

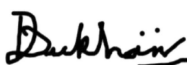
 Eskom National Transmission Company South Africa TM	Scope of Works	NTCSA
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CONTENTS

	Page
1. INTRODUCTION	3
2. SUPPORTING CLAUSES.....	7
2.1 SCOPE OVERVIEW.....	7
2.1.1 Purpose	7
2.1.2 Applicability	8
2.2 NORMATIVE/INFORMATIVE REFERENCES.....	8
2.2.1 Normative	8
2.2.2 Informative	9
2.3 DEFINITIONS.....	9
2.3.1 Classification	9
2.3.2 Definitions	9
2.4 ABBREVIATIONS.....	10
2.5 ROLES AND RESPONSIBILITIES.....	10
2.6 PROCESS FOR MONITORING	11
2.7 TOWER DETAILS	11
3. SAFETY, HEALTH, ENVIRONMENT AND QUALITY (SHEQ) FOR SAFE WORKING PROCEDURE (SWP)....	11
4. RECIEVABLES	12
5. ACCESS.....	12
6. SITE WALKOVER.....	12
7. SCOPE OF WORKS	12
7.1 SINKHOLE REHABILITATION BY MODIFIED INVERTED FILTER METHOD AT CLUSTER A.....	12
7.2 PROVISIONAL MATERIALS QUANTITIES FOR MODIFIED INVERTED FILTER SINKHOLE REHABILITATION.....	14
7.3 CIVIL ENGINEERING DESIGN AND CONSTRUCTION OF STORMWATER MANAGEMENT FOR SERVITUDE AREA (CLUSTER A)	14
8. DELIVERABLES	14
9. AUTHORISATION.....	15
10. REVISIONS	16
11. DEVELOPMENT TEAM	16
12. ACKNOWLEDGEMENTS	16
 Figure 1-1. Apollo Croydon 1 275kV T17 R21: Annotated Locality Image.....	4
Figure 1-2. Apollo Croydon 1 275kV T17 R21: Area Layout depicting Clusters	5
Figure 1-3. Apollo Croydon 1 275kV T17 R21: Dolomitic Designation	6

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1. INTRODUCTION

On October 2021, the National Transmission Company South Africa (NTCSA) Central Transmission Grid received notice of sinkholes present along the portion Apollo Croydon 1 275kV powerline servitude from the Council of Geoscience (CGS). The impacted area is in Olifantsfontein, East Rand Gauteng. The portion of the power line servitude affected was identified as the area running perpendicular to the SANRAL R21 roadway and bounded by Sterkfontein Bricks and Olifantsfontein Dolomite Mine on each side. The area contains one (1) NTCSA transmission (Tx) structure and two (2) Eskom distribution (Dx) structures.

A Dolomite Stability Investigation (DSI) was conducted in mid to late 2022 and the area was classified as D3 and D4 Dolomite Land (Refer Figure 1-3). The assessment further classified the area into four (4) clusters (Refer Figure 1-2).

In April 2024, due to rain events and water ingress (including water ingress by adjacent stakeholder infrastructure), one of the Eskom Dx structures (Esselen – Eerstefabriekke pole 47) experienced a partial failure when the footings sank into an existing sinkhole which had expanded from water ingress. This indication of further sub-surface deterioration of the area led to the temporary back-staying (safety measure) being conducted for the NTCSA Tx structure i.e., Apollo Croydon 1 275kV T17.

Figure 1-1 below shows an aerial image of the area taken in April 2024. Numerous sinkholes are present in the area with the closest sinkhole being noted approximately 13m from Apollo Croydon 1 275kV Tower 17, and sinkholes noted directly under from the Dx tower (i.e., Esselen – Eerstefabriekke pole 47).

This permanent solution requires the sinkhole rehabilitation for Cluster A (Refer Figure 1-1 and Figure 1-2) and the design requirements for stormwater management of the impacted servitude area. This entire document outlines the scope of *works* required.

The *works* comprises of an initial visual assessment of the area to denote areas of alignment between the current area condition and the DSI report, a verification of findings (where required, and conducted by the *Contractors* relevant specialist/s) and the implementation of the modified inverted filter method to rehabilitate the sinkholes within Cluster A. The rehabilitation must also include the civil engineering technical design and implementation of stormwater management for the power line servitude area. From previous observations the primary contributors have been noted as, area topography and meteorological event, the water contribution by adjacent stakeholder infrastructure.

The *works* will also include temporary works including access, placement and monitoring of laydown areas, monitoring of clearances and earthing of equipment (as needed), monitoring of existing power line infrastructure stability and production of required documentations including but not limited to quality control, as-built records and safety documentations.

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Figure 1-1. Apollo Croydon 1 275kV T17 R21: Annotated Locality Image

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Figure 1-2. Apollo Croydon 1 275kV T17 R21: Area Layout depicting Clusters

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Figure 1-3. Apollo Croydon 1 275kV T17 R21: Dolomitic Designation

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2. SUPPORTING CLAUSES

2.1 SCOPE OVERVIEW

The *Works* comprises of the visual observation of the area to determine areas of alignment of the current site conditions with the DSI report (visual assessment may yield the requirement for a verification of findings). The rehabilitation of sinkholes at the Cluster A area (Refer Figure 1-1 and Figure 1-2) using the modified inverted filter method and, the design and construction of stormwater management implementation/s to manage the ingress of water in the area.

The *Contractor* appoints a dolomite land Level 3 specialist (as defined within SANS 1936 (2012)). A visual assessment of the area (Cluster A) is conducted to determine alignment between the conditions of the area to the findings made within the DSI report. Discretionary verification (by means of localised survey and/or intrusive testing) may be conducted as per the *Contractors* site observations. The verification method and extent of required works must be confirmed with the *Employer* prior to commencement of works. Should rehabilitation method augmentation or requirement for a Level 4 dolomite specialist arise from the verification works, this must be detailed in writing and discussed with the *Employer* as soon as possible. The *Contractor* is required to oversee all site rehabilitation works. The *Contractor* will ensure all required technical specialist/s collaborate to manage the sinkhole rehabilitation and to produce the civil engineering design. Adequate site technical oversight must be conducted. The *Contractors* appointed professionally registered civil engineer MUST have experience in stormwater design for dolomite land.

Due to the nature of the work area, the *Contractor* will determine safe areas for laydown and stockpiling of materials. The *Contractor* must ensure electrical safety throughout the duration of the project by monitoring of powerline clearances and plant earthing (as needed). The *Contractor* is to ensure that works are conducted in a safe manner to prevent injury or fatality when working in close proximity to open cavitated areas.

The *Contractor* ensures alignment to governing standards and guidelines for works in dolomite land.

The *Contractor* provides all materials, equipment and resources required to execute the *Works*. The *Contractor* is required to allocate technical tasks in accordance with the relevant SANS standards.

2.1.1 Purpose

The *Contractor*:

- a) Performs overview visual assessment and conducts discretionary verification works in the Cluster A area,
- b) Performs sinkhole rehabilitation works at the Cluster A area,
- c) Designs and constructs stormwater management implementations for the management of water in the servitude area,
- d) Provides safety measures and a Dolomite Risk Management Plan (DRMP) for the rehabilitated area (as needed),
- e) Procures materials and manages the quality checks of materials. The *Contractor* checks all materials certificates to ensure materials quality is aligned,
- f) Manages the laydown of plant and equipment. Laydown areas are determined by the *Contractor* and are placed at a safe distance away from the sinkhole area, the backstay implementation. The safety of the laydown is also determined from a dolomite context,

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- g) Manages the mixing of materials on site to prevent spillages, environmental contraventions and further sinkhole development (where required),
- h) Obtains necessary licenses and approvals (as needed),
- i) Ensures all works is governed by the necessary South African National Standards (SANS) governing Legislation and Government Norms & Acts, Guidelines. (Including but not limited to SANS 1936 (2012) Parts 1-4: Development on Dolomitic Land; SANS 2001: BE 3: Repair of Sinkholes and Subsidence in Dolomitic Land; Kleinhans, I., and Van Rooy, J.L., (2016): "Guidelines for Sinkhole and Subsidence Rehabilitation based on Generic Geological Models of a Dolomite Environment on the East Rand, South Africa."),
- j) Appoints and ensures that all parties working within NTCSA and Eskom DX servitudes must conduct works under supervision of an allocated, qualified Authorized Person (as per HV Regulations ORHVS [12]),
- k) All equipment working in close proximity to live powerlines must be earthed as outlined in Annex C of [11] below,
- l) All equipment used for repair works purposes must adhere to the necessary equipment height and width clearances,
- m) Provide as-built drawings for the constructed storm water infrastructure.
- n) Indicate/ provide maintenance/monitoring philosophy (as needed).
- o) Arranges progress meetings and allows for reviews of designs and works.
- p) Takes technical accountability for the repair implementations.

2.1.2 Applicability

This document applies to the NTCSA Apollo Croydon 1 275kV T17 & Eskom Dx power lines within the Cluster A sinkhole repair area.

2.2 NORMATIVE/INFORMATIVE REFERENCES

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

2.2.1 Normative

- [1] SANS 1936(2012): Parts 1-4: Development on Dolomitic Land
- [2] SANS 634: Geotechnical Development for Township Investigations
- [3] SANS 2001: BE 3: Repair of Sinkholes and Subsidence in Dolomitic Land
- [4] All *works* are conducted in accordance with the requirements of the Occupational Health and Safety Act (Act 85 of 1993) as amended
- [5] The successful tenderer conforms to all relevant legislation, whether natural, social, cultural or technical, and shall liaise with the appropriate authorities if required.
- [6] ISO 9001 Quality Management Systems
- [7] Construction Regulations, 2014
- [8] 32-727 - Eskom Safety, Health, Environment and Quality (SHEQ) Policy
- [9] Occupational Health and Safety Act No. 85 of 1993,

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2.2.2 Informative

- [10] 240-80605256: Access to Private Property Standard
- [11] 240-47172520: "The Standard for the Construction of Overhead Powerlines (TRMSCAAC 6.0)
- [12] 240-114967625: "Operating Regulations for High Voltage Systems (ORHVS)"
- [13] EK_S382 – EK_S387 (December 2021): "Inspection Report of Sinkholes Near R21, Clayville."
- [14] Kleinhans, I., and Van Rooy, J.L., (2016): "Guidelines for Sinkhole and Subsidence Rehabilitation based on Generic Geological Models of a Dolomite Environment on the East Rand, South Africa."
- [15] Kleinhans, I (2017): "Rehabilitation of Sinkholes and Subsidence on Dolomitic Land, Ekurhuleni Metropolitan Municipal Area of Jurisdiction, Gauteng, South Africa."
- [16] SANRAL Drainage Manual, 6th Edition, 2013
- [17] LC037-22.R02 (2022): "Report to Eskom on the Results of a Geotechnical And Dolomite Stability Investigation for the Apollo Croydon Sinkhole Assessment And Remediation"

2.3 DEFINITIONS

2.3.1 Classification

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

2.3.2 Definitions

Definitions	Description
Competent Person – Dolomitic Stability Investigation	"person who is qualified by virtue of his experience, qualifications, training and in-depth contextual knowledge of development of dolomitic land to a) plan and conduct geotechnical site investigations for the development of dolomitic land, evaluate factual data, develop a geological model, derive interpretive data and formulate an opinion relating to the outcomes of such investigations; b) develop and inspect for compliance the necessary precautionary measures required on dolomite land to enable safe and sustainable developments to take place; c) develop dolomite risk management strategies; d) investigate the cause of an event and participate in the development of the remedial measures required."
Sinkhole	"feature that occurs suddenly and manifests itself as a hole in the ground."
Subsidence	"shallow, enclosed depression"

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2.4 ABBREVIATIONS

Abbreviation	Description
CGS	Council for Geoscience
DSI	Dolomitic Stability Investigation
DRMP	Dolomite Risk Management Plan
DX	Distribution Division
ECSA	Engineering Council of South Africa
HV	High Voltage
LES	Lines Engineering Services
NTCSA	National Transmission Company South Africa
OSH	Occupational Health and Safety
ORHVS	Operating Regulations for High Voltage Systems
PPE	Personal Protective Equipment
PR.ENG	Professional Engineering
PR.SCI.NAT	Professional Natural Scientist
SANAS	South African National Accreditation System
SANS	South African National Standards
SHEQ	Safety Health Environment and Quality
SWP	Safe Work Procedure
TX	Transmission Division

2.5 ROLES AND RESPONSIBILITIES

The *Contractor*:

- a) provides adequate equipment, resources and materials for the required *Works*,
- b) manages laydown, procurement, mixing and placement of materials (as needed),
- c) ensures all materials and quality checks are conducted timeously and recorded adequately,
- d) manages cost and a scheduled time frame of works,
- e) ensures the scope is carried out in full,
- f) provides regular feedback on the status of the works,
- g) ensures that all site work is supervised by the required technical specialists and other required parties in alignment with governed standards, guidelines and legislation,
- h) ensures that prior to any works, all parties working on site familiarized themselves with the *Employer's* safety requirements and the Occupational Health and Safety (OSH) Act (85 of 1993),
- i) ensures all works complies with applicable licenses and authorisations,
- j) obtains all necessary approvals and acceptances (as needed),
- k) applies discretion in conducting works in dolomitic land and in close proximity to voided areas,
- l) ensures that, should the ground conditions exhibit notable changes, the *Employer* is informed promptly,
- m) notifies the *Employer* as soon as possible, if any impedance or ruptured services is encountered,
- n) ensures the appointment of an Authorised Person on Outcome 3 "Responsible Person",
- o) ensures that all work conducted in close proximity to live lines within Eskom servitude is conducted under the supervision of an Authorised Person on Outcome 3 "Responsible Person",
- p) ensures that all equipment has required earthing, height and width clearances as advised by the Authorised Person,

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- q) ensures alignment to the latest applicable standards and guidelines for equipment earthing and clearances which will include document [11] Annexure C,
- r) arranges necessary security measures for plant, equipment and laydown on site,
- s) ensures that area works do not destabilize existing power line infrastructure,
- t) ensures the successful rehabilitation of Cluster A sinkhole area,
- u) ensures the successful design and construction of stormwater management implementation/s.

2.6 PROCESS FOR MONITORING

- a) The *Contractor* provides weekly progress updates and ensures that regular meetings are conducted to inform the *Employer* of progress and developments with regard to the rehabilitation works, and design and construction of the stormwater management implementation/s.

2.7 TOWER DETAILS

- a) Affected tower Co-ordinates:

Tower Number	Deg. Lat	Deg. Long	Height above MSL
Affected TX Tower - Apollo Croydon 1 275kV Tower 17	- 25.946569S	28.257492E	1539.2
Affected DX Tower 1 (Next to TX) - Esselen Eerstefabrieke pole 47	-25.946475	28.257709	1539.2
Affected DX Tower 2 - Esselen Hippo Quarries pole 47 – NB. Tower currently unaffected*	-25.964118	28.257808	1539.2

- b) Minimum safe working clearance for TX Line: 3.0 m (**with an Authorised Person**)
- c) Minimum safe working clearance for DX Line: 1.5m (**with an Authorised Person**)
All powerline clearances will need to be confirmed by relevant personnel prior to commencement of works.

3. SAFETY, HEALTH, ENVIRONMENT AND QUALITY (SHEQ) FOR SAFE WORKING PROCEDURE (SWP)

The *Contractor*:

- a) Submits a Safe Work Procedure (SWP) for acceptance by the *Employer* before commencement of the Works.
 - a. The Safe Work Procedure (SWP) outlines how the scoped tasks on site will be accomplished safely and details the considerations and provisions to ensure such.
- b) Ensures that all personnel are familiar with the *Employers* Health and Safety induction, and Personal Protective Equipment (PPE) requirements before commencement of the Works.
- c) Identifies and submits strategic measures to execute works without contravening environmental compliances and/or guidelines put forth within South African National Standards and/or Legislation.
- d) Ensures that all SHEQ activities are incorporated into the schedule.
- e) If areas are deemed unstable, the *Contractor* must align safety considerations as per SANS 2001 BE 3 (and other required standards and guidelines).
- f) Ensures that the SWP must contain as a minimum:
 - Methodology of works, sequencing and safety approach to task execution
 - Qualification/training requirements

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- PPE as identified by site Health, Safety and Environment personnel
- Risks and Prevention/mitigation measures
- Emergency procedures
- Access
- Equipment safety (working platforms etc) and earthing measures

4. RECIEVABLES

Upon contract award, the *Contractor* will receive:

- a) EK_S382 – EK_S387 (December 2021): “Inspection Report of Sinkholes Near R21, Clayville.”
- b) 240-47172520: “The Standard for the Construction of Overhead Powerlines (TRMSCAAC 6.0)
- c) LC037-22.R02 (2022): “Report to Eskom on the Results of a Geotechnical And Dolomite Stability Investigation for the Apollo Croydon Sinkhole Assessment And Remediation”
- d) 240-114967625: “Operating Regulations for High Voltage Systems (ORHVS)”

5. ACCESS

Access to the servitude/ tower positions is done in accordance with the Access to Private Property Standard (240-80605256). The *Employer* gives guidance to the *Contractor* regarding access to the powerline servitude and structure positions.

6. SITE WALKOVER

- a) The *Contractor* conducts a site walkover for the affected areas.
- b) The *Contractor* must ensure that all required technical personnel are present during the site walkover.
- c) The *Contractors* identifies areas of notable adjacent, bisecting infrastructure and potential safety concerns.
- d) The *Contractor* identifies landform features and contributing environmental factors.
- e) The *Contractor* makes provision for the works to not be encumbered by the overall site conditions and ensures that the works take into consideration to stability of the area, and necessary safety considerations.
- f) The *Contractors* identifies safe laydown and stockpile areas (for materials, plant, equipment and personnel) and identifies safe materials mixing area (as needed).

7. SCOPE OF WORKS

7.1 SINKHOLE REHABILITATION BY MODIFIED INVERTED FILTER METHOD AT CLUSTER A

- a) Cluster A has been identified as the group of sinkholes closest to the NTCSA Tx and Eskom Dx infrastructure (Refer Figure 1-2 and Figure 1-2 above).
- b) The *Contractor* appoints a Dolomite Land Level 3 Specialist to ensure successful implementation of the works in the area.
- c) The *Contractor* will review all technical documentation submitted in the receivables pack.
- d) At onset of works, the *Contractor* conducts a visual assessment of the area to determine areas of alignment of the current area conditions with the provided DSI report.

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- e) A verification assessment of findings by means of intrusive ground testing or survey may be required. Should this be required, the *Contractor* submits a written motivation detailing the verification methodologies to the *Employer* prior to commencement.
- f) The *Contractor* verification assessment may yield the requirement for a dolomite land Level 4 specialist involvement and/or augmentation of the rehabilitation method. Should this occur, the *Contractor* submits a written motivation to the *Employer* as soon as he becomes aware and prior to commencement of the Dolomite Land Level 4 appointment or methodology augmentation.
- g) During investigative drilling works for the DSI, ground heaving was noted within the area. The *Contractor* is required to take the necessary safety and construction considerations for prevent ground movement, damage to equipment and infrastructure and to prevent injury or loss of life.
- h) A survey monitoring of the structures in the area is conducted by the *Contractor* as the works commence to ensure that the rehabilitation works does not impact or destabilize the structures in the area.
- i) Necessary safety precautions and monitoring is conducted for all persons and plant working in close proximity to sinkholes.
- j) Proposed method for sinkhole rehabilitation by modified inverted filter method:
 - a. Expose throat/s of the sinkholes at Cluster A by removal of compressible, erodible residual dolomite.
 - i. During the excavation works, care is taken to ensure sidewalls are visually monitored to ensure that potential material loss does not lead to ground instability causing injuries or loss of equipment.
 - ii. No overhanging walls should be present.
 - iii. Assessment for localised ground cracking and subsidence is conducted.
 - b. Placement of rockfill layer i.e., cobbles and minimum 500mm diameter boulders to choke the throat/s.
 - i. Where required, the rockfill is compacted using applicable plant.
 - ii. The depth and thickness of rockfill is determined by the *Contractor*.
 - c. An adequately flowable mix of soilcrete (or similar) is then placed for void infill between the cobbles and boulders.
 - i. Where applicable, the soilcrete (or similar) strength requirements are advised by the *Contractor*.
 - d. The rockfill "plug" is thereafter overlain by G6 – G4 material (stabilized with 5% OPC) with 30% - 40% cobbles compacted in 150mm – 300mm lifts to 95% to 98% Modified AASHTO (as advised by the *Contractor*)
 - e. From approximately 1000mm below surface to approximately 500mm above surface (or as required for adequate reshaping), backfilling is conducted with G8 quality material or better.
 - i. Material is placed in layers of 150mm and compacted to 95% Modified AASHTO
 - ii. Surface reshaping works must allow for sufficient water redirection as sheet flows away from the power line infrastructure and must not result in water ponding.
 - iii. The topography of the area is considered when the reshaping works are conducted.
- k) Where required, all materials testing must be conducted at a SANAS accredited laboratory. All test results are checked by the *Contractor*.
- l) Given the uncertainty of the sinkhole extent below the ground; should ground piping or extension of voiding be noted below the powerline structures; the *Contractor* may propose additional/alternate methods of ground rehabilitation. The augmented method must be accepted by the *Employer* prior to implementation.
- m) Temporary access roads, laydown areas and/or mixing areas are arranged by the *Contractor*. No temporary works must create ponding of water or direct water flow toward the power line infrastructure within the area.

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- n) The *Contractor* identifies safe laydown and stockpile areas (for plant, materials, equipment, and personnel) as needed. Relevant standards including but not limited to SANS 1936 (2012) and SANS 2001 BE 3 are applied. Laydown of materials, plant and equipment must be placed a sufficient distance away from the works area to not trigger further sinkholes or ground instability, or environmental contraventions.
- o) The *Contractors* determines safe working distances for plant.
- p) Safety measures must be taken to prevent overturning/falling of equipment (as required).
- q) No personnel must traverse the work area without authorisation to do so.
- r) No personnel must enter the sinkholes.
- s) The *Contractor* makes provision for site security measures as needed.

7.2 PROVISIONAL MATERIALS QUANTITIES FOR MODIFIED INVERTED FILTER SINKHOLE REHABILITATION

Material Quantities (Cone/Funnel Shape)	Unit	Quantity
Boulders + Cobbles	m ³	334
Soilcrete or similar flowable (low MPa)	m ³	167
G6 – G4 (+5%OPC)	m ³	2669
G8 (or better)	m ³	334
MIN TOTAL	m ³	3503

The above material quantities are based on limited field information. Quantities are high level estimates and are re-measurable.

7.3 CIVIL ENGINEERING DESIGN AND CONSTRUCTION OF STORMWATER MANAGEMENT FOR SERVITUDE AREA (CLUSTER A)

- a) The *Contractor* appoints a professionally registered civil engineer with experience in stormwater design for dolomite land to design and ensure adequate construction of the stormwater implementation/s in the area.
- b) All necessary aspects of the contributing dolomite environment are considered in the civil engineering stormwater designs.
- c) The stormwater management implementation/s are required to manage the drainage of the contributing environment.
 - a. From initial assessment a total of three (3) SANRAL culvert outlet drains daylight into the sinkhole area with contributing water from topography and an adjacent earth berm located west of the sinkhole area.
- d) All stormwater management designs must comply to SANS 1936 (2012) Parts 1 to 4, and SANS 2001 BE3, as well as all other pertinent standards and guidelines that may be required.
- e) Designs are presented to the *Employer* for acceptance.

8. DELIVERABLES

- a) The *Contractor* ensures the successful sinkhole rehabilitation of the Cluster A area.
- b) The *Contractor* ensures review of the initial receivables data pack as submitted by the *Employer* upon contract award.
- c) The *Contractor* conducts a visual assessment of the Cluster A area to determine areas of alignment between the current area conditions and the DSI and determines requirement for verification works (where needed).

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- d) Should additional works and/or additional personnel requirements arise from the potential verification works (or other), this must be communicated to the *Employer* by means of a written motivation to validate the additional requirements. *Employer* acceptance is received prior to commencement of additional tasks.
- e) The *Contractor* ensures the civil engineering design and construction of stormwater implementation/s in the area for the purpose of stormwater management within the NTCSA servitude.
- f) Site reports and as-builts are provided.
- g) The *Contractor* appoints a Level 3 dolomite specialist (*Contractors* competent person) to guide, advise and oversee all rehabilitation works and input into additional design (as needed).
 - a. Competent person as defined withing SANS 1936 (2012) for Level 3 geo-professional.
- h) The *Contractor* appoints a professionally registered civil engineer (PrEng) with experience is stormwater design for dolomite land to design and supervise construction works for stormwater management implementation/s.
- i) The *Contractor* ensures all works are overseen by the *Contractors* Authorised Person and necessary *Contractor* safety personnel at all times.
- j) The *Contractors* provides all plant, equipment, materials and resources to execute the works.
- k) Should leaking drainage services or damage to water-borne services be encountered, the local authority must be informed in writing timeously by the *Contractor*.
- l) The *Contractor* ensures that no rehabilitations works results in the destabilization of the existing powerline infrastructure in the area. For this reason a visual observation of the ground and survey monitoring of structures is conducted throughout the duration of the works.
- m) The *Contractor* ensures that no areas where works, temporary works or laydowns have occurred is left in such a manner as to create erosion or water ponding, or trigger environmental contraventions.
- n) The *Contractor* compiles a Dolomite Risk Management Plan (DRMP) for the rehabilitated area/s.
- o) The *Contractors* applies for all necessary authorizations and approvals (as required).
- p) The *Contractor* manages all documentation and records for handover to the *Employers* Project Manager.

NB. Written consent must be received from the *Employer* for any and all deviations from the works as outlined herein.

9. AUTHORISATION

This document has been seen and accepted by:

Name	Designation
A Simbudayal	Senior Engineering Geologist: LES Structures, Civils & Mechanical PrSciNat
S Nzama	Cluster Manager: LES Structures, Civils & Mechanical Pr Eng
D A Dukhan	Chief Civil Engineer: LES Structures, Civils & Mechanical Cluster Pr Eng
G Pillay	Civil Engineer: LES Structures, Civils & Mechanical
W Mokoena	Civil Engineer: LES Structures, Civils & Mechanical
R Pillay	Senior Civil Engineer: DX NED Pr Eng
M Masilana	Recovery Manager: Lines & Servitudes Central Grid
M Nyalunga	Middle Manager: Lines & Servitudes Central Grid
V Buckland	Middle Manager: Environmental
R Chauke	Quantity Surveyor: Lines & Servitudes Central Grid

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10. REVISIONS

Date	Rev.	Compiler	Remarks
2024-11	2.0	A Simbudayal	Final document for signature
2024-10	1.1	A Simbudayal	Draft document for review
2023-06	1.0	A Simbudayal	Final document for signature
2023-05	0.1	A Simbudayal	Internal draft for review

11. DEVELOPMENT TEAM

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

- Alicia Simbudayal: Senior Engineering Geologist, LES

12. ACKNOWLEDGEMENTS

- Sibonelo Nzama
- Dan Dukhan
- Kabelo Molaodi
- Gino Pillay
- Redz Pillay
- Mac Masilana
- Mbali Nyalunga
- Vuyokazi Buckland
- Ronald Chauke
- Sibongile Masemola

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