	Report	TRANSMISSION
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Title: **Guy anchor link restoration Scope of Work – Western Grid**

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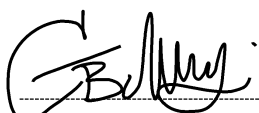
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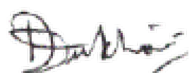
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1. PROJECT DETAILS

Project Description	Multiple Lines (Enabling Project)					
Project No.'s	ID		WBS		Rev	1
Operating Unit & Project Office:	Transmission: AME			Western Grid		
Project Manager:	Tony Baloka					
Program Manager:						
Project Sponsor / Client Representative:	Western Grid					
Engineer / Discipline Manager:	Thabo Baloyi / Tebogo Bhulose					
PLCM Phase	ERA					

2. INTRODUCTION TO THE SCOPE STATEMENT

The purpose of this Scope of Work document is to set out the remedial measures needed to increase the life expectancy of the Cross-rope or Guyed Vee towers and to minimise the risk of a possible tower and line failure. This will be done through the restoration and treatment of the guy anchor links for various states of corrosion.

All activities that are performed by the contractor should be recorded and assist the engineer in evaluating the method statements and Safe Work Procedure prescribed by the contractor. The use of cameras to record the activities should be promoted during the Guy anchor restoration and contractors should price for such activities.

(Note: This Specification is valid for lines in the Western Grid. Eskom LES must be consulted per project to check if the information in this specification is applicable to that particular project scope.)

3. NORMATIVE REFERENCE

1. SANS 10280-1:2017 – Overhead power lines for conditions prevailing in South Africa
2. 240-47172520 – The Standard for the Construction of Overhead Powerlines (TRMSCAAC 6)

4. PROJECT SCOPE DESCRIPTION (PROGRESSIVELY ELABORATED)

The contract must investigate all guyed structures on each line. They must document the types and number of foundations found on the line.

The contractor must expose all the cross-rope foundation that do not have adequate concrete protrusion out of the NGL. Once the type of the foundation has been determined, the following scope of work must be followed:

Inclined Pile Anchor Foundations:

- Induction and Risk assessment (Access to Farm)
- Site establishment (Only where agreed in writing with landowner, otherwise no site establishment on private property unless the use of landowner consent form is signed)
- Excavate the foundation to investigate the type of foundation on the tower.
- Clear and expose the corroded element (anchor link) with a hand brush.
- Thoroughly clean the anchor by means of a wire brush, washing with water and drying.
- An assessment will need to be done of the corrosion condition. Only category 1, 2, 3 and 4 will be applicable.
- All corrosion needs to be removed by soft wire brushing (category 1 & 2) and sand blasting for category 3 & 4.
- Each corrosion assessment must be accompanied by digital photographs.
- Metal surfaces are to be cleaned and coated with 2 coats of 99% zinc rich paint or similar approved.
- Use the level of corrosion to predict the restoration and treatment process.
- Any sign of corrosion on the anchor link must be removed through sand blasting.

- Apply the relevant treatment process as per the restoration specification.
- After the drying and curing of concrete, the excavated foundations must be backfilled according to TRMSCAAC 6.
- Check guy tension and correct where applicable.
- The site must be cleaned and restore before the contractor moves to the next tower.

Deadman Anchor Foundations:

- Induction and Risk assessment (Access to Farm)
- Site establishment (Only were agreed in writing with landowner, otherwise no site establishment on private property unless the use of landowner consent form is signed)
- The total length of the link must be exposed to the level of concrete on the top of the concrete, while taking care to stay within the maximum dimensions as per the restoration Specification.
- An assessment will need to be done of the corrosion condition. Only category 1, 2, 3 and 4 will be applicable.
- All corrosion needs to be removed by soft wire brushing (category 1 & 2) and sand blasting for category 3 & 4.
- Each corrosion assessment must be accompanied by digital photographs.
- Metal surfaces are to be cleaned and coated with 2 coats of 99% zinc rich paint or similar approved.
- The exposed link is to be encased in 30MPa concrete to 150mm above natural ground level using a 300mm diameter uPVC pipe. Larger diameter tubes may be used where applicable. This encasement method will be applicable to all dead man anchors.
- After the drying and curing of concrete, the excavated foundations must be backfilled according to TRMSCAAC 6.
- Check guy tension and correct where applicable.
- The site must be cleaned and restore before the contractor moves to the next tower.

5. PROJECT ACCEPTANCE CRITERIA

Contractor will be awarded the contract after tender evaluations. For technical, tenderers who pass the threshold of 75% for technical compliance will be further evaluated by the rest of the tender process like Commercial and SHEQ. All work to be performed will be done after Safe Work procedures are accepted by Eskom. All work to be done as per accepted quality documentations like the quality plan and QITP's.

6. PROJECT ASSUMPTIONS

- Access to tower positions is possible.

7. PROJECT CONSTRAINTS

- Constraint 1- rebuild within existing servitude.
- Constraint 2 - May require switching the line back on at short notice.

8. PROJECT REFERENCES

Description	Location
LES 1650	Guy anchor link restoration Specification – Western Grid

9. PROJECT ADDITIONAL INFORMATION

N/A