

	<b>Security Threat Assessment (STA) Report</b>  <b>CONTROLLED DISCLOSURE</b>	Unique Identifier	240-147801103
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		Revision	1
		Effective Date	September 2022
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**Enquiries:**  
**Name:** Noel Smouse  
**Tel** +27 079 503 3719

**Dear:** Billy Pasha,

## SECURITY THREAT ASSESSMENT (STA) REPORT: Wonderkrag Substation

### 1. INTRODUCTION

As part of a continuous security service to the Wonderkrag Substation a STA was conducted by the mandated security official Noel Smouse in order to assist the client to better understand their current security threat profile. This report identifies and describes any evident threats identified that may affect the Client’s accountable and responsible business function(s).

This report further assists the Client to effectively manage legal compliance (*e.g. NKP Act, PSIRA Act etc.*), organisational conformance (*e.g. SHEQ, Risk & Resilience Management etc.*) and other key performance areas and may also assist with the SWOT analysis and the identification of risks in regards to their Operational and Business Plans. As per the Eskom “Security Threat Assessment (STA) Standard (240-79537982)” a STA need to be conducted at least bi-annually for all sites, regions and areas where security is mandated to do so.

### 2. MANDATE

The mandate of the security officials and/or team that conducted this STA is described within their formal appointment and/or designation as agreed with their responsible line management.

### 3. SCOPE

The scope of a Security Threat Assessment is guided by the Security Threat Assessment (STA) Standard (240-79537982) in consultation with the Client and according to their needs.

The establishment of a 5x500MVA 400/132kV Mulalo (Wonderkrag) substation.

Establishment of Mulalo Substation involves the following remote ends and substations: Tutuka Power Station, Kriel Power Station, Zeus Substation, Sasol 3 (East), Sasol 2 (West) and associated new power lines.

Sasol OCGT (Amafutha) substation and associated new power lines to Sol Substation as the remote end. Establish 400/132kV Mulalo Substation and infrastructure 400kV Busbars

- 132kV Busbars
- 4 x 400kV feeder bays (Diameters)
- 5 x 500MVA 400kV transformer bays (Diameters)
- 5 x 500MVA 132kV transformer bays
- Move and install 1 x 500MVA transformer from Sol to Mulalo

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#### 4. CONTEXT OF THE STA METHODOLOGY

The STA methodology is based on a systematic and guided approach as set by the Security Threat Assessment (STA) Standard (240-79537982) that compliments legal compliance. As part of the assessment a study is conducted on the Micro and Macro environments and all the related PESTEL elements thereof that may affect security, site or regional operations of the organisation. The STA forms the basis for a security design and is the most important aspect in determining where and how to treat the security threats as part of a security design. In addition, the STA assists with the identification of the most appropriate and needed security control measures to effectively manage security threats by reducing the probability and/or impact of any uncertain event where threats against the organisation's assets and resources are evident.

#### 5. THREAT PROFILE

##### 5.1. Environmental Scanning results

a) **Number of Employees** : Unknown

b) **Number of Visitors / Clients** : Unknown

##### c) **Political Circumstances**

The municipal council consists of sixty-three members elected by mixed-member proportional representation. Thirty-two councillors are elected by first-past-the-post voting in thirty-two wards, while the remaining thirty-one are chosen from party lists so that the total number of party representatives is proportional to the number of votes received. In the election of 3 August 2016 the African National Congress (ANC) won a majority of thirty-six seats on the council. The following table shows the results of the election. African National Congress 36, Democratic Alliance 15, Economic Freedom Fighters 9, Freedom Front Plus 2 and Sakhisizwe Progressive Movement 1

##### d) **Socio-Economic Circumstances**

As coal is the main ingredient for the industrial process, Sasol Two had to be developed around a coal field. The four coal mines, namely Brandspruit, Middelbult, Bosjesspruit, and Twistdraai, form the largest underground coal mining complex in South Africa and annually supply approximately 37, 3 million tons of coal to Sasol Synthetic Fuels. A further two mines; Impumelelo (2014) and Shondoni (2015) were opened to help supply a total of a third of the country's coal for the project. Secunda consist of mainly lower income workers, working in the mines and Sasol. Unemployment is a major problem in Secunda and surrounding areas as to the rest of the country.

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#### e) Demography

The town has approximately 40,198 inhabitants, with an estimated 118,889 people living in nearby township, named eMbalenhle - meaning "pretty flower". The town has experienced significant growth in the past few years due to the expansions underway at the Sasol complexes.

• Black African	20.6%
• Coloured	3.8%
• Indian/Asian	3.0%
• White	71.9%
• Other	0.7%

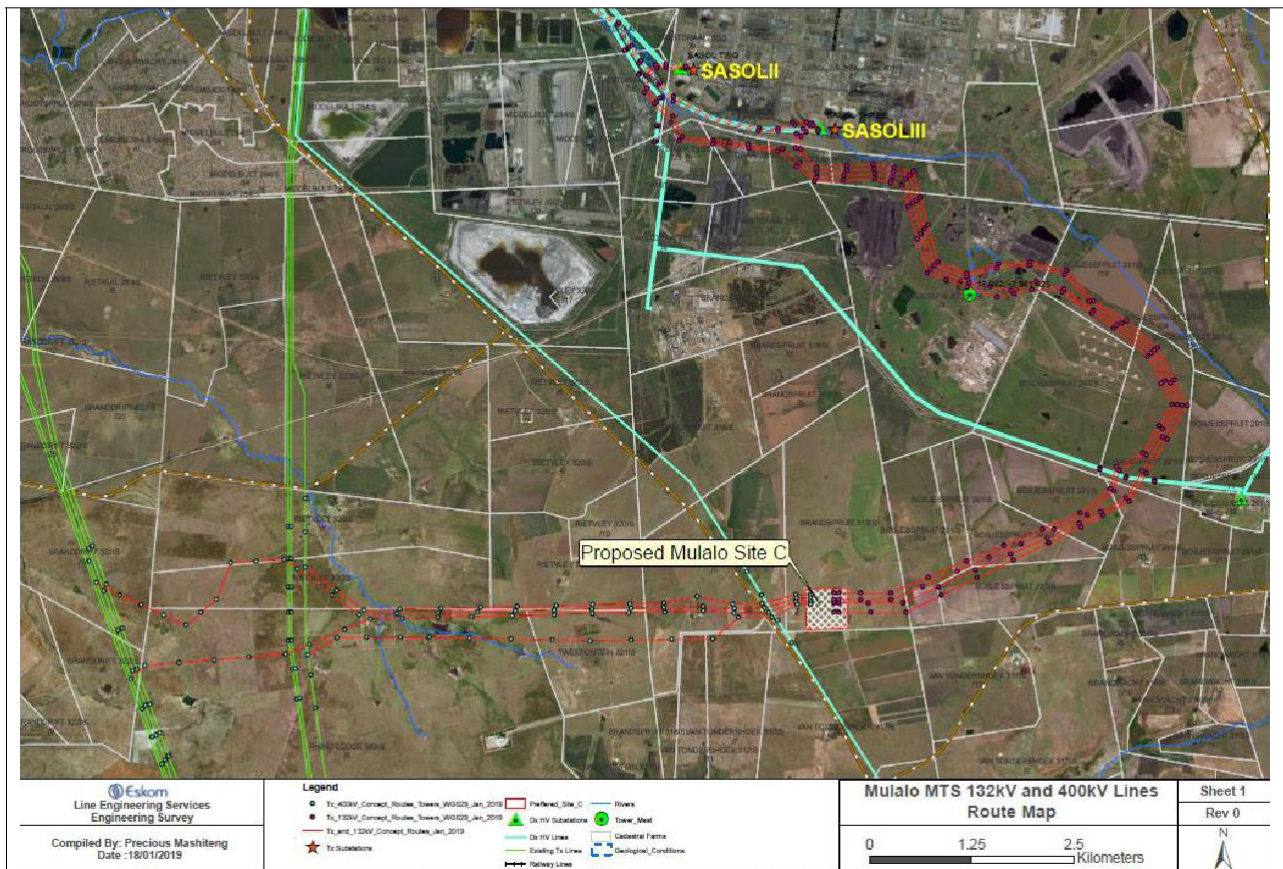
#### 5.2. Site Details

a) Area or Address of Site	: Brand spruit 318– IS Portion 2
b) Sector / Part of Site	: Tx
c) Coordinates Latitude	: 26°37'2.73" S
d) Coordinates Longitude	: 29°9'49.89" E
e) Site Description	: Greenfields

#### f) Additional comments of Site or Area

- Sol Substation (Projection upgrades only),
- Tutuka Power Station (Projection upgrades only),
- Kriel Power Station (Projection upgrades only),
- Zeus Substation (Projection upgrades only),
- Sasol 3 (East) (Projection upgrades only),
- Sasol 2 (West) (Projection upgrades only) and associated new power lines.
- Sasol OCGT (Amafutha) substation (New HV yard within Sasol) and associated new power lines.

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#### g) Site Map / Geographical Map (Visual Representation of Site or Area)

### 5.3. Asset Identification

#### a) Project material

There is no project material on site.

#### b) Maintenance Material

There is no maintenance material on site.

#### c) Equipment

There is no equipment on site.

#### d) Carports

No carports on site.

#### e) Buildings

There is no building on site.

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#### f) Vegetation

The farmer does vegetation control.

### 6. CRIME SATITISTICS OF SITE OR AREA (*Crime Statistics Worksheet*)

	2016	2017	2018
Murder	6	2	1
Sexual Offences	10	18	25
Attempted murder	8	3	5
Assault with the intent to inflict grievous bodily harm	39	42	28
Common assault	131	132	146
Common robbery	63	48	47
Robbery with aggravating circumstances	58	37	43
Arson	1	1	0
Malicious damage to property	44	60	57
Burglary at non- residential premises	111	98	83
Burglary at residential premises	633	727	602
Theft of motor vehicle/motorcycle	51	64	97
Theft out of or from motor vehicle	216	193	169
Illegal possession of firearms and ammunition	1	1	1
Drug-related crime	131	151	161
Driving under the influence of alcohol or drugs	39	33	32
Commercial crime	225	252	354
Carjacking	4	1	4
Robberies at residential premises	11	6	5
Robberies at non-residential premises	11	7	7



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#	1	Threat (What and when?)	Robbery / Theft			
Asset; processes; people; information; plant building equipment etc.			Access Gate / Motor Vehicle / People			
Place (Where?)			Wonderkrag substation			
Modus Operandi (Where and When?)			<ul style="list-style-type: none"> <li>Day and Night</li> <li>Main Access Gate</li> <li>Organised crime , Bread and butter thieves</li> </ul>			
Aggressor (Who?)			Criminal / Community			
Probability (likelihood)	9	Consequence (Impact)	4	Threat Index (1 -10)	4	

#	2	Threat (What and when?)	Malicious Damage to Property / Burglary			
Asset; processes; people; information; plant building equipment etc.			Control Room / Equipment Room			
Place (Where?)			Wonderkrag Substation			
Modus Operandi (Where and When?)			<ul style="list-style-type: none"> <li>Server Room</li> <li>Day and Night</li> <li>Plant Sabotage</li> </ul>			
Aggressor (Who?)			Criminal / Community / Employee			
Probability (likelihood)	7	Consequence (Impact)	2	Threat Index (1 -10)	4	

#	3	Threat (What and when?)	Assault			
Asset; processes; people; information; plant building equipment etc.			Main access gate / Control Room			
Place (Where?)			Wonderkrag Substation			
Modus Operandi (Where and When?)			<ul style="list-style-type: none"> <li>Day and Night</li> <li>Control Room</li> </ul>			
Aggressor (Who?)			Criminal / Community / Employee			
Probability (likelihood)	6	Consequence (Impact)	2	Threat Index (1 -10)	4	

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## 7. CURRENTS SECURITY CONTROLS MEASURES IMPLEMENTED

The current security controls security measures was recorded and evaluated during the STA.

#	1	Security Control Measure - Type						
		Security Control Measure – Description						
		Threat Control Effectiveness	FE		ME		MI	
							None	

Legend					
FE	Fully Effective	ME	Mostly Effective	MI	Mostly Ineffective

## 8. THREAT ASSESSMENT RESULTS

SECURITY THREAT ASSESSMENT							
#	Asset Description	Threats	Type of Compromise	Probability	Consequences	Impact	Threat Index
1	Equipment	Theft / Malicious Damage to Property	Destruction / Loss	8	Financial Losses	Serious	5
2	Plant /Buildings	Arson / Malicious Damage to Property / Sabotage	Destruction / Interruption / Loss of Asset	7	Interruption of supply	Severe	4.5
3	Material	Arson / Theft / Malicious Damage to Property / Sabotage	Destruction / Interruption / Loss of Asset	7	Financial Losses	Serious	5

Legend						
Threats	Who	What	When	Where	Why	How

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Type of Compromise	Disclosure		Modification		Destruction		Removal		Interruption		Injury	
Probability	Low (1-6)					Medium (7 -9)				High (10)		
Consequence	Privacy			Trust			Asset				Service	
Impact	Trivial				Serious				Severe			
Threat Index	1	2	3	4	5	6	7	8	9			

PROBABILITY RATING	8
ORGANISATIONAL IMPACT LEVEL	5
VULNERABILITY LEVEL	Low
THREAT INDEX	4

## 9. THREAT AND RISK ASSESSMENT VALIDITY (6 Months)

Date of assessment (YYYY-MM-DD)	09/2020
Validity date (YYYY-MM-DD)	09/2022

## 10. DETAILS OF ASSESSMENT TEAM

#	NAME	DESIGNATION
1	Noel Smouse	Security

## 11. RECOMMENDATIONS

It is the prerogative of the Client / asset owner to decide on how to treat the security threats specifically or collectively and how to manage the related risks arises from the threats as described in this document. Based on the information gathered during the threat assessment, the following recommendations need to be considered for improvement of security control measures:

**CONTROLLED DISCLOSURE**



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#	Security Measures Type	Recommendations
1	Physical Security Line Patrols	The provision of Physical Security Line Patrols to patrol the area (servitude) to keep the servitude free from illegal land invaders
2	Community Engagement Forum	Ongoing engagement with the community to report on illegal land invaders and get assistance. (Security Advisors to be part of these meetings)
3	Physical measures	Placing of concrete pillars to mark the servitude to prevent illegal building of houses
4	Terrace	<ul style="list-style-type: none"> <li>• Single Tier clear view fence with barbwire on top</li> <li>• Security lightning at perimeter fence</li> <li>• CCTV with a monitoring facility at the main access point</li> <li>• Main access entrance with access control</li> </ul>
5	Document control	Strict document control for material and equipment entering and leaving site.

#	Security Measures Type	Recommendations
1	Security Lightning	<ul style="list-style-type: none"> <li>• The lighting for the perimeter should be in line with the Eskom lighting for perimeter security (240-91252455) standard.</li> </ul>
2	CCTV Cameras	<ul style="list-style-type: none"> <li>• CCTV installation at access control gate, stockyard, perimeter fence, control room which should be in line with the Specifications for CCTV surveillance with intruder detection, Eskom Standard 240-91190304.</li> </ul>
3	Access Control	<b>Main Access Gate</b> <ul style="list-style-type: none"> <li>• Contractor and visitors must complete all personal details into the access control register on entry and exit of the site.</li> <li>• Eskom employees, Contractors, Visitors or vehicles entering the site must have proper authorisation to do so.</li> <li>• The physical access control must be in line with the Eskom integrated access control system standard (IAC 31-1134).</li> </ul>
4	Intrusion Detection Beams	<ul style="list-style-type: none"> <li>• Perimeter Fence</li> </ul>
5	None-Lethal Energized Fence	<ul style="list-style-type: none"> <li>• Perimeter Fence</li> <li>• Must be in line with Eskom NLEPDS 240-78980848</li> </ul>
	Control Room	<ul style="list-style-type: none"> <li>• Control room area needs to be allocated at the main entrance for proper access and egress control with the necessary registers</li> <li>• The occupants of control room will be there to monitor the cameras</li> <li>• The control room must meet Eskom's minimum control room standard</li> </ul>

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It is further recommended that if threats are rated with a high probability, impact or high frequency of occurrence, the Client need to consult with their designated Risk Manager to conduct an Integrated Risk Management Assessment.

## 12. DISCLAIMER & CONFIDENTIALITY

The contents of this threat assessment are strictly confidential. The report is solely intended for the use of the addressee(s) named herein. It is, however advised that should management decide to submit this assessment, in whole or in part, to any other party outside of the mentioned addressee(s), such a decision should be made after consultation with this BU / department. This assessment is compiled solely to address the engagement agreed upon and endorsed herein. Any copying, disclosure or publication of this assessment in whole or in part or in any form whatsoever, without the writer`s consent, is strictly prohibited.

Yours sincerely



**Noel Smouse**

**Officer Security (PDP)**

25 November 2020



**Julie Cheerkoot**

**Middle Manager**

**Security: Transmission Division**

25 November 2020