



Scope of work

Group Technology

Title: **SCOPE OF WORK FOR THE
REMOVAL AND
REPLACEMENT OF
ASBESTOS MATERIALS IN
THE NORTHEAST GRID**

Unique Identifier: **ALPH24P15-SE-E82**

Alternative Reference Number: **NA**

Area of Applicability: **Engineering**

Documentation Type: **Standard**

Revision: **3**

Total Pages: **11**

Next Review Date: **NA**

Disclosure Classification: **CONTROLLED
DISCLOSURE**

Compiled by

S. Sibiya
Snr Advisor: Architecture
Substation Engineering

Date: 14-10-2025

Functional Responsibility

P. Mvuyana
Chief Engineer
Substation Engineering

Date: 16-10-25

Authorised by

A. Maneli
Middle Manager
Substation Engineering

Date: 16 - 10 - 2025

CONTENTS

	Page
1. INTRODUCTION.....	3
2. REFERENCES.....	3
3. SCOPE OF WORK	4
3.1 IDENTIFIED SUBSTATIONS.....	4
3.2 DETAILED SCOPE PER BUILDING	5
3.3 REPLACEMENT MATERIALS & SPECIFICATION	8
4. DRAWINGS LIST	10
4.1 AS-BUILT DRAWINGS	10
4.2 LIGHTING INSTALLATION DRAWINGS	10
5. AUTHORISATION	11
6. REVISIONS.....	11
7. DEVELOPMENT TEAM.....	11

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the database.

1. INTRODUCTION

The initiation of this project is motivated based on Eskom's commitment to the compliance of legal and other requirements and to ensure that occupational health and safety risks to Eskom employees and contractors are eliminated or reduced.

In compliance to the requirements of the occupational health and safety act (Act 85 of 1993), Asbestos Regulations GNR, 155 of 10 February 2002, asbestos containing materials at substations in the North East Grid (NEG) grid were identified. Asbestos containing materials were found to be in the form of trench covers, fascia boards, gutters, roof, ceilings, walls, downpipes, tanks and sleeve pipes. The project will ensure safe processing, handling, storing, disposal and phase-out of asbestos materials.

A national asbestos phase out initiative was created to ensure that all asbestos and asbestos containing material are phased out by the end of 2033 within the entire Eskom business unit.

2. REFERENCES

- [1] 240-55922824 Substation layout design guidelines
- [2] Occupational health and safety act (OHS Act) 85 of 1993
- [3] (32-1205) Eskom maintenance management policy
- [4] (TST41-794) Substation and facility maintenance
- [5] (32-727) Eskom safety, health, environment and quality policy
- [6] (32-846) Operating regulations for high voltage systems
- [7] (SANS 1200) General civil
- [8] SABS 10229-1:2010 Transport of Dangerous Goods
- [9] SABS 10231: 2019 transport of Dangerous Goods by Road
- [10] National Environmental Management Waste Act 59 of 2008
- [11] OHSA act (Act 85 of 1993)

CONTROLLED DISCLOSURE

3. SCOPE OF WORK

The scope of work entails the full development of the project to enable execution of the following high-level scope of work at the identified North east Grid (NEG) Stations:

1. Contractor rendering the below services shall be registered with the Department of Employment and Labour as an asbestos Contractor.
2. Some items in section 3.2 could and could not be asbestos material as they have not been tested, the contractor shall test for asbestos material on all items listed, items tested negative shall not be removed but finished as per the specifications.
3. Before commencement of any works, equipment in control rooms, battery rooms and carrier rooms must be protected from asbestos dust particles. The protection system must be structurally sound to handle any debris that may fall from the ceiling.
4. The protection system must provide adequate lighting and the temperature inside must be controlled to be 22°C.
5. Before the removal of ceilings, the dust layer above must be vacuumed.
6. Clean out and safely remove all asbestos containing material in the form of trench covers, fascia boards, gutters, roofs, ceilings, interior and exterior walls, tanks, down pipes and sleeve pipes.
7. Correct handling of asbestos containing materials should be always adhered to.
8. All asbestos waste shall be transported according to SABS 0228 and SABS 0229 standards and specifications.
9. Disposal shall be done through the appointment of accredited waste management service providers.
10. During the removal of asbestos material, the contractor must be responsible for the protection of the surrounding.
11. All material must be disposed at licenced hazardous waste sites.
12. Containers or vehicles in which asbestos containing material is to be transported must be clearly identified classified and packed in accordance with SABS 0228 and SABS 0229.

Transport documentation must be handled in line with the National Environmental Management Waste Act 59 of 2008 before the contract for disposal is approved.

3.1 IDENTIFIED SUBSTATIONS

1. Gumeni
2. Komatipoort
3. Marathon
4. Prarie
5. Alpha
6. Camden
7. Majuba

CONTROLLED DISCLOSURE

8. Normandie
9. Sol
10. Tutuka
11. Zeus
12. Hendrina
13. Rockdale
14. Vulcan
15. Kruispunt
16. Duvha
17. Komati

3.2 DETAILED SCOPE PER BUILDING

Substation	Building	Asbestos item	Quantity	
			Length/area	No.
Lowveld Customer Load Network (CLN)				
1. Gumeni	Control building	Barge Boards	79m	All
2. Komatipoort	132 & 275kV Buildings, Offices, Workshop, Dog kennel etc	Sleeve Pipes	20m	All
		Roof Sheetting	256m²	All
		Ceiling	670.5m²	All
		Fascia boards	51m	All
		Oil Dam pipes	26m	All
		Barge boards	31m	All
3. Marathon	Main Office, Compressor Rooms, Dog Kennels etc	Roof Sheetting	38m²	All
		Fascia boards	379m	All
		Sleeve Pipes	20m	All
		Ceiling	16.5m²	All
	PTM&C and Lines Building	Roof Sheetting	250m²	All
		Window Sills	20m	All
		Ceiling	250m²	All
4. Prairie	Control building (Excluding extension)	Ceiling	871m²	All
		Fascia boards	162m	All
		Sleeve Pipes	20m	All
HVS Customer Load Network				
5. Alpha		Windowsills (internal) (depth is ±150mm)	315m	All

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the database.

**SCOPE OF WORK FOR THE REMOVAL AND REPLACEMENT
OF ASBESTOS MATERIALS IN THE NORTHEAST GRID,
CUSTOMER LINE NETWORK**

Unique Identifier: **ALPH24P15-SE-E82**

Revision: **3**

Page: **6 of 11**

	Access Control, Offices & GIS Building	Ceiling	460m²	All
		Flowerpots	24 m²	All
		Water Tank	3m²	All
		Sleeve Pipes	20m	All
6. Camden	400kV Control Building & 275kV Storeroom	Ceiling	450m²	All
		Windowsills (int. & ext.) (depth is ±150mm)	250m	All
		Trench Covers	4 m²	All
		Fascia Board	280 m	All
7. Majuba	Office Building	Windowsills (internal) (depth is ±150mm)	6m	All
8. Normandie	Control Building & Dog Kennel	Roof Sheetting	71m²	All
		Barge boards	28 m	All
		Fascia Board	157 m	All
		Ceiling	542m²	All
		Ceiling	620m²	All
		Downpipes	78 m²	All
		Gutters	152 m²	1
		Fascia Board	271 m	All
		Drain Covers	4 m²	All
9. Sol	Storeroom, Kitchen, Toilets, Admin Office & Access Control building	Windowsills (internal) (depth is ±150mm)	78m	All
10. Tutuka	EA's Office & Control Building	Windowsills (ext.) (depth is ±150mm)	50m	All
		Fascia Board	50 m	All
		Sleeve pipes	20 m	8
		Ceiling	32m²	All
11. Zeus	Stores, Control Building & Toilets	Fascia Board	152 m	All
		Windowsills (internal) (depth is ±150mm)	28m	All
		Ceiling	80m²	All
Middleburg Customer Load Network				
12. Hendrina	400kV Control Room	Ceiling	235m²	All

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the database.

**SCOPE OF WORK FOR THE REMOVAL AND REPLACEMENT
OF ASBESTOS MATERIALS IN THE NORTHEAST GRID,
CUSTOMER LINE NETWORK**

Unique Identifier: **ALPH24P15-SE-E82**

Revision: **3**

Page: **7 of 11**

	400kV Battery Room	Ceiling	108m ²	All
	132kV Control Room	Ceiling	279m ²	All
	Control Building Offices	Ceiling	98m ²	All
		Barge Board	22 m	All
		Fascia Board	50 m	All
13. Rockdale	Control Building	Barge Board	35 m	All
		Fascia Board	115 m	All
		Ceiling	527 m ²	All
	Workshop Building	Barge Board	24 m	All
		Ceiling	102 m ²	All
		Fascia Board	28 m	All
	Access Control Building	Ceiling	70 m ²	All
		Fascia Board	22 m	All
		Barge Board	19 m	All
	Office Building	Ceiling	118 m ²	All
		Fascia Board	39 m	All
		Barge Board	15 m	All
	Boardroom Building	Ceiling	180 m ²	All
		Fascia Board	37 m	All
		Barge Board	24 m	All
Witbank Customer Load Network				
14. Kruispunt	General Stores & Bathrooms	Ceiling below Gutters	180m ²	All
	Control Building & Offices	Ceiling	450m ²	All
	Battery room & Tool Store	Ceiling	400m ²	All
		Downpipes	55m	All
15. Vulcan	Battery Room & Retaining Wall	Pipes	80m	All
	Main Building	Windowsills (internal) (depth is ±150mm)	35m	All
	Stores	Ceiling	220m ²	All
		Ceiling below Gutters	250m ²	All
		Windowsills (internal) (depth is ±150mm)	25m	All
16. Duvha	Office	Ceiling	60m ²	All

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the database.

	General Stores	Ceiling	37m ²	
	Control Building	Ceiling below Gutters	70m ²	All
		Ceiling	450m ²	All
		Pipes	40m	All
17. Komati	Flammable & General Stores	Ceiling	350m ²	All
	Supporting Buildings	Ceiling	550m ²	All
		Roof Pipes	65m	All

3.3 REPLACEMENT MATERIALS & SPECIFICATION

Roof sheeting	<p>0.4mm IBR roof sheeting with galvanised coating AZ 200, 'Chromadek' paint system, colour on one side and concealed fix system.</p> <p>Sheeting to be installed strictly according to manufacturer's specification, a five year guarantee shall be issued for workmanship and water tightness of the sheeting.</p> <p>Colour – desert sand on exterior side only.</p> <p>Any other sheeting with screw fixing is not allowed.</p>
Purlins	If required to be replaced – Hot dipped galvanised steel purlins to be primed and enamel painted and timber purlins to be replaced with 50x75mm SA pine purlins.
Fasteners	Clips for sheeting to be fixed to purlins with corrosion resistance fasteners.
Roof insulation	<p>"Sisalation FR430" heavy industrial insulation or Alucushion / bubblefoil (Fire retardant grade) polyethylene and alum. foil thermal insulation.</p> <p>Insulation to be installed under purlins.</p>
Fascia & barge boards	<p>Everite nutec boards:</p> <p>Fascia board – 80 x 200mm</p> <p>Barge board – 150 x 200 x 10 x 3000mm</p> <p>Boards are to be fastened with suitable screws. NO NAILS ALLOWED</p>
Gutters & downpipes	<p>Gutter – 150 x 150 x 0.8mm aluminium pre-painted continuous lengths gutters. This is a standard size, a large roof might require a larger gutter, Contractor to confirm sizes with Eskom prior to purchasing the item.</p> <p>Downpipes – 100 x 100mm aluminium pre-painted continuous lengths downpipes. This is a standard size, a large roof might require a larger downpipe, Contractor to confirm sizes with Eskom prior to purchasing the item.</p> <p>Colour - white</p>

CONTROLLED DISCLOSURE

Ceiling	<p>6mm Thick rhino board fixed to existing brandering complete with H-profile jointing strips and 75mm polystyrene cornices, apply white acrylic sealer between cornice & ceiling & wall.</p> <p>Painting:</p> <p>Paint one coat primer and two coats of prominent paints satin silk sheen (white base) white cloud 0702-Y</p> <p>Ceiling insulation:</p> <p>100mm thick aerolite (Think pink) or isotherm polyester ceiling insulation tightly fit between trusses.</p> <p>Where necessary add additional SAP branders at 400mm crs under truss tie-beam for support.</p> <p><u>Control room only</u></p> <p>12.5mm Rhinoboard Donn BPB gyprex lay-in exposed tee suspended ceiling system with a suspended height of 350mm below tie-beam truss.</p> <p>Ceiling tile size = 1200x600mm</p> <p>Ceiling tiles on Donn T38 exposed grid, T38 (3600) main tees at 1200 crs and T38-600 cross tees with capping of pre-painted aluminium.</p> <p>25x19mm M6 PVC cornice wall moulding.</p> <p><u>Battery room only</u></p> <p>Battery rooms new ceiling:</p> <p>4mm thick everite Nutec board fixed to existing brandering complete with H-profile jointing strips and 75mm polystyrene cornices, apply white acrylic sealer between cornice & ceiling & wall.</p> <p>Battery room ceiling paint:</p> <p>Battery room interior – Paint one coat primer and two coats of acid resistant Plascon plascoguard Geopon 3000WB series, colour – white.</p>
Windowsills	<p>175mm Fibre cement windowsills to be painted with primer and prominent paints satin silk exterior acrylic.</p> <p>Colour – match roof sheeting. (Exterior)</p> <p>Colour – crisp white. (Interior)</p>
Sleeve pipes, vent pipes and sewer pipes	Polyvinyl chloride (PVC) pipes of same size.
Trench covers	Precast concrete trench covers, Contractor to confirm trench sizes on site and match with existing concrete trench covers on site.

CONTROLLED DISCLOSURE

4. DRAWINGS LIST

4.1 AS-BUILT DRAWINGS

The following drawings are as-built drawings for control buildings in each substation to be used for information only, Contractor shall confirm dimensions and quantities on site.

ITEM	DRAWING NUMBER	SUBSTATION
-	N/A	N/A

4.2 LIGHTING INSTALLATION DRAWINGS

ITEM	DRAWING NUMBER	SUBSTATION
1	HEN24P12-SE-E40-0	Hendrina substation – 132Kv Control building lighting layout
2	HEN24P12-SE-E41-0	Hendrina substation – 400Kv Control building lighting layout
3	HEN24P12-SE-E42-0	Hendrina substation – 400Kv Control building Battery Room lighting layout
4	HEN24P12-SE-E43-0	Hendrina substation – 400Kv Control building Office lighting layout
5	KOMP24P08-SE-E43	Komatipoort substation - Workshop lighting layout
6	KOMP24P08-SE-E44	Komatipoort substation - Office lighting layout
7	KOMP24P08-SE-E45	Komatipoort substation – 132Kv Control Building lighting layout
8	KOMP24P08-SE-E46	Komatipoort substation – 275Kv Control Building lighting layout
9	MARA24P12-SE-E40	Marathon substation – Single Quarters Offices lighting layout
10	MARA24P12-SE-E41	Marathon substation – Offices lighting layout
11	MARA24P12-SE-E42	Marathon substation – Control Building lighting layout
12	PRA24P14-SE-E43	Prairie substation – Workshop Building lighting layout
13	PRA24P14-SE-E44	Prairie substation – Access Control Building lighting layout
14	PRA24P14-SE-E45	Prairie substation – Control Building lighting layout
15	ROC24P09-SE-E43	Rockdale substation – Boardroom Building lighting layout
16	ROC24P09-SE-E44	Rockdale substation – Access Control Building lighting layout
17	ROC24P09-SE-E45	Rockdale substation – Workshop & Tea Room Building lighting layout
18	ROC24P09-SE-E46	Rockdale substation – Office Building lighting layout
19	ROC24P09-SE-E47	Rockdale substation – Control Building lighting layout
20	CAM24P12-SE-E48	Camden substation – Control Building lighting layout
21	CAM24P12-SE-E49	Camden substation – Relay House lighting layout

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the database.

22	0.57-49733-0	Duvha substation – Inflammable Store lighting layout
23	DUV24P11-SE-E45	Duvha substation – Office Building lighting layout
24	DUV24P11-SE-E48	Duvha substation – Control Building lighting layout
25	DUV24P11-SE-E51	Duvha substation – Workshop Building lighting layout
26	TUTP24P10-SE-E45	Tutuka substation – Office Building lighting layout
27	KOM21P06-SE-E48	Komati substation – Control Building lighting layout
28	KRU19P07-SE-E43-03	Kruispunt substation – Access Control Building lighting layout

5. AUTHORISATION

This document has been seen and accepted by:

Name	Designation
Phenyo Mvuyana	Chief Engineer
Andile Maneli	Middle Manager - Civil

6. REVISIONS

Date	Rev.	Compiler	Remarks
20-01-2025	0	S. Gwala	First issue
17-06-2025	1	S. Gwala	Second issue Barberton station has been removed from the list. Control Building at Sol Station has been removed from the list.
30-07-2025	2	S. Gwala	Third issue Combined ceiling square meters and total lengths for fascia and barge boards at Duvha, Hendrina & Rockdale stations have been separated into individual buildings.
14-10-2025	3	S. Sibiya	Fourth issue Simplon substation removed, asbestos removal has been completed on site.

7. DEVELOPMENT TEAM

Sifiso Gwala – Chief Draughtsperson - Substations

Sipho Sebose – Senior Technologist

Anton Naude – Senior Technologist

Sibonelo Sibiya – Snr. Advisor: Architecture

CONTROLLED DISCLOSURE

When downloaded from the EDMS, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the database.