	<b>SoW</b>	<b>Camden Power Station</b>
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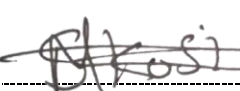

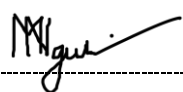
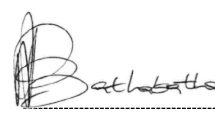
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## **1. Introduction**

Common plant/Auxiliary maintenance department is responsible for the repairs and maintenance of both surfaced and unsurfaced roads at Camden Power Station. There is a need to appoint a Contractor to execute this maintenance scope of work. The scope for the maintenance of the abovementioned roads includes performing preventative maintenance and corrective maintenance activities.

## **2. Supporting Clauses**

### **2.1 Scope**

#### **2.1.1 Purpose**

The purpose of this document is to give detailed information regarding the scope of work for the 5-year road maintenance contract.

#### **2.1.2 Applicability**

This document shall be applicable at Camden Power station.

#### **2.1.3 Effective date**

This document will be effective after it has been signed for Authorisation.

### **2.2 Normative/Informative References**

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

#### **2.2.1 Normative**

- [1] ISO 9001 Quality Management Systems
- [2] OHSACT Occupational Health and Safety Act, 85 of 1993
- [3] 240-99527377 Inspection Manual for Civil Works at Eskom's Power Stations
- [4] 240-99611535 Civil Works Inspection Status Checklist Template

#### **2.2.2 Informative**

- [5] 240-144332407: Standard for Eskom Power Stations Concrete Remedial Work
- [6] 240-142483465: Guidelines on Maintenance and Rehabilitation of Roads
- [7] Southern African Development Community document
- [8] TRH7: Use of bitumen emulsions in the construction and maintenance of roads

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[9] CSIR Potholes: Technical Guide to their Causes, Identification and Repair

[10] TMH09: Pavement Management Systems- Standard Visual Assessment Manual for Flexible Pavements.

[11] TMH12: Pavement Management Systems: Standard Visual Assessment Manual for Unsealed Roads

[12] SANRAL Routine Road Maintenance Manual

## **2.3 Definitions**

N/A

## **2.4 Abbreviations**

<b>Abbreviation</b>	<b>Explanation</b>
CPS	Camden Power Station
ITP	Inspection, Testing Plan
ISO	International Organization for Standardization.
OHSACT	Occupational Health and Safety Act.
PPE	Personal Protective Equipment.
QCP	Quality Control Procedure.
SANS	South African National Standards.
SADC	Southern African Development Community.
TMH/TRH	Technical Methods for Highways/Technical Recommendations for Highways

## **2.5 Roles and Responsibilities**

### **2.5.1 Employer**

The Employer shall ensure the following:

- a) Develop the scope of work.
- b) Perform supervision of daily activities during execution and ensure adherence to safety and environmental compliance.
- c) Inform and issue the Contractor with the updated maintenance strategy.
- d) Performance is measured by the Employer against those areas which contribute to the Employer's business and the Contractor shall ensure compliance to such measures (e.g. reliability, availability, and safety).
- e) Areas of measurement include the Employer's key business indicators and will be redefined from time to time.
- f) Review and approves the Contractor's construction method statement procedure, QCP and ITP
- g) Is present for all applicable points of the ITP.
- h) Provide Engineering and Maintenance support for information required by the Contractor.

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i) The Employer and Contractor in this SOW is committed towards the following:

- Retention of critical skills
- Continuous cost reduction
- Health and environment safety

### **2.5.2 Contractor**

The Principal Contractor shall ensure the following:

- a) Execute the defined scope according to contractual agreement.
- b) All Contractor employees shall comply with Eskom's policies and site regulations, including non-use of cell phones in restricted areas, adherence to Eskom's life-saving rules, adherence to Generation Occurrence Management Procedure, no smoking policy, Camden maintenance user requirement specification, etc. These requirements will be detailed during the induction training process and are stipulated in the referenced documents and their references.
- c) The Contractor shall comply with the Employer's Environmental, Health and Safety standards, policies, and procedures.
- d) The Contractor shall be responsible for all works as per Employer's instructions, processes, and systems.
- e) The Contractor is to ensure that any service rendered does not interfere with the Employer's scheduled work and should align himself with the Employer's work control management process.

## **2.6 Process for Monitoring**

All activities shall be done and be checked as per the Quality Control plan/s to be developed by the Contractor and be accepted by the Client for the specific activities.

## **2.7 Related/Supporting Documents**

As per 2.2

## **3. Scope of Work**

### **3.1.1 Site description**

Camden Power Station is located 18km south of Ermelo Town along the N2 road. The Power Station has internal and external roads network which provide access to the Station and transportation of goods, materials, equipment, and personnel. Roads cover some aspect of traffic engineering which includes traffic signs, the pavement, stormwater structures (side channels & culverts), and barricades. Camden has both gravel and surfaced roads that fall within this maintenance scope of work.

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The 5-year road maintenance contract is required to conduct preventative maintenance and corrective maintenance activities on these. Over and above the maintenance of the already built roads (e.g. drainage structures), the Contractor is required to execute modifications and new installations issued to the Contractor by the engineering department during the period of the road maintenance contract.

### **3.1.2 Works to be executed.**

#### **3.1.2.1 Gravel and Asphalt roads:**

The access roads to Camden Power Station are being used by employees to reach the workplace and for goods transportation. These roads require frequent maintenance to prolong the life span of the roadbed and to ensure safety of the road users. The road network is approximately 25km long, with 7.88km being Asphalt and 16.88km being gravel roads. The average width of the roads is 6m.

Below is a list of the defects that are common on the asphalt roads:

- Potholes.
- Crocodile cracks.
- Longitudinal and transverse cracks.
- Edge breaking.
- Settlements.
- Rutting.
- Fading road marking.
- Water ponding due to loss of cross fall and blocked/damaged culverts and drainage inlets.
- Damaged side kerbs.
- Damaged paved sidewalks.
- Missing cat eyes on oak road.
- Damaged/missing guard rails

Silted and vegetated side drains and culverts Below is

a list of the defects on the gravel roads:

- Water Ponding due to improper drainage because of loss of cross-sectional shape of the road.
- Blocked culverts and damaged and/or highly vegetated side drains.
- Dust generation from the roads.
- Depressions on the road.

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As part of the maintenance contract, the Contractor is required to ensure that the above are addressed, the methods adopted for the repairs are to be in line with the applicable standards listed in section **2.2.2** of this document.

This includes:

### **3.1.2.2 Asphalt Roads**

#### Repairs

- Large & small Pothole and patch repairs.
- Sealing of surface cracks.
- Milling and overlays.
- Replacement of damaged and missing guard rails.

#### Road Marking

Contractor to make provision for both thermoplastic and acrylic water-based road making paint for all three colors (white, red, and yellow). Road marking to be done as and when required. The marking to include but not limited to:

- STOP word markings on asphalt roads and block paving.
- Yield markings on asphalt roads and block paving.
- Guidance Road studs.
- Paraplegic parking symbols.
- Continuous lines (no overtaking) in the middle of the asphalt roads.
- Broken lines (overtaking) in the middle of the asphalt roads.
- Directional arrows on asphalt roads.
- Directional arrows on block paving.
- Islands marking on asphalt roads and on block paved parking areas.
- Block Pedestrian crossing markings on asphalt roads.
- Continuous lines on the edges/ kerbings of the road.

Warning markings.

5m solid lines on parking bays (asphalt & block paving).

The surface preparation and application of the paint including the dimensions for the above markings) shall be done according to the latest revision of the Southern African Development Community document (SADC RTSM). In addition to the abovementioned colours, the contractor to make provision for black paint for the removal of errors.

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Maintenance on drainage structures.

This shall include:

- Reinstating side drains on gravel shoulders
- Cleaning of side drains and culverts.
- Concrete repairs (patching and resealing of expansion joints) on the above and kerbing.

**3.1.2.3 Gravel Roads**

Repairs

- Filling and compaction of distressed sections of the road.
- Blading of the road on an as and when required bases to reinstate the cross section of the road.

Dust suppression

- This shall be done using a chemical dust suppressant for haul roads. The road preparations and application of the product shall be in accordance with the technical datasheet of the chemical product supplied, this includes the mixing of the product for the best performance results. Proposed chemicals shall allow for timeous return of traffic after application on the road. The proposed product shall not harm or pollute the environment. All products shall be sent to Eskom for acceptance prior to application.

Maintenance on drainage structures.

This shall include

- Reinstating side drains next to the gravel shoulders
- Cleaning of side drains and culverts.
- Replacement of damaged and missing guard rails to protect the side drains from being driven over.

The Contractor is expected to supply all required material and equipment for the repairs on an as and when required bases. This includes but not limited to; chemical dust suppressant, road marking paint (acrylic and thermoplastic paint), cat eyes, hot and cold asphalt mixes, concrete (30MPa), joint sealants, paving bricks, kerbing, guardrails (to include the supports), G2 and G5 material, yellow plant for the works, etc. In addition to the above, all temporary works (traffic control) during the repair or road marking works shall be supplied and be conducted by the Contractor.

**NB!** All the works to be done under section 3.1.2 shall be accompanied by a quality control plan that will be tracked by both the contractor and an Eskom representative. Defect close out shall be accepted once the QCP for the works has been signed by all parties.

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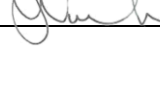
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#### 4. Acceptance

This document has been accepted by

Name and Surname	Designation	Signature
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Patrick Shange	Common Plant Maintenance Senior Technician	
Riaan Venter	Chief Engineer – Civil and Structural Engineering, Generation Engineering	

#### 5. Revisions

Date	Rev.	Compiler	Remarks
17/02/2025	01	D.S Nkosi	Original SoW

#### 6. Development Team

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

#### 7. Acknowledgements

N/A

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