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SECURITY THREAT ASSESSMENT (STA) REPORT: Erica MTS and Philippi-Erica 400kV Line

1. INTRODUCTION

The Eskom's infrastructure programme has seen numerous threatening acts from the communities it operates from which has put the safety of personnel and equipment at risk. With the critical challenges in an ever-changing socio-economic environment, with increased application of expertise, technology and brutal force within criminal ranks, it has become essential to implement a fully integrated security strategy that will facilitate safe deliver of Tx Operations.

Power Delivery Projects is to construct the Erica MTS and Philippi-Erica 400kV Line (City of Cape Town Strengthening). An STA was conducted to assist the project management team to better understand the current security threat profile of the area where the project is to be executed.

2. MANDATE

The security mandate is to ensure effectiveness of Eskom security performance by providing a strategic framework for the identification, remediation and management of security risks affecting Eskom's personnel, assets, critical systems, operations sustainability and reputation. This plan has been developed to enable pro-activeness and capabilities of preventing crime that intends to hijack the operations, reinforced cost effective security operations, innovation, technology, efficient use of resources and effective business processes that will enable operations with minimal challenges that may pose a risk to project completion. This security plan will play a key role in legal compliance and risk management and ensuring the security of project employees and assets.

3. SCOPE

The scope of a Security Threat Assessment is guided by the Security Threat Assessment (STA) Standard (240-79537982) in consultation with the project manager. The project scope is to:

- Establishment of a new 400/132kV 2 x 500MVA Substation (Erica)
- Installation of 2 x 400/132 500MVA transformers
- Establishment of 4 x 132kV Feeders

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- Construction of a 10km 400kV line from Philippi Substation to Erica Substation.

This report therefore:

- Identifies and describes any evident threats identified that may affect the project's accountable and responsible business function(s).
- It will further enable the team 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
- It 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)" an STA will be conducted at least bi-annually for all sites, regions and areas where operations are executed.

4. CONTEXT OF THE STA METHODOLOGY

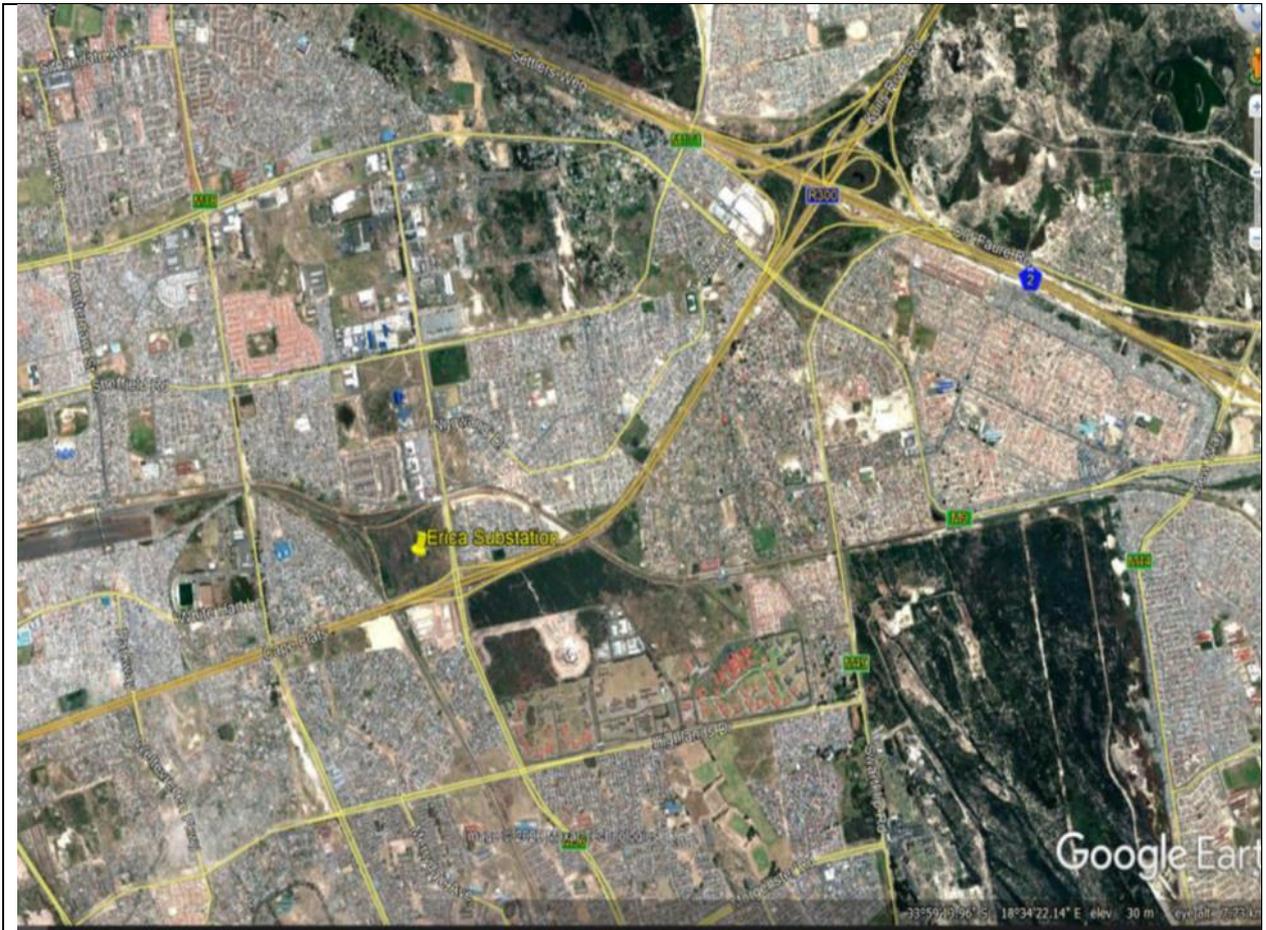
The STA methodology is based on a systematic and guided approach as set by the Security Threat Assessment (STA) Standard (240-79537982) that compliments legal compliance. As part of the assessment, a study is conducted on the Micro and Macro environments and all the related PESTEL elements thereof that 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. Site or Area

Erica Substation is a Greenfields and is situated on the boundary of Mitchells Plain, Philippi East and Lentegour

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

5.2 Environmental Scanning results

a) Number of Employees : Unknown

b) Number of Visitors / Clients : Unknown

c) Political Circumstances

The project is to be constructed in Cape Town in Mitchells Plane Township. The area is politically contested by the Democratic Party (DA) and the African National Congress (ANC) with a dominance of the DA. Ms Washiela is the DA's candidate and has been a resident of Mitchells Plain for 30 years. She is a PR Councillor (Proportional Councillor) and already serves the residents of Ward 82. The ward is a DA stronghold

d) Socio-Economic Circumstances (Philippi, Lentegour and Mitchells Plain)

Mitchells Plain was created by the apartheid government in the early 1970s as a Coloured township for middle-income families. The township was laid out in terms of the neighbourhood

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unit concept with large open spaces, localised public facilities and wide arterial routes. Various forms of housing were provided including, freestanding, semi-detached and duplex housing. However, by the late 80's and 90's, major areas of Mitchells Plain deteriorated into urban ghettos. Gangsters and drug abuse has increased and a number of informal settlements has sprung up in several areas. Today Mitchells Plain is one of Cape Town's and South Africa's largest townships with a population of about 290,000 people.

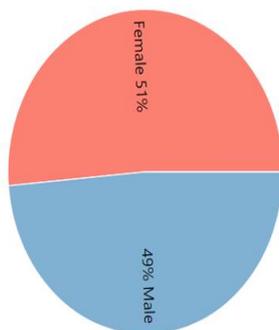
In terms of economic activity, investment is primarily in retail development with Mitchell's Plain being considered as having the strongest level of investment on the Cape Flats.

It has a central business district (CBD), locally called the "Town Centre" and three large shopping centres; Promenade Shopping Centre on AZ Berman Drive, Westgate Mall on the corner of Morgenster and Vanguard Drive and Watergate Shopping Centre, completed in 2017, on the corner of the Cape Flats Freeway (R300) and AZ Berman Drive. The Promenade Shopping Centre is the largest with more than 120 stores comprising major clothing, furniture, banks and restaurant chains. Informal economic activity is a significant part of the local economy. Such activity reflects a dominance of retail functions with informal trading responding to market and thus concentrated around the main public transport interchanges and along heavily utilised pedestrian routes.

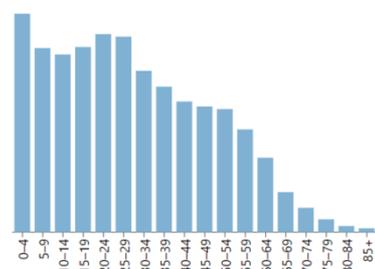
Philippi faces many social problems, including lack of education, violent crime, substance abuse, environmental degradation and a rise in the number of residents with HIV/AIDS. Schools in Philippi are often overcrowded, with low pass rates and are under-resourced with few extra-curricular activities available to students. The average household income is R3, 200 or less, indicating that many residents holds low income jobs or lives on social grants. Successful graduates often move away from the township, leaving learners with few role models and little motivation to challenge local job seeking behaviours or believe that they can make something of themselves. Lack of information, networks and opportunities trap many into continued poverty and under-productivity.

e) Demography

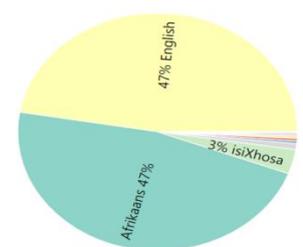
Gender



Age



First language



5.2. Site Details

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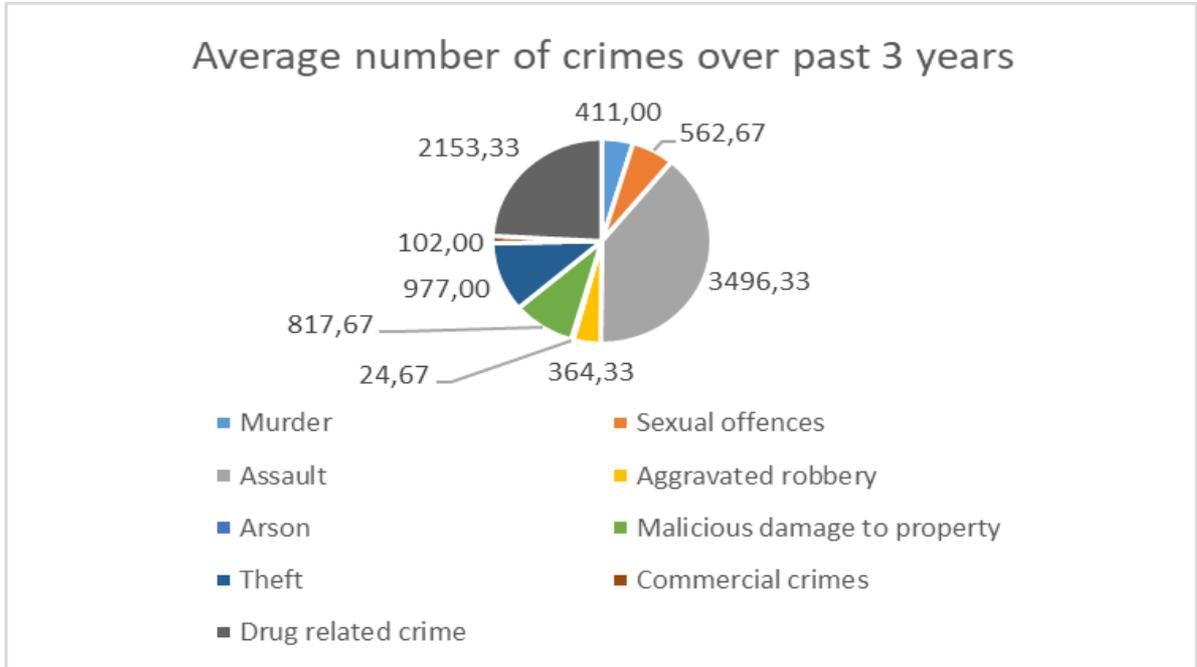
- a) Area or Address of Site : Erica Substation b) Sector / Part of Site : Substation
c) Coordinates Latitude : 34o 01' 1.5"S d) Coordinates Longitude : 18o 36' 12.4" E.

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.
f) Vegetation -The farmer does vegetation control.

6. CRIME SATITISTICS OF SITE OR AREA (*Crime Statistics for Philippi*)



#	1	Threat (What and when?)	Robbery / Theft			
Asset; processes; people; information; plant building equipment etc.		Access Gate, construction material / Motor Vehicle				
Place (Where?)		Erica Substation				
Modus Operandi (Where and When?)		<ul style="list-style-type: none"> Day and Night Main Access Gate Organised crime , Bread and butter thieves 				
Aggressor (Who?)		Criminals				
Probability (likelihood)	8	Consequence (Impact)	trivial	Threat Index (1 -10)	6	

#	2	Threat (What and when?)	Malicious Damage to Property			
Asset; processes; people; information; plant building equipment etc.		Control Room / Equipment Room				
Place (Where?)		Erica Substation				

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Modus Operandi (Where and When?)		<ul style="list-style-type: none"> Laydown area / Site Camp /Site Offices Day and Night Plant Sabotage 			
Aggressor (Who?)		Criminal / Community / Employee			
Probability (likelihood)	7	Consequence (Impact)	Serious	Threat Index (1 -10)	6

#	3	Threat (What and when?)	Assault		
Asset; processes; people; information; plant building equipment etc.		Main access gate / Control Room			
Place (Where?)		Erica Substation			
Modus Operandi (Where and When?)		<ul style="list-style-type: none"> Day and Night Control Room /Site Offices Employees 			
Aggressor (Who?)		Criminal / Community / Employees			
Probability (likelihood)	9	Consequence (Impact)	Serious	Threat Index (1 -10)	7

#	4	Threat (What and when?)	Community unrest, political interference		
Asset; processes; people; information; plant building equipment etc.		Access Gate, construction material / Motor Vehicle / employees			
Place (Where?)		Erica Substation			
Modus Operandi (Where and When?)		<ul style="list-style-type: none"> Day and Night Main Access Gate Organised crime 			
Aggressor (Who?)		Criminals / Community			
Probability (likelihood)	8	Consequence (Impact)	trivial	Threat Index (1 -10)	8

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7. CURRENTS SECURITY CONTROLS MEASURES IMPLEMENTED

There is currently no control measures on site (New Build Project)

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	6
2	Plant /Buildings	Arson / Malicious Damage to Property / Sabotage	Destruction / Interruption / Loss of Asset	7	Interruption of supply	Severe	7
3	Material	Arson / Theft / Malicious Damage to Property / Sabotage	Destruction / Interruption / Loss of Asset	8	Financial Losses	Severe	8
4	Project activities	Community unrest/riot/ organised crime	Destruction / Interruption / Loss of Asset	8	Increased project costs and changes to project construction schedule	Severe	8

Legend									
Threats	Who	What	When	Where	Why	How			
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

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PROBAILITY RATING	8
ORGANISATIONAL IMPACT LEVEL	5
VULNERABILITY LEVEL	Low
THREAT INDEX	6

9. THREAT AND RISK ASSESSMENT VALIDITY *(12 Months from date of approval)*

Date of assessment (YYYY-MM-DD)	23 – 02 - 2021
Due date (YYYY-MM-DD)	

10. DETAILS OF ASSESSMENT TEAM

#	NAME	DESIGNATION
1	Noel Smouse	Security Officer

11. RECOMMENDATIONS

The project manager with security personnel have to strategies how to treat the security threats specifically or collectively and how to manage the related risks arising 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:

#	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 as well as placing of notice boards aimed at ownership visibility to prevent illegal building of houses

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		Concrete wall around the servitude
4	Laydown Area	<ul style="list-style-type: none"> • Single Tier clear view fence with barbwire on top • Security lightning at perimeter fence • CCTV with a monitoring facility at the main access point • Main access entrance with access control
5	Document control	Strict document control for material and equipment entering and leaving site.

6	Security Lightning	<ul style="list-style-type: none"> • The lighting for the perimeter should be in line with the Eskom lighting for perimeter security (240-91252455) standard.
7	CCTV Cameras	<ul style="list-style-type: none"> • 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.
8	Access Control	<p>Main Access Gate</p> <ul style="list-style-type: none"> • Contractor and visitors must complete all personal details into the access control register on entry and exit of the site. • Eskom employees, Contractors, Visitors or vehicles entering the site must have proper authorisation to do so. • The physical access control must be in line with the Eskom integrated access control system standard (IAC 31-1134).
9	Intrusion Detection Beams	<ul style="list-style-type: none"> • Perimeter Fence
10	None-Lethal Energized Fence	<ul style="list-style-type: none"> • Perimeter Fence • Must be in line with Eskom NLEPDS 240-78980848
11	Control Room	<ul style="list-style-type: none"> • Control room area needs to be allocated at the main entrance for proper access and egress control with the necessary registers • The occupants of control room will be there to monitor the cameras • The control room must meet Eskom's minimum control room standard
12	Physical guarding	<ul style="list-style-type: none"> • Placement of physical personnel to manage access control • Hiring of armed guards to for plant guarding and for tactical response in instances of riots

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 a continuous Integrated Risk Management Assessment.

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Approved by: Supported by:	Julie Cheerkoot 	Middle Manager Security Transmission Division	Date 10 March 2021
Received by:	Rod Speedy	Project Development	Date: