	Scope of Work	Transmission Telecommunications
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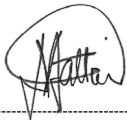
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CONTROLLED DISCLOSURE

1. Introduction

The Physical Security National Maintenance Contract is required to be established to carry out maintenance and repairs at Transmission Telecommunication radio sites perimeter security. This document provides the scope of work for the establishment of the maintenance and repair contract on an as-and-when required basis with an external service provider and provides the list of activities that will be required as part of the contract as well as competencies/capabilities required from the third-party contractor.

2. Supporting Clauses

2.1 Scope

2.1.1 Purpose

The purpose of this document is to specify the Transmission Telecommunication requirements of services required for the perimeter fence maintenance and repairs contract to be procured from a third-party contractor.

2.1.2 Applicability

This document shall apply throughout Eskom Holdings Limited Divisions.

2.1.3 Effective date

This document is effective from the date of the last authorizing signature

2.2 Normative/Informative

2.2.1 References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.2 Normative

- [1] ISO 9001 Quality Management Systems
- [2] 32- 727 Safety, Health, Environment and Quality (SHEQ) Policy
- [3] Occupational Health and Safety Act, No. 85 of 1993

2.2.3 Informative

- 1. High Security Mesh Fence Standard 240-76368574
- 2. Standard for Non-Lethal Energized Perimeter Detection System 240-78980848

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2.3 Definitions

2.3.1 Document

None

2.4 Abbreviations

None

2.5 Roles and Responsibilities

As described in the document content.

2.6 Process for Monitoring

Implementation of the scope will be monitored throughout the contract process.

2.7 Related/Supporting Documents

None

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3. Contractor Scope of Work

3.1 Site Location and Access Road Conditions

The Eskom Telecoms Radio Sites covered under this contract shall be for Central Region (Free State, Gauteng and NorthWest), Western Region (Western Cape and Northern Cape), Northern Region (Limpopo and Mpumalanga), Eastern Region (KZN and Eastern Cape). The contractor will be notified of any changes. Many of the sites under this contract are at high altitude and are at the end of challenging gravel roads which requires 4x4 bakkies and trucks.

3.2 Services Required

The list below is provided to give the contractor an idea of what skills they should possess in-house to be able to carry out requirements of this contract. Should an omission be identified later, the service can still be requested, based on establishing whether it is within the contractors' capabilities. Skills outside those identified on the list can be procured by the contractor under the "Material /Purchases/Hiring Equipment/ Professional Services at % Markup" line item in the price list.

General Physical Security Maintenance Service
Kerbing, anti-tunneling and stoning works
Steel Palisade fence supply and install
Diamond mesh fence supply and install
High Security Single/Double skin welded mesh fence supply and install
Earthing of steel fences and gates
Mangates (diamond mesh, palisade and high security welded mesh) supply and install
Leaf gates (diamond mesh, palisade and high security welded mesh) supply and install
Sliding gates (diamond mesh, palisade and high security mesh) supply and install
Trenching and Ducting
Razor wire and Flatwrap supply and install
Gate motors supply and install
Electrical Fence conductors and insulators supply and install
Electrical Fence energizers supply and install
Electrical Fence piggy-back post supply and install
LED Flood light 6m post and earthing of post supply and install
LED 20Watt Flood SAB approved supply and install
LED Flood light junction box supply and install inside telecom building

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3.3 Contract Kick-Off

1. A list of sites that require repairs and maintenance shall be given to the contractor
2. An Eskom tick sheet will form the basis of the initial evaluation to ensure that all aspects pertaining to the scope of work on site, is covered.
3. Eskom will prioritize work to be done and request the contractor to provide a schedule/plan.

3.4 Travel , Work , Accommodation Arrangement

1. It is accepted that travel / work be undertaken by a minimum of two people. This is to ensure safety when driving and working on site.
2. If a larger team is required due to the nature of the work, it should be negotiated between the Eskom representative and the contractor.
3. The contractor and the Eskom representative must agree on the schedules as planned, including the timelines, travel arrangements, resources, scope of works and accommodation.
4. Any deviation from the agreed schedule/plan must be communicated and negotiated with the Eskom representative.

3.5 Hand Tools / Equipment / Portable Electrical Equipment and Plant Hire

1. The contractor must have the necessary hand tools, equipment, and portable electrical equipment in-house to carry out the general facilities maintenance.
2. Plant and/or specialized equipment can be hired under the “Material / Purchases / Hiring Equipment / Professional Services at % Mark-up”
3. This is dependent on negotiation and agreement with the Eskom representative.
4. Transport of tools and material that is within the capability of a LDV or 4x4 LDV, is covered under the “Travel per km” line item on the list. Transport requiring a Truck will be covered under the “Material / Purchases / Hiring Equipment / Professional Services at % Mark-up” line item on the price list. This is dependent on negotiation and agreement with the Eskom representative.

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3.6 Process for Carrying Out Work

1. The Eskom representative will provide the contractor with a request/scope of work.
2. The Contractor will then provide a quotation to the Eskom representative, based on the request / scope of work.
3. On acceptance of the quotation, the Eskom representative will provide the contractor with a purchase order or task order.
4. If the nature of work changes due to unforeseen conditions identified on site, such changes must be communicated to the Eskom representative who will evaluate the changes/variations. The contractor must provide a new/updated quotation as soon as possible. The Eskom representative will amend the purchase or task order accordingly.
5. All work/travel will be done in compliance with the OHS Act and Regulations as well as the Eskom SHEQ Policies.

3.7 Pricing/Quotation

1. The contract is based on time and materials.
2. The contractor will quote to carry out the required scope of work as provided by the Eskom representative based on the following line items:

ITEM NO,	DESCRIPTION	UNIT
PRELIMINARY AND GENERAL		
A1	Site Establishment Time Related	day
A2	Travelling charge per Kilometer below 3ton trucks	R/km
A3	Travelling charge per Kilometer above 3ton trucks	R/km
A4	Security	day
AS	Security	night
A6	Health and Safety Plan	Item
A7	Maintain H&S File	Item
A8	Personal Protective Equipment (Hard hat included)This item only to be claimed in the event of temporal employment (local labour) and proof need to be provided,contrador is responsible for PPE for their permanent employees	per person
A9	Training To be claimed in the event of temporal employment (local labour) and proof need to be provided	sum

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A10	Medical certificates to be claimed in the event of temporal employment local labour and prrof need to be provided	sum
A11	Accomodation	cost 4%
A12	Design layout drawing of the fence to be provided on request	item
A13 CLO (Only when required)		month
Site Establishment Fixed Charge		
	0.50km	
A14	0-50m length of fence	Sum
A15	51-100m length of fence	Sum
A16	101-150m length of fence	Sum
A17	151-200in Inth of fence	Sum
A18	201-250m length of fence	Sum
	51-150km	
A23	0-50m length of fence	Sum
A24	51-100m length of fence	Sum
A25	101-150m length of fence	Sum
A26	151-200m length of fence	Sum
A27	201-250m length of fence	Sum
	151-250km	
A32	0-50m length of fence	Sum
A33	51-100m length of fence	Sum
A34	101-150m length of fence	Sum
A35	151-200m length of fence	Sum
A36	201-250m length of fence	Sum
	250-350km	
A41	0-50m length of fence	Sum
A42	51-100m length of fence	Sum
A43	101-150m length of fence	Sum
A44	151-200m length of fence	Sum
A45	201-250m length of fence	Sum
	>350km	
A50	0-50m length of fence	Sum
A51	51-100m length of fence	Sum
A52	101-150m length of fence	Sum
A53	151-200m length of fence	Sum
A54	201-250m length of fence	Sum
Site De-Establishment - Fixed Charge		
	0.50km	

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A59	0-50m length of fence	Sum
A60	51-100m length of fence	Sum
A61	101-150m length of fence	Sum
A62	151-200m length of fence	Sum
A63	201-250m length of fence	Sum
	51-150km	
A68	0-50m length of fence	Sum
A69	51-100m length of fence	Sum
A70	101-150m length of fence	Sum
A71	151-200m length of fence	Sum
A72	201-250m length of fence	Sum
	151-250km	
A77	0-50m length of fence	Sum
A78	51-100m length of fence	Sum
A79	101-150m length of fence	Sum
A80	151-200m length of fence	Sum
A81	201-250m length of fence	Sum
	250-350km	
A86	0-50m length of fence	Sum
A87	51-100m length of fence	Sum
A88	101-150m length of fence	Sum
A89	151-200m length of fence	Sum
A90	201-250m length of fence	Sum
	>350km	
A95	0-50m length of fence	Sum
A96	51-100m length of fence	Sum
A97	101-150m length of fence	Sum
A98	151-200m length of fence	Sum
A99	201-250m length of fence	Sum
SUB TOTAL PRELIMINARY AND GENERAL		
B	Alterations (Rate to include taking rubble off site to a permitted dumping site)	
B1	Removal of Diamond Fence 2.4m high	m
B2	Removal of Diamond Fence 1.8m high	m
B3	Removal of Steel Palisade Fence 2.4m high	m
B4	Removal of Steel Palisade Fence 1.8m high	m
B6	Removal of Fence (Razor) 2.4m high	m
B7	Removal of Fence (Razor) 1.8m high	m
B8	Removal of double welded mesh Fence 2.4m high	m
B9	Removal of double welded mesh Fence 1.8m high	m
B14	Removal of earthing	m
B15	Removal of rubble to an approved dumping site	m3

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SUBTOTAL ALTERATIONS		
C	Earthworks and Civil Works	
C1	Site Clearance	m2
C2	Excavation in Soft Soil (for concrete bases or posts)	m3
C3	Excavation in Intermediate Soil (for concrete bases or posts)	m3
C4	Excavation in Rock (for concrete bases or posts)	m3
C5	Supply and laying 26mm nominal size yard stone	m3
C6	Supply and laying 36mm/37mm nominal size yard stone	m3
SUBTOTAL EARTHWORKS AND CIVIL WORKS		
D	Concrete and Formwork	
D1	Anti-tunnelling 100mm wide, 600mm deep concrete (15MPa) between post	m
D2	Pillar 350x350 including 500x500 base as per spec)	no
D3	Reinforced concrete for bases	m3
D4	Reinforced concrete for ramps	m3
D5	Formwork to sides of bases	m2
D6	Formwork for ramps	m2
D7	Formwork to of edges, ners, ends and reveals not exceeding 300mm high or wide	m
D8	Mild steel reinforcement to structural concrete work	kg
D9	High tensile steel reinforcement to structural concrete work	kg
SUBTOTAL CONCRETE AND FORMWORK		
E	Fencing	
E	Fencing (Prices to be according to drawings, specifications and Eskom standards) For the High Security Fence the tenderer should refer to the Standard Technology number	
E1	Single Welded Mesh Fence 2.4m high Single Skin (76x12.5mm aperture in wire thickness 4mm)	m
E2	Single Welded Mesh Fence 2.4m high Single skin with double line vertical wires Skin (76x12.5mm aperture in wire thickness 4mm)	m
E3	Double Welded Mesh Fence 2.4m high Doublee skin (12.5mm aperture in wire thickness 4mm)	m
E4	Diamond Mesh temporary fence 1.8mm high	m
E5	Diamond Mesh permanent fence 1.8mm high	m
E9	Steel palisade Fence 2.4m high	m
E10	Steel palisade Fence 1.8m high	m
E11	Removable Mesh Panels	m
E11a	Corner post single skin welded mesh fence 2.4m high including all related work	no
E11b	Corner post double skin welded mesh fence 2.4m high including all related work	no

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E12	Intermediate post 2.4in high for welded Mesh Fence inclu angle iron and all other metalwork	no
E13	Intermediate post 3m high for welded Mesh Fence inclu angle iron and all other metalwork	no
E14	Corner post palisade fence 2.4m high including all related work	no
E15	Corner post palisade fence 1.8m high including all related work	no
E16	Barb wire	m
E17	IPE Post 3m long for 2 4m high palisade fence	no
E18	IPE Post 3m long for 1.8m high palisade fence	no
E19	Angle iron Post 3m long for 2.4m high Double Welded Fence	no
E20	Angle iron Post 3m long for 2 4m high Single Welded Fence	no
E21	Posts 3000 x100 x 3m round tube with cap for 2 4 meter high palisade fence with adequate brackets for ends, corner & intermediate straining posts not exceeding 45 degrees	no
E22	730mm Gals Concertina Coil	m
E23	900nm Galv Concerto Coil	m
E24	Gate posts 3m high for Diamond Mesh Fence Incl all related metalwort	no
E25	Gate costs for High Security fence incl all related	no
E26	Flat Wrap 500	m
E27	Flat Wrap 700	m
E28	Flat Wrap 900	m
E29	V-overhangs	m
E30	Single-overhangs	no
F	Swing Gates	
F1	Palisade Double Gate size 2.4m high a 6m wide	each
F2	Palisade Double Gate size 1.8m high x 6m wide	each
F3	Palisade Double Gate sae 2.4rn high x 5m wide	each
F4	Pallsade Double Gate size 1.8m i high a 5m wide	each
F5	Pallsade Gate size 2 4m high x 1.5m wide	each
F6	Pallsade Gate size 2 4m high x 1m wide	each
F7	Pallsade Gate size 1.8m high x 1.5m wide	each
F8	Pallsade Gate size 1.8m high x 1m wide	each
F9	Double Skin Welded Mesh Double gate size 2.4m high x 6m wide	each
F10	Double Skin Welded Mesh Double gate size 1 8m high x 6m wide	each
F11	Double Skin Welded Mesh Double gate size 2 4m high a 5m wide	each
F12	Double Skin Welded Mesh Double gate size 1 8m high x 5m wide	each
F13	Single Skin Welded Mesh Double gate size 2 4m high x 6m wide	each
F14	Single Skin Welded Mesh Double gate size 1 8m high x 5rn wide	each
F15	Double Skin Welded Mesh Single gate size 2 4m high x 1 5m wide	each
F16	Double Skin Welded Mesh Single gate size 2 4m high x 1m wide	each
F17	Single Skin Welded Mesh Single gate size 2 4m high x 1 5m wide	each
F18	Single Skin Welded Mesh Single gate size 2 4m high x 1m wide	each

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F19	Diamond Mesh Double Gate size 6m wide	each
F20	Diamond Mesh Double Gate size 5m wide	each
F21	Diamond Mesh Single Gate size 1.5m wide	each
F22	Diamond Mesh Single Gate size 1m wide	each
F23A	Security Gate – Annexure A	each
F23	Electrical Fence conductors supply and install	m
F24	Electrical Fence insulators/bobin supply and install	each
F25	Electrical Fence energizers supply and install	each
F26	Electrical Fence piggy-back post supply and install	each
F27	Electrical Fence stand alone post supply and install	each
F28	Flood light LED 20Watt with motion sensors and lightning earth spike supply and install	each
F29	Flood light post 6m including supply and install	each
F30	Flood light junction box with controls(motion sensor bypass, on/off control, 50Vdc15A/220Vac convertor) supply and install	each
F31	Braded copper for swing gains (All gate leaves must bonded to hinged posts using 70mm x 350mm long pvc covered copper conductor(welded cable). Lug each end with inner copper lugs drilled 16mm diameter and covered with heat shrink Each lug to be fastened with two M16 x 40mm galvanised bolts, nuts and washers to earth lugs on the gate and earth part on the posts)	each
G SLIDING GATE		
G1	Motorised Palisade Sliding Gate size 24m high x 6m wide	each
G2	Manual Palisade Sliding gate size 2 4m high x 6m wide	each
G3	Motorised Palisade Sliding Gate size 2 4m high x 5m wide	each
G4	Manual Palisade Sliding gate size 2 4m high x 5m wide	each
G5	Motonsed Double skin Welded mesh gate size 2.4m high x 6m wide	each
G6	Manual Double skin Welded mesh gate size 2 4m high x 6m wide	each
G7	Motonsed Double skin Welded mesh gate size 2.4m htgh x 5m wide	each
G8	Manual Double skin mesh welded mesh gate size 2 4rn high x 5m wide	each
G9	Motorised single skin Welded mesh gate size 2 4m hlgh x 6rn wide	each
G10	Manual single skin Welded mesh gate size 2 4m high x 6m wide	each
G11	Motorised single skin Welded mesh gate size 2 4m high x 5m wide	each
G12	Manual single skin Welded mesh gate size 2 4m high x 5m wide	each
G13	Manual palisade sliding Gale size 1.8m high x 6m wide	each
G14	Supply and install Gate Motor for existing gates and connect to electrical supply	each
G15	Solar Power Kit for a Centurion D10 Motor	each
H EARTHING		
H1	Excavations for earthing in hard rock	each
H2	Excavation for earthing in soft rock	each
H3	Excavations for earthing in intermediate soil	each
H4	Trenches 0.75m x 500mm soft soil	each
H5	Trenches 0 75m x 500mm hard soil	each

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H6	Trenches 0 75m x 500mm deep by machine	each
H7	Trenches 0 75m x 1000mm soft soil	each
H8	Trenches 0 75m x 1000mm hard soil	m
H9	Trenches 0.75m x 1000mm deep by machine	m
H10	Connect earthing to fence	m
H11	Connect earthing to swing gates	m
H12	Connect earthing to sliding gates	m
H13	Supply and install 10mm copper earth	m
H14	Backfilling of excavated material including compaction	m ³
H15	Backfilling of imported material including compaction	m ³
H16	Brazing/Bonding of copper to earthmat	m
H17	Supply and install and bolted 50 x 3mm Flat copper strap bolted (rate to include MI 6 bolts)	m
I COMPENSATION ITEMS		
I1	Site supervisor	hr
I2	Foreman	hr
I3	Carpenter	hr
I4	Blocklayer	hr
I5	Painter	hr
I6	Plasterer	hr
I7	Welder	hr
I8	Driver	hr
I9	Fence Erector	hr
	Semi Skilled Labour	
I10	General Worker	hr
I11	Leading Hand	hr
	Unskilled Labour	
I12	Labourer	hr
	Electrical	hr
I13	Master Electrician	hr
I14	Installation Electrical	hr
I15	Semi -Skilled Electrical	hr
I16	Labourer Electrical	hr
	Plant	
I17	Truck (7ton)	hr
I18	LDV	hr
I19	Tipper Truck	hr
I20	Compressor	hr
I21	Digger Loader	hr
I22	Crane 8 ton	hr
I23	Crane 15 ton	hr
I24	Scaffolding	h

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I25	Trencher	hr
I26	Bobcat+Operator	hr
I27	Auger	hr
I28	Generator	hr
I29	Jack Hammer	hr
I30	Air Compressor	hr
I31	Breakers	hr
I32	Concrete Cutter	hr
I33	Plate Compactor	hr
I34	Concrete Mxe	hr

3. In support of travel expenses (during quoting), the contractor will submit a Travel Plan containing an active Google Maps Route Link. This must match up with km and travel time (@100km/h) quoted on.
4. Travel will be calculated from the contractor's base as negotiated-on at contract award.
5. Invoices from contractor's suppliers to be submitted in support of billing against the line item "Material / Purchases / Hiring Equipment / Professional Services at % Mark-up".
6. No Travel km claims within a radius of 50km.
7. The transport of goods beyond the capability of a LDV or 4x4 LDV, must be billed against the line item "Material / Purchases / Hiring Equipment / Professional Services at % Mark-up".
8. Maintenance visits must be grouped together to keep travel expenses to a minimum. Eskom requires that the contractor submit a travel plan as part of the quotation process to ensure travel has been planned efficiently.

3.8 Verification / Quality acceptance of Work

1. All work to be checked for quality and completeness by Eskom representative before signing off and payment.
2. Photographic proof of work done, might be requested by the Eskom representative as proof of quality and completeness. This will be negotiated on a per job basis or as situations arise.

3.9 General Radio Site Conditions

1. There are no toilet facilities on sites.
2. There is no water on sites.
3. There is electricity on sites.

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4. Strict compliance to Eskom Transmission SHEQ Policies and Procedures.

3.10 Policies, Procedures and Standards

1. All work is to be carried out according to Eskom's Policies, Procedures and Standards. These will be provided to the contractor.
2. Non-compliance or sub-standard work will be rectified by the contractor before payment will be done. The cost to rectify anomalies will be for the contractor and will not be paid by Eskom.

4. Acceptance

This document has been seen and accepted by:

Name	Designation
Zane Hassen	Regional Manager – Western Region
Mark Ganesan	Regional Manager – Central Region
Petros Masoka	Regional Manager – Northern Region
Unathi Dyantyi	Regional Manager – Eastern Region

5. Revisions

Date	Rev.	Compiler	Remarks
July 2022	1	Moeried Jattiem	New document

6. Development Team

The following people were involved in the development of this document:

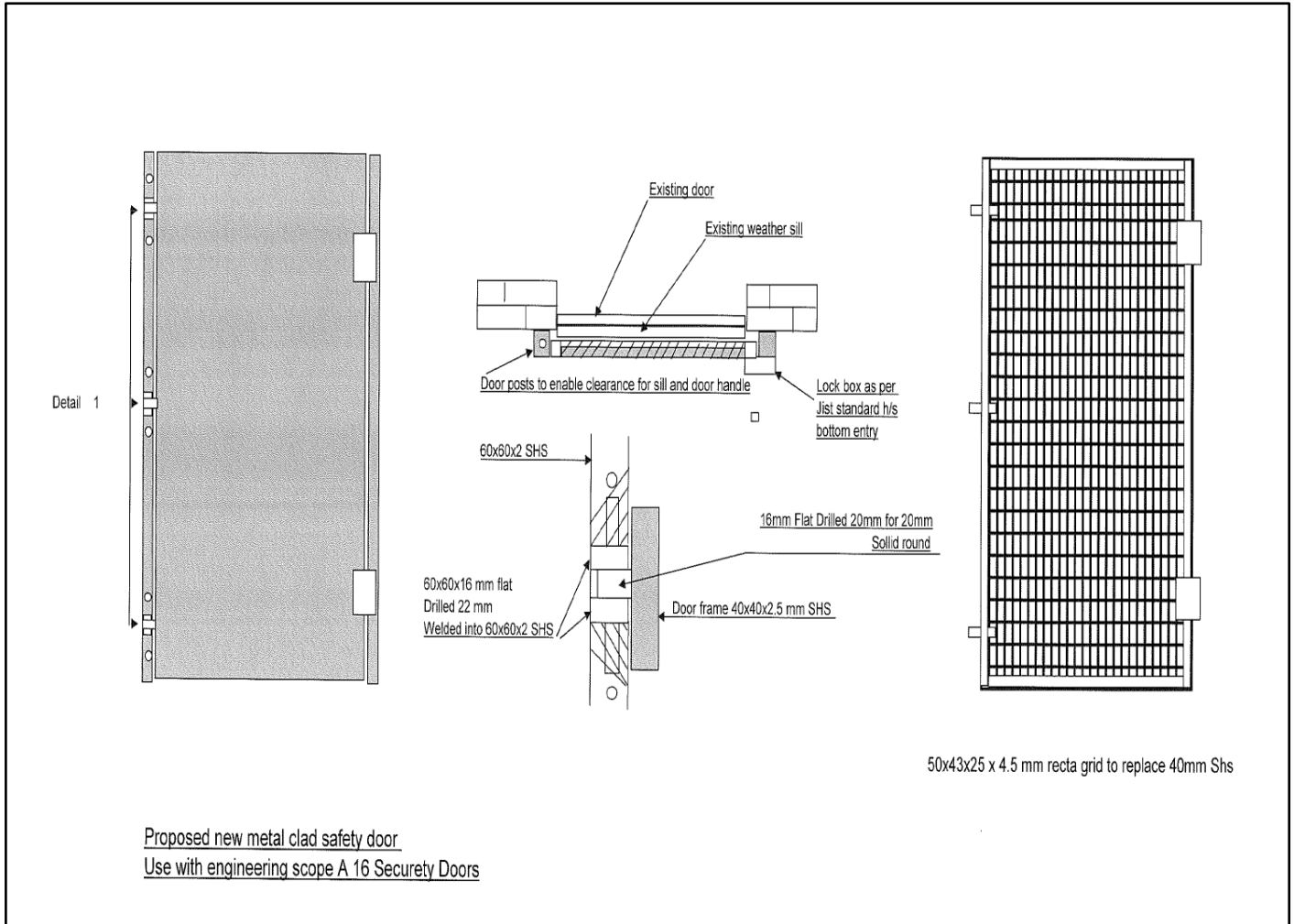
- Moeried Jattiem

7. Acknowledgements

N/A

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Annexure A - Security Gate



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