.6 THROUGHPUT

The system shall accept a passage of at least 50 persons per minute without functional overload.

3.7 PLACING IN POSITION AND TESTING

3.7.1 The detector shall be placed in position, tested, commissioned and adjusted to the user Department's requirements by the successful tenderer.
NOTE: The final positioning will be determined on site.

3.7.2 The system must be arranged so that the traffic-flow is channelled through the metal detector.

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METAL DETECTOR SPECIFICATION

3.8 BROCHURES

3.8.1 Brochures furnishing descriptions and technical specifications, etc., of the unit offered shall be submitted with the tender. _____

3.8.2 The following information is also required:

Manufacturer _____

Year of manufacture _____

Country of origin _____

Model number _____

3.9 MAINTENANCE

3.9.1 The unit must be relatively maintenance-free and with minimum future service. A statement confirming this is required from the tenderer. _____

3.9.2 Electronic modules must be easily exchangeable. _____

3.9.3 Spare parts must be locally stocked and availability guaranteed for a ten year period starting from date Of delivery. _____

3.10 GUARANTEE AND SERVICE

3.10.1 The successful tenderer shall guarantee and service the complete unit for a period of twelve (12) months from date of delivery of every unit to site. _____

3.10.2 During the period of guarantee the successful tenderer shall at his own expense, carry out all necessary repair work including material and labour (excluding work required due to damage by others) in order to maintain the unit in a working condition. _____

3.10.3 The successful tenderer shall, during the period of guarantee, repair the unit to the satisfaction of the Department within 24 hours after he has been notified that the unit is not operating. _____

3.10.4 After the lapse of the initial twelve-month period of servicing under the guarantee, the successful tenderer may be required to enter into a service agreement with the Department. _____

3.11 TRAINING

The successful tenderer shall thoroughly train and instruct operators designated by the user Department in the operation of the unit. _____

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METAL DETECTOR SPECIFICATION

3.12 MANUALS

Two complete sets of manuals, each with the following information shall be handed over to the Department when the unit is delivered to site:

- (a) Operating instructions
- (b) Technical description with diagrams and Instructions for maintenance and repairs.

TECHNICAL SPECIFICATION
FOR
X-RAY INSPECTION UNITS

CLAUSE	DESCRIPTION	STATE DETAILS OF OFFER
1.1	<u>GENERAL</u>	
1.1.1	<p>A licence for the X-ray machine, issued in terms of the Hazardous Substances Act (Act 15 of 1973), must be submitted with the tender, failing which the tender will not be considered. Plus the ID No's and SABS BIN No. of the service technicians registered to carry out the servicing of the X-ray machines in accordance with the requirements of the SABS.</p> <p>In addition to complying with the specification the X-ray inspection unit shall meet the requirements of the SA Police Security Advisory Board, Pretoria. Liaison Officer: Dir. B Barnard Tel.: 082 778 9254</p> <p>Name and tel. No. of the tenderer's contact person to make arrangements with: Name: _____ Tel. No. _____</p>	<p>_____</p> <p>_____</p>
1.1.2	<p>The X-ray inspection unit shall complete with:</p> <ul style="list-style-type: none"> - Dual Energy Detector system (Multi Energy Imaging) - Colour monitor (remotely operated) - Conveyor belt - Screening for full profile of inspection tunnel - Discharge roller table - UPS 	<p>_____</p> <p>_____</p> <p>_____</p>
1.2	<u>GENERAL SPECIFICATION</u>	
1.2.1	<u>Construction Details</u>	
1.2.1.1	The unit must incorporate a facility to be controlled either from the right or the left-hand side.	_____
1.2.1.2	In addition a facility must be incorporated so that, the operating keyboard and monitor can be operated remotely, at least 5m from the unit.	_____
1.2.1.3	Maximum height including the tunnel shall not exceed 1400mm from the floor level.	_____
1.2.1.4	The unit must be quiet when in operation.	_____
1.2.1.5	X-ray high voltage generator, shall be rated at 160kV and operate at 140kV	_____
1.2.1.6	<p>Ambient conditions, under which the unit must operate:</p> <ul style="list-style-type: none"> -0°C to 40°C -relative humidity 95%, non-condensing 	<p>_____</p> <p>_____</p>

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X-RAY SPECIFICATION

1.2.1.7 Control elements (pushbuttons, switches, etc.) are to be of sturdy design, selected for severe operating conditions.

1.2.1.8 The unit must be of steel base construction on roller castors and not exceeding 700kg in total weight.

1.2.1.9 Discharge rollers to be included with the unit. The discharge roller platform shall be long enough to prevent articles being X-rayed from falling off before it is recovered by the owner.

1.2.1.10 The conveyor belt must be designed for 24 hour, heavy-duty operation.

1.2.1.11 The unit shall not be longer than 900mm wide and 2600mm in overall length, including the conveyor belt platform.

1.2.2 **Power ratings**

1.2.2.1 The unit has to operate from 230V $\pm 5\%$, 50 Hz, single phase power supply.

1.2.2.2 The maximum running current shall be less than 5A.

1.2.2.3 A suitable power point will be provided on the site by others.

1.2.3 **Image presentation**

1.2.3.1 Objects of the following dimensions must be able to be passed through the tunnel without any obstruction:

- Height: at least 400mm
 - Width: at least 600mm
 - Length: unlimited
-
-
-

Monitor display shall cover not less than 500mm of the object length.

Full scan volume must be seen on the screen, without any corner cut-off. This is a firm requirement.

1.2.3.2 Imaging scale of all objects should be constant with the minimum distortion.

1.2.3.3 A zoom facility is essential. The optimum requirement is for the push-button selection of at least 9, independent zoom sectors. The selected sector must be identified by light frame before zoom is activated.

1.2.3.4 A colour monitor (non-interlaced), screen size of at least 34cm, is required. Parallel operation of additional monitors, without modification to the unit, must be available.

1.2.3.5 The image on the monitor screen must be flicker free.

1.2.3.6 Control of brightness and of contrast must be provided on the front panel of the monitor.

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X-RAY SPECIFICATION

- 1.2.3.7 Possibility of switching over from "POSITIVE" to "NEGATIVE" image should be available as an option. _____
- 1.2.3.8 A digital memory is essential. _____
- 1.2.3.9 The capacity of the digital memory must exceed 1Mbyte. _____
- 1.2.3.10 The number of solid state detectors shall be not less than 1152. _____
- 1.2.3.11 Dual (Multi) energy colour system with a four (4) colour (Industry Standard) is a firm requirement. _____
- 1.2.3.12 Organic/Inorganic colour stripping. _____
- 1.2.3.13 High and low penetration. _____
- 1.2.3.14 Variable colour stripping and variable gamma edge enhancement. _____
- 1.2.3.15 Automatic density (variable) threat alert. _____
- 1.2.3.16 Automatic organic material threat alert. _____
- 1.2.3.17 Operator log-in identification facility. _____
- 1.2.3.18 Video output capabilities for recording of images shall be included. _____
- 1.2.3.19 Voltage stabiliser must be included. _____
- 1.2.3.20 UPS shall be included to provide 10 – 15 minutes back-up. _____
- 1.2.4 **Resolution and penetration**
- 1.2.4.1 A sample wire with diameter of 0.16mm (AWG 34) must be distinguished on a monitor, and 30AWG wire must be visible behind 21mm of aluminium. _____
- 1.2.4.2 The image quality on the monitor must be uniform, without distortion in the centre or the edges. _____
- 1.2.4.3 Penetration of 25mm steel minimum must be guaranteed. _____
- 1.2.4.4 A pre-selectable density threat level must be a feature of the equipment, with a visual and/or audible alarm if any item being screened exceeds that pre-selected density. _____
- 1.3 **CONTROL OPERATION – MINIMUM REQUIREMENTS**
- 1.3.1 **Controls**
- 1.3.1.1 A mains key switch for 230V main power supply is required. _____
- 1.3.1.2 Push button – power "ON". _____
- 1.3.1.3 3 Push buttons for conveyor control, "GO", "STOP" & "REVERSE". _____
- 1.3.1.4 As a minimum, 9 push button keyboard for zoom sector selection and a separate push button for zoom activation is required. _____

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X-RAY SPECIFICATION

1.3.1.5 A robust, RED, emergency stop push button, fitted in a prominent position on the keyboard, as well as on the X-ray unit.

1.3.1.6 Light symbols indicating "X-ray on".

1.3.1.7 X-ray warning signs, in accordance with the requirements of the SA Radiation Board, must be attached to each end of the tunnel in a visible position.

1.3.1.8 Easy operation of the unit is essential.

1.3.2 **Passage of luggage through X-ray unit**

1.3.2.1 Objects must be able to be conveyed through the unit in any orientation.

1.3.2.2 All objects, also those which are only partially lying flat on the conveyor belt (e.g. guitars, etc.) must be fully screened.

1.3.3 **Object representation**

1.3.3.1 The conveyor belt speed should be such that each point of an object, when passing through the unit, will be visible for at least 5 seconds

1.4 **CONVEYOR BELT**

1.4.1 **Loading**

1.4.1.1 At least 75kg overall weight

1.4.1.2 The conveyor belt must be driven by an almost noiseless drum-motor.

1.4.2 **Dimensions**

1.4.2.1 Belt length: < 2100mm

1.4.2.2 The height of the top of the conveyor belt above floor level shall be not less than 600mm, but shall not exceed 800mm

1.4.3 **Speed and duty cycle**

1.4.3.1 Conveyor belt speed: approximately 0.2 m/sec.

1.4.3.2 Up to 2400 objects must be screened per hour.

1.4.4 **Operation**

1.4.4.1 Normal: Continuous operation in forward direction.

1.4.4.2 Stop:

1.4.4.3 Reverse: Intermitted operation by pressing the reverse button.

1.4.4.4 Duty cycle: no warm-up period will be accepted.

1.5 **SAFETY**

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X-RAY SPECIFICATION

1.5.1 **X-ray dose: Screened object**

1.5.1.1 Standard –0.1 mR per inspection. Lower dose units may be offered as an alternative.

1.5.2 **Radiation leakage to surrounding**

1.5.2.1 Less than 0.5 millirems/h at any point on the surface, 5cm from the surface

1.5.2.2 The unit must comply with all ruling international safety regulations such as the German TUV, Swiss SEV, UK NRPB or USA FDA.

1.5.3 **Conveyor belt**

1.5.3.1 The feed and discharge ends of the conveyor belt are to be of such design that fingers, etc. cannot be caught during normal operation.

1.5.4 **Operation under fault conditions**

1.5.4.1 The X-ray tube shall be automatically de –energised when conveyor belt is stopped.

1.5.4.2 X-ray radiation shall only be switched on with the moving conveyor belt, before the object passes through the unit.

1.5.4.3 X-ray radiation shall be automatically switched off if the radiation shielding covers are removed.

1.5.5 **Film safety**

1.5.5.1 Tenderers must guarantee the unconditional safety of photographic material of professional quality.

1.5.5.2 Typical standards must allow for highly sensitive films of 1000 ASA to be irradiated at least 30 times without damage.

1.6 **PLACING IN POSITION AND ASSEMBLING**

1.6.1 The unit shall be placed in position and assembled on site by the successful tenderer.

NOTE: The final placing will be determined on site.

1.7 **BROCHURES**

1.7.1 Brochures, furnishing description and technical specification, etc. of the unit offered, shall be submitted with the tender. If the brochures have information, which does not comply with the specification, the tenderer must submit a covering letter listing all brochure items, which do not comply and confirm that the equipment offered will comply with the specification, referring to these items.

1.7.2 The following information is also required:

Manufacturer: _____

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X-RAY SPECIFICATION

ISO Rating: _____

Country of origin: _____

Model number of the unit offered _____

Date of manufacture _____

1.8 **MAINTENANCE, SERVICE AND REPAIR**

1.8.1 The unit design must be of the low maintenance type and with minimum future service. **A statement confirming this is required from the tenderer, together with a copy of the service/maintenance schedule.**

1.8.2 An overall design of modular type is preferred.

1.8.3 Electronic modules must be easily exchanged.

1.8.4 All sub-assemblies in the unit must be of such a design that, maintenance and repair can be carried out by a single person, including removal and exchange of the X-ray generator tanks.

1.8.5 Spare parts must be locally stocked and availability guaranteed for a ten-year period, starting from the date of delivery.

1.9 **GUARANTEE AND SERVICE**

1.9.1 The successful tenderer shall guarantee and service the complete unit for a period of twelve (12) months from the date of delivery to site, and successful commissioning of the unit.

1.9.2 During the period of guarantee, the successful tenderer shall, at his own expense, carry out all necessary repair work, including material and labour, (excluding work required due to damage by others) in order to maintain the unit in a working condition.

1.9.3 The successful tenderer shall, during the period of guarantee, repair the unit to the satisfaction of the Department, within 24 hours after he has been notified that the unit is not operating.

1.10 **TRAINING**

1.10.1 The successful tenderer shall thoroughly train and instruct all the operators and supervisors, designated by the User Department in the operation of the unit.

1.11 **ONBOARD COMPUTER**

1.11.1 Video Memory: at least 16MB

1.11.2 Processor Speed: at least 333MHz

1.11.3 Storage Capacity: At least 1 000 MB

1.11.4 A two part training programme must be incorporated in the system.

1.11.4.1 Part 1 – Initial training

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X-RAY SPECIFICATION

Pre-loaded images must be recalled by the computer, some without and some with threats. The operator must detect the threats and his progress is logged.

- 1.11.4.2 Part 2 – Ongoing training
The system must merge fake threat images into real time images and the performance of the operator must be logged.

1.12 **MANUALS**

Three complete sets of manuals, each with the following information shall be handed over to the Department when the unit is delivered to site:

(a) Operating instructions

(b) Technical description with diagrams and instructions for maintenance and repairs.

1.13 **DEVIATIONS FROM SPECIFICATION AS ALTERNATIVE (STATE BRIEFLY)**

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X-RAY SPECIFICATION

2. **TECHNICAL INFORMATION**

State the following information of the unit offered:

- | | | |
|------|---|-------|
| 2.1 | Total height above floor level | _____ |
| 2.2 | Maximum X-ray voltage | _____ |
| 2.3 | Dimensions of the unit | |
| | Height | _____ |
| | Width | _____ |
| | Length (including conveyor belt) | _____ |
| 2.4 | Total running current | _____ |
| 2.5 | Maximum dimensions of objects: | |
| | Height | _____ |
| | Width | _____ |
| | Length | _____ |
| 2.6 | Number of detectors | _____ |
| 2.7 | Capacity of digital memory | _____ |
| 2.8 | Number of shades of grey | _____ |
| 2.9 | Maximum over-all loading on conveyor belt | _____ |
| 2.10 | Conveyor belt speed | _____ |
| 2.11 | X-ray dose per inspection | _____ |
| 2.12 | Radiation leakage at any point, 5cm away from surface | _____ |
| 2.13 | Multi-Energy mode – State colours for material discrimination | _____ |

23. RETURNABLE HYDRID BACKUP SYSTEM DATA SHEET

SCHEDULE OF INFORMATION / COMPLIANCE DOCUMENT
(RETURNABLE DOCUMENT)

The tenderer must sign and return the compliance document. Failure to do so will automatically lead to disqualification of the tenderer and his/her tender will not be considered regardless of tendered value.

** Tenderer to indicate Yes or No to confirm compliance to specification **

<u>Description</u>	<u>Yes / No</u>	<u>Make & model & size</u>
Inverter-chargers		
Lithium iron phosphate batteries		
Solar inverters with optimizers		
Charge controllers		
Solar modules		
Mounting system		
DC cabling and installation		
DC isolation with surge protection		
AC input isolation with surge protection		
AC output isolation with surge protection		
AC output isolation with Type B RCD		
AC cabling and installation		
Feeder circuit breaker in DB		
By-pass switch included		
Electrical earthing and bonding allowed for		
Inverter-charger monitoring system		
Power usage monitoring system		
Load control system with PLC & HMI		
Generator control and programming for low battery etc		
Generator supplier integration and liaison		
Labelling		
Drawings, equipment lists & design requirements		
ECSA accredited (Pr Eng / Pr Tech Eng) sign off		
Health & Safety file allowed for		

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HYBRID BACKUP SYSTEM WITH GRID TIE AND SOLAR CHARGING

Site acceptance testing allow for		
Customer hand-over and training allow for		
Anti-islanding NRS and SANS approved		
Guarantee		

Date

Tenderer authorised signature

Name and Surname

Position



SUNDUMBILI MAGISTRATE OFFICE: ADDITIONAL ACCOMMODATION

**RETURNABLE DOCUMENTS:
MECHANICAL WORKS**

NOTE: The following returnable documents are included in
BOOK 4 of 4 but are to be completed in **BOOK 1 of 4**.

ANNEXURE A TO THE STANDARD TECHNICAL SPECIFICATION FOR AN AUTOMATIC SPRINKLER INSTALLATION

SCHEDULES OF EQUIPMENT AND MATERIALS

Item No. 1	Sprinklers	
------------	------------	--

- (a) Make _____
- (b) Country or origin _____
- (c) Date of manufacture _____
- (d) Material _____
- (e) Approved by _____

Item No. 2	Piping	Fittings
------------	--------	----------

- (a) Make _____
- (b) Country of origin _____
- (c) Quality _____

Item No. 3	Hydraulic Alarm	
------------	-----------------	--

- (a) Make _____
 - (b) Country of origin _____
 - (c) Approved by _____
 - (d) Material of body _____
 - (e) Material of turbine _____
 - (f) Diameter of turbine _____ mm
 - (g) Type of bearings _____
 - (h) Method of lubrication _____
 - (i) Diameter of gong _____
 - (j) Material of gong _____
 - (h) Mass of alarm complete _____ kg
-

Item No. 4	Stop Valve	Alarm Valve
(a)	Make _____	
(b)	Country of origin _____	
(c)	Approved by _____	
(d)	Material of body _____	
(e)	Material of moving parts _____	
(f)	Type of seat _____	
(g)	Hydraulic test pressure _____	kPa _____ kPa
(h)	Mass _____	kg _____ kg

Item No. 5	Booster Pump and Motor	
(a)	Make of pump _____	
(b)	Country of origin of pump _____	
(c)	Make of motor _____	
(d)	Country of origin of motor _____	
(e)	Type of motor and number of phases _____	
(f)	Rated power of motor _____	KW
(g)	Pumping yield at 20m head _____	l/m
	25m head _____	l/m
(h)	Material of casing _____	
(i)	Material of impellers _____	
(j)	Number of impellers _____	
(k)	Type of glands _____	
(l)	Type of bearings in pump and motor _____	
(m)	Make and type of starter _____	
(n)	Maximum starting current.amp _____	
(o)	Amperage at full load.amp _____	
(p)	Total mass of pump and motor _____	Kg

ANNEXURE C TO THE STANDARD TECHNICAL SPECIFICATION FOR A PUMP

INSTALLATION FOR AN AUTOMATIC SPRINKLER FIRE EXTINGUISHING SYSTEM

SCHEDULES OF EQUIPMENT AND MATERIALS

Item No, 1 Pump

- (a) Make _____
- (b) Manufacturer's Model No _____
- (c) Country of Origin _____
- (d) Type of Pump _____
- (e) Diameter of suction pipe _____ mm
- (f) Diameter of delivery pipe _____ mm
- (g) Yield at specified delivery head _____ l/s
- (h) Power absorbed at spindle _____ kW
- (i) Efficiency of pump at rating stated above _____ %
- (j) Maximum delivery head with pump at rated operating speed and outlet valve closed kPa _____
- (k) Diameter of shaft _____ mm
- (l) Shaft material _____
- (m) Pump casing material _____
- (n) Number of impellers _____
- (o) Impeller material _____
- (p) impeller size _____
- (q) Does the pump have a horizontal split casing _____ Yes/no*
- (r) Type of bearings _____
- (s) Type of flexible coupling _____
- (t) Make of coupling _____
- (u) (W) Size of coupling _____ mm
- (v) Details of gland or bearings _____

Item No, 2 Engine for Fire Pump

- (a) Make _____
- (b) Manufacturer's Model No _____
- (c) Type of engine _____
- (d) Country of origin _____

- (e) Number of cylinders _____
- (f) Bore and Stroke of cylinder _____ mm
- (g) Rated power under specified conditions _____ kW
- (h) Speed _____ r p m
- (i) Method of cooling _____ water/air
- (j) Type of fuel filter _____
- (k) Full load efficiency of engine _____ %
- (l) Fuel consumption at full load _____ l/hr
- (m) Recommended fuel and oil _____
- (n) Type of regulator _____
- (o) Type of thermostatic valve _____
- (p) Type of oil pressure relief valve _____
- (q) Total mass of engine _____ kg
- (r) Fan V-belts _____
- (s) Number of V-belts _____
- (t) Are spare parts available in South Africa _____

Item No, 3

Control Equipment for Engine

- (a) Manufacturer _____
- (b) Size of base _____ m x _____ m
- (c) External dimension of cabinet _____ m x _____ m x _____ m

Item No, 4

Motor for Fire Pump

- (a) Make _____
- (b) Manufacturer's Model No _____
- (c) Type of motor _____
- (d) Country of origin _____
- (e) Driving speed _____ r p m
- (f) Rated power _____ kW
- (g) Amperage at full load _____ Amp
- (h) Total mass of motor _____ kg

Item No, 5

Control Equipment for Motor

- (a) Manufacturer _____
- (b) Size of base _____ m x _____ m
- (c) External dimensions of cabinet _____ m x _____ m x _____ m

Item No,6

Booster Pump and Motor

- (a) Make of pump _____
- (b) Country of origin of pump _____
- (c) Make of motor _____
- (d) Country of origin of motor _____
- (e) Type of motor and number of phases _____
- (f) Rated power of motor _____ kW
- (g) Pumping yield at 20m head _____ l/m
- (h) 25m head _____ l/m
- (i) Material of casing _____
- (j) Material of impeller _____
- (k) Type of glands _____
- (l) Type of bearings in pump and motor _____
- (m) Make and type of starter _____
- (n) Maximum starting current _____ amp
- (o) Amperage at full load _____ amp
- (p) Total mass of pump and motor _____ kg

Item No,7

Battery

- (a) Make _____
- (b) Battery type _____
- (c) Country of origin _____
- (d) Does the battery have a built in monostat? _____
- (e) Guarantee period _____
- (f) Number of batteries? _____

(g) Total capacity _____ Amp hr.

Item No,8

Battery Charger

- (a) Make _____
- (b) Country of origin _____
- (c) Type of charger offered _____
- (d) Maximum charging capacity _____ Amp
- (e) Recharging time _____ hr \

(The recharging should reach approximately 80% of battery capacity within 7 hours.)
Note: Tenderers are reminded that the charger should be of constant potential type designed to limit the Charging current to meet the specification of the battery supplier.

Item No 9

Pressure Switches

- (a) Make _____
- (b) Country of origin _____
- (c) Model Number _____
- (d) Voltage of pressure switch _____

Item No 10

Electrical Work

- (a) Name of the firm that will undertake the electrical work _____

Item No 11

Tank

- (b) Make _____
- (c) Size of plates _____ m x _____ m x _____ m
- (d) External dimensions of tank _____ m x _____ m x _____ m
- (e) Gross capacity _____ l
- (f) Type of depth indicator _____

Item No 12

Pipe work and Fittings

- (a) Size of suction pipe _____ mm
- (b) Size of drainage pipe _____ mm
- (c) Material of non-return valve _____
- (d) Size of sluice valve _____ mm
- (e) Make of pressure gauges _____
- (f) Country of origin of pressure gauges _____
- (g) Diameter of pressure gauges _____ mm
- (h) Diameter of copper pipes to gauges _____ mm

SECTION 5 – SCHEDULE OF TECHNICAL INFORMATION**1. GENERAL**

Tenderers are required to complete the following Schedule of Technical Information and shall in addition, under separate cover, give full particulars of the equipment and installations offered as well as detailed descriptions of the various methods of control and operation.

2. TECHNICAL INFORMATION SCHEDULE

Item	Description	Details
1.	Manufacturer's name	
2.	Country of origin	
3.	% South African manufacture	
4.	Performance	
a)	Car speed in m/s	
b)	Average round trip time	
c)	Maximum carrying capacity of each lift car	
d)	Average waiting time after registration of a landing call	
5.	Main Hoist Motor	
a)	Maker's name	
b)	Type	
c)	Rated output (kW)	
d)	Time rating (starts/hr)	
e)	Manufacturing standard and safety codes	
f)	Maximum speed (RPM)	
g)	Rated voltage (Volts)	
h)	Full load current (Amps)	
i)	Starting current (Amps)	
j)	Type of bearings	
k)	Maximum line current with lift starting with full contract load (Amps)	
6.	Type of Brake	
7.	Gearing (If Applicable)	
a)	Material of worm	
b)	Material of worm-wheel	
c)	Type of thrust bearings	
d)	Ratio of gearing	

Item	Description	Details
e)	Type of worm-shaft bearings	
f)	Worm above or below wheel	
8.	Drive	
a)	Diameter of traction sheave (rope centres)	
b)	Type of grooving used on traction sheave	
c)	Type of bearing for sheave shaft	
d)	Diameter of smallest deflector pulley used	
e)	Type of grooves provided on deflector pulleys	
f)	Type of bearings for deflector pulleys	
g)	Means provided for absorption of vibration	
9.	Switch gear and Control System	
a)	Make of main circuit breaker	
b)	Rupturing capacity of main circuit breaker (kA)	
c)	Type of control system	
d)	Control voltage	
e)	Make of contactors	
f)	Make of control relays	
g)	Contact materials used for auxiliary and main contacts of controller switch gear	
h)	Type of selector	
10.	Car and Doors	
a)	Mass of complete car with doors and operating gear (kg)	
b)	Net inside dimensions(width x depth x height) in mm	
c)	Thickness of material of car and landing doors	
d)	Finish of car and landing doors	
e)	Clear width and height of car and landing entrances	
f)	Type of door drive mechanism offered	
g)	Type of suspension used for car and landing doors	
h)	Type of proximity detectors	
(I)	For passengers approaching from landing	
(II)	For passengers leaving lift car	
i)	Type of material used for inside finishes of car (i.e. panels, ceiling trim)	
j)	Thickness and type of floorboards and floor covering	

Item	Description	Details
k)	How is car and platform isolated from supporting structure?	
l)	Are car panels treated externally for sound absorption?	
m)	Door speed:	
(I)	Normal (m/min)	
(II)	On force closing (m/min)	
11.	Ropes	
a)	Maker's name	
b)	Diameter of ropes (mm)	
c)	Number of main ropes	
d)	Breaking load of each rope (kN)	
e)	Maximum working load of each rope	
f)	Factor of safety	
g)	Tensile strength of steel used (MPa)	
h)	Number of strands in rope	
i)	Number of wires per strand	
j)	Construction and lay of rope	
k)	Type of rope fastening used	
l)	System of roping (i.e. 2:1 or 1:1, single or double wrap)	
12.	Counterweight	
a)	Total mass (kg)	
b)	Percentage of live load counter balanced (%)	
13.	Guide Rails	
a)	Type and section	
b)	Mass per metre-length (kg) for:	
(I)	Car	
(II)	Counterweight	
14.	Roller Shoes	
a)	Type	
b)	Material of tyres for roller type guides	
15.	Buffers	
a)	Type	
b)	Length of stroke	

Item	Description	Details
c)	Reactions on pit floor when buffers are hit at 115% of contract speed whilst car is carrying contract load	
(I)	Car buffers	
(II)	Counterweight buffers	
16.	Safety Gear	
a)	Type	
b)	Type of governor	
c)	Stopping distance at overspeed with:	
(I)	Car empty (mm)	
(II)	With contract load (mm)	
d)	Percentage over-contract speed when governor trips safety (%)	
e)	Percentage over-contract speed at which governor trips motor supply	
f)	Is safety still effective if governor rope breaks after application of safety device?	
17.	Steelwork at Top of Shaft	
a)	Number and type of sections used	
b)	Reactions on structure must be submitted with tender by indicating position, magnitude and direction of all reactions on a drawing	
18.	Levelling	
a)	Levelling speed (m/s)	
b)	Levelling tolerance guaranteed (Maximum) (mm)	
c)	Will car and landing doors be fully open when car reaches floor level?	
d)	What is distance of levelling zone above and below floor level?	
19.	Selector Type	
20.	Deviations from Specification as an Alternative Offer: Does the equipment offered comply strictly with the specification (Yes/No)	

3. Deviations from Specification as Alternative Offer

If answer to 20 above is NO, tenderers shall give full details of all deviations between the alternative offered and specified equipment hereunder:

.....
.....
.....
.....
.....
.....
.....

TENDERER'S NAME AND ADDRESS

.....
.....
.....

.....
Signature of Tenderer's
Authorised Signatory

TEL NO.

DATE :



SUNDUMBILI MAGISTRATE OFFICE: ADDITIONAL ACCOMMODATION

**RETURNABLE DOCUMENTS:
Part 2 Contract Data**

NOTE: The following returnable documents are included in
BOOK 2 of 4 but are to be completed in **BOOK 1 of 4**.

PART 2: CONTRACT DATA COMPLETED BY THE TENDERER:

C TENDERER'S SELECTIONS

C 1.0 Securities [11.0]

In respect of contracts with a contract sum up to R1 million, the security to be provided by the contractor to the employer will be a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT).

In respect of contracts with a contract sum more than R1 million, the security to be provided by the contractor to the employer will be selected by the Contractor as indicated below:

Guarantee for construction: Select Option A, B, C, D or E

Option A	cash deposit of 10 % of the contract sum (excluding VAT)
Option B	variable construction guarantee of 10 % of the contract sum (excluding VAT) (DPW-10.3 EC)
Option C	payment reduction of 10% of the value certified in the payment certificate (excluding VAT)
Option D	cash deposit of 5% of the contract sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT)
Option E	fixed construction guarantee of 5% of the contract sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT) (DPW-10.1 EC)]

NB: Insurances submitted must be issued by either an insurance company duly registered in terms of the Insurance Act [Long-Term Insurance Act, 1998 (Act 52 of 1998) or Short-Term Insurance Act, 1998 (Act 53 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.

Guarantee for payment by employer [11.5.1; 11.10]	Not applicable
Advance payment, subject to a guarantee for advance payment [11.2.2; 11.3]	Not applicable

Tender / Quotation no: DBN23/11/01

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

C 2.0 Payment of preliminaries [25.0]

Contractor's selection

Select Option A or B

Where the **contractor** does not select an option, Option A shall apply

Payment methods

Option A	The preliminaries shall be paid in accordance with an amount prorated to the value of the works executed in the same ratio as the amount of the preliminaries to the contract sum , which contract sum shall exclude the amount of preliminaries . Contingency sum(s) and any provision for cost fluctuations shall be excluded for the calculation of the aforesaid ratio
Option B	The preliminaries shall be paid in accordance with an amount agreed by the principal agent and the contractor in terms of the priced document to identify an initial establishment charge, a time-related charge and a final dis-establishment charge. Payment of the time-related charge shall be assessed by the principal agent and adjusted from time to time as may be necessary to take into account the rate of progress of the works

Lump sum contract

Where the amount of **preliminaries** is not provided it shall be taken as 7.5% (seven and a half per cent) of the **contract sum**, excluding contingency sum(s) and any provision for cost fluctuations.

C 3.0 Adjustment of preliminaries [26.9.4]

Contractor's selection

Select Option A or B

Where the **contractor** does not select an option, Option A shall apply.

Provision of particulars

The **contractor** shall provide the particulars for the purpose of the adjustment of **preliminaries** in terms of his selection. Where completion in **sections** is required, the **contractor** shall provide an apportionment of **preliminaries** per **section**.

Option A	An allocation of the preliminaries amounts into Fixed, Value-related and Time-related amounts as defined for adjustment method Option A below, within fifteen (15) working days of the date of acceptance of the tender
Option B	A detailed breakdown of the preliminaries amounts within fifteen (15) working days of possession of the site . Such breakdown shall include, inter alia, the administrative and supervisory staff, the use of construction equipment , establishment and dis-establishment charges, insurances and guarantees, all in terms of the programme

Tender / Quotation no: DBN23/11/01

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

Adjustment methods

The amount of **preliminaries** shall be adjusted to take account of the effect which changes in time and/or value have on **preliminaries**. Such adjustment shall be based on the particulars provided by the **contractor** for this purpose in terms of Options A or B, shall preclude any further adjustment of the amount of **preliminaries** and shall apply notwithstanding the actual employment of resources by the **contractor** in the execution of the **works**.

Option A	<p>The preliminaries shall be adjusted in accordance with the allocation of preliminaries amounts provided by the contractor, apportioned to sections where completion in sections is required</p> <p>Fixed - An amount which shall not be varied.</p> <p>Value-related - An amount varied in proportion to the contract value as compared to the contract sum. Both the contract sum and the contract value shall exclude the amount of preliminaries, contingency sum(s) and any provision for cost fluctuations.</p> <p>Time-related - An amount varied in proportion to the number of calendar days extension to the date of practical completion to which the contractor is entitled with an adjustment of the contract value [23.2; 23.3] as compared to the number of calendar days in the initial construction period [26.9.4].</p>
Option B	<p>The adjustment of preliminaries shall be based on the number of calendar days extension to the date of practical completion to which the contractor is entitled with an adjustment of the contract value [23.2; 23.3] as compared to the number of calendar days in the initial construction period [26.9.4]. The adjustment shall take into account the resources as set out in the detailed breakdown of the preliminaries for the period of construction during which the delay occurred.</p>

Failure to provide particulars within the period stated

Option A	<p>Where the allocation of preliminaries amounts for Option A is not provided, the following allocation of preliminaries amounts shall apply:</p> <p>Fixed - Ten per cent (10%) Value-related - Fifteen per cent (15%) Time-related - Seventy-five per cent (75%)</p> <p>Where the apportionment of the preliminaries per section is not provided, the categorised amounts shall be prorated to the cost of each section within the contract sum as determined by the principal agent</p>
Option B	<p>Where the detailed breakdown of preliminaries amounts for Option B is not provided, Option A shall apply</p>

Lump sum contract

Where the amount of **preliminaries** is not provided it shall be taken as 7.5% (seven and a half per cent) of the **contract sum**, excluding contingency sum(s) and any provision for cost fluctuations.