

WAG 'N BIETJIE 400KV MTS PROJECT

Construction of the Wag 'n Bietjie Main Transmission Substation (MTS) and a 132kv Powerline between the Wag 'n Bietjie MTS and the Vetlaagte MTS : Situated on a Portion of the Remaining Extent of Wagt en Bittje No 5; the Remaining Extent of Wag 'n Bietjie Annex C No 137; and the Remaining Extent of Vetlaagte No 4, De Aar, Northern Cape

ENVIRONMENTAL MANAGEMENT PROGRAMME

July 2022

Applicant / Owner of the Environmental Authorisation

MTS Wag n Bietjie Proprietary Limited (Reg no. 2015/270324/07)
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Compiled by

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Addenda

Addendum 1 – Landscape Dynamics Company Profile and Condensed CVs of the EAPs

Addendum 2 – DFFE Screening Tool

(a) DFFE Screening Tool Report

(b) Verification of DFFE Screening Tool Report

Addendum 3 – Palaeontology : Photographs of fossils that could be found during excavations

CHAPTER 1 – GENERIC ENVIRONMENTAL MANAGEMENT PROGRAMME

1.1 Objectives of the Environmental Management Programme

The compilation of this Environmental Management Programme (EMPr) forms part of the requirements of the 2014 EIA Regulations, as amended. Compliance with the contents of the EMPr is required during the construction and operational phases of the project. The EMPr serves as an environmental management tool by providing a generic structured plan of mitigation measures / management action, which serves as a guide to assist in minimising the potential environmental impact of the activity that may arise during the construction and operational phases.

The EMPr provides a set of guidelines for the environmental management of all works to be executed so as to have a minimum impact on the environment in accordance with all relevant legislation, policies and standards. In this context it should be viewed as a dynamic or 'living' document, which may require updating, or revision during the life-cycle of the project to address new circumstances as the need arises. It is essentially a written plan of how the environment is to be managed in practical and achievable terms.

The effectiveness of the EMPr is limited by the level of adherence to the conditions set forth herein. Compliance with the EMPr will be monitored on a regular basis as set out in the EMPr and contractual clauses.

The EMPr forms part of the Contract Documentation and is thus a legally binding document. An individual responsible for environmental damage must pay costs both to environment and human health and the preventative measures to reduce or prevent additional pollution and/or environmental damage from occurring (the Polluter Pays Principle).

Further to the above, the following objectives apply:

- To state the standards and guidelines which has to be adhered to in terms of environmental legislation;
- To set out the mitigation measures / management actions and environmental specifications which Eskom will be required to implement in order to minimise the extent of environmental impacts, and where possible to improve the condition of the environment;
- To mitigate potential negative impact associated with the project and ensure optimising of positive impact;
- To define corrective actions which must be taken in the event of non-compliance with the specifications of the EMPr;
- To prevent long-term or permanent environmental degradation;
- To ensure that the applicant, construction workers and the operational and maintenance staff are well acquainted with their responsibilities in terms of the environment;
- To ensure that communication channels to report on environment related issues are in place.

1.2 Gazetted Generic Environmental Management Programme

On 22 March 2019 a *Generic Environmental Management Programme (EMPr)* was promulgated in terms of Section 24 of NEMA and gazetted as Government Notice No 435. This EMPr is applicable where application is made for Environmental Authorisation for substations and overhead electricity transmission and distribution infrastructure as identified in terms of

- activity 11 or 47 of EIA Regulations Listing Notice 1 of 2014, as amended, or for
- activity 9 of EIA Regulations Listing Notice 2 of 2014, as amended, and
- any other listed and specified activities necessary for the realisation of such infrastructure.

The EMPr forms part of the Basic Assessment and EIA Reports, is a legally binding document and contains general as well as site specific mitigation measures.

The Generic Environmental Management Programme consists of the following:

- APPENDIX A: DEVELOPMENT AND EXPANSION OF SUBSTATION INFRASTRUCTURE and
- APPENDIX B: DEVELOPMENT AND EXPANSION OF OVERHEAD ELECTRICITY INFRASTRUCTURE

The Wag 'n Bietjie 400kV MTS Project consists of the construction of a Main Transmission Substation; 400kV LiLo lines as well as a 132kV power line. Appendix A and B are thus applicable to this project.

Both Appendixes are divided into the following:

1. Part A (General Guidance and Information)
2. Part B: Section 1 (Pre-approved Generic EMPr Template)
3. Part B: Section 2 (Site Specific Information and Declaration)
4. Part C (Site Specific Sensitivities / Attributes)
5. Method Statements

PART A (GENERAL GUIDANCE AND INFORMATION)

- Provides general guidance and information such as definitions, acronyms, roles & responsibilities, documentation and reporting. This section **is not legally binding**.

PART B: SECTION 1 (PRE-APPROVED GENERIC EMPr TEMPLATE)

- Contains generally accepted impact management outcomes and impact management Actions required for the avoidance, management and mitigation of impacts and risks associated with the development
- The template in this section is to be completed by the contractor, with each completed page signed and dated by the holder of the EA prior to commencement of the activity. Once completed and signed, the template represents the EMPr for the activity approved by the Competent Authority (CA) and **is legally binding**.
- The template is not required to be submitted to the CA because the generic EMPr was gazetted for implementation and has therefore been approved by the CA.
- The EAP must make this section available for public consideration.

PART B: SECTION 2 (SITE SPECIFIC INFORMATION and DECLARATION)

- Contains preliminary infrastructure layout *and* a declaration that the applicant/holder of the EA
 - will comply with the pre-approved generic EMPr as contained Part B: Section 1;
 - understands that the impact management outcomes and impact management actions **are legally binding**.
- The preliminary infrastructure layout must be submitted with the BAR / EIA Report ensuring that all impact management outcomes and impact management actions have been either preapproved or approved in terms of Part C.
- This section **must be** submitted to the CA together with the final BAR or EIA Report. The information submitted to the CA will be considered to be incomplete should a signed copy of Part B: section 2 not be submitted.
- Once approved, this Section forms part of the EMPr for the site and **is legally binding**.

PART C (SITE SPECIFIC SENSITIVITIES / ATTRIBUTES)

- Any site specific management outcomes and management actions not included in the pre-approved generic EMPr must be included in this section.
- These specific environmental attributes must be referenced spatially and impact management outcomes and impact management actions must be provided.
- These outcomes and actions must be presented in the format of Part B: Section 1.
- This section will not be required should the site contain no specific environmental sensitivities or attributes.
- If Part C is applicable it is required to be submitted together with the BAR or EIA Report to the CA for consideration.
- The information in this section must be prepared by an EAP and must contain his/her name and expertise including a Curriculum Vitae.
- Once approved, Part C forms part of the EMPr for the site and **is legally binding**.

METHOD STATEMENTS

- It contains the method statements to be prepared prior to commencement of the activity.
- The method statements are **not required** to be submitted to the Competent Authority.

CHAPTER 2: SITE SPECIFIC INFORMATION AND DECLARATION

2.1 Contact Details of the Applicant

Contact details of the applicant

Name of applicant : MTS Wag n Bietjie (Pty) Ltd (Reg no. 2015/270324/07)
Contact person : Mr Warren More
Tel No : 021 685 3240
E-mail address : warren@mulilo.com
Postal Address : PostNet Suite #53, Private Bag X21, Howard Place, 7405
Physical Address : Top Floor, Build.#4, Golf Park Estate, 44 Raapenberg Rd. Mowbray, Cape Town, 7405

2.2 Contact Details and Expertise of the EAP

Contact details of the EAP

Name of EAP : Landscape Dynamics Environmental Consultants (Pty) Ltd
: Annelize Erasmus & Susanna Nel
Tel No : 082 566 4530 & 082 888 4060
E-mail address : info@landscapedynamics.co.za

Expertise of the EAP

Landscape Dynamics Environmental Consultants (Pty) Ltd had been appointed by MTS Wag n Bietjie (Pty) Ltd for the compilation of this EMPR. Landscape Dynamics is an environmental consultancy firm established in May 1997. The main line of business since that time up to the present is the compilation of environmental impact assessments. Landscape Dynamics has a broad client base from both the private and government sectors which has developed over the past 25 years of professional services supplied. The operating base for Landscape Dynamics is the entire South Africa; with offices and/or local representation in Gauteng, the Western Cape, Mpumalanga and Kwa-Zulu Natal.

The Environmental Assessment Practitioners (EAPs) for this project are Ms Annelize Erasmus and Ms Susanna Nel. Both EAPs are registered with EAPASA. .

Refer to Addenda A of this EMPr for a Company Profile and Curriculum Vitae's of the EAPs.

2.3 Project Information

- **Project name**
Wag 'n Bietjie 400kV MTS Project
- **Description of the project**

The project area is situated between 9km and 11km south-east of the town of De Aar in the Northern Cape Province. The locality map provided below is also attached as Appendix (1).

LOCALITY MAP - Wag 'n Bietjie MTS Project
(on the Remaining Extent of the Farm Wagt en Bittje No 5, De Aar, Northern Cape Province)

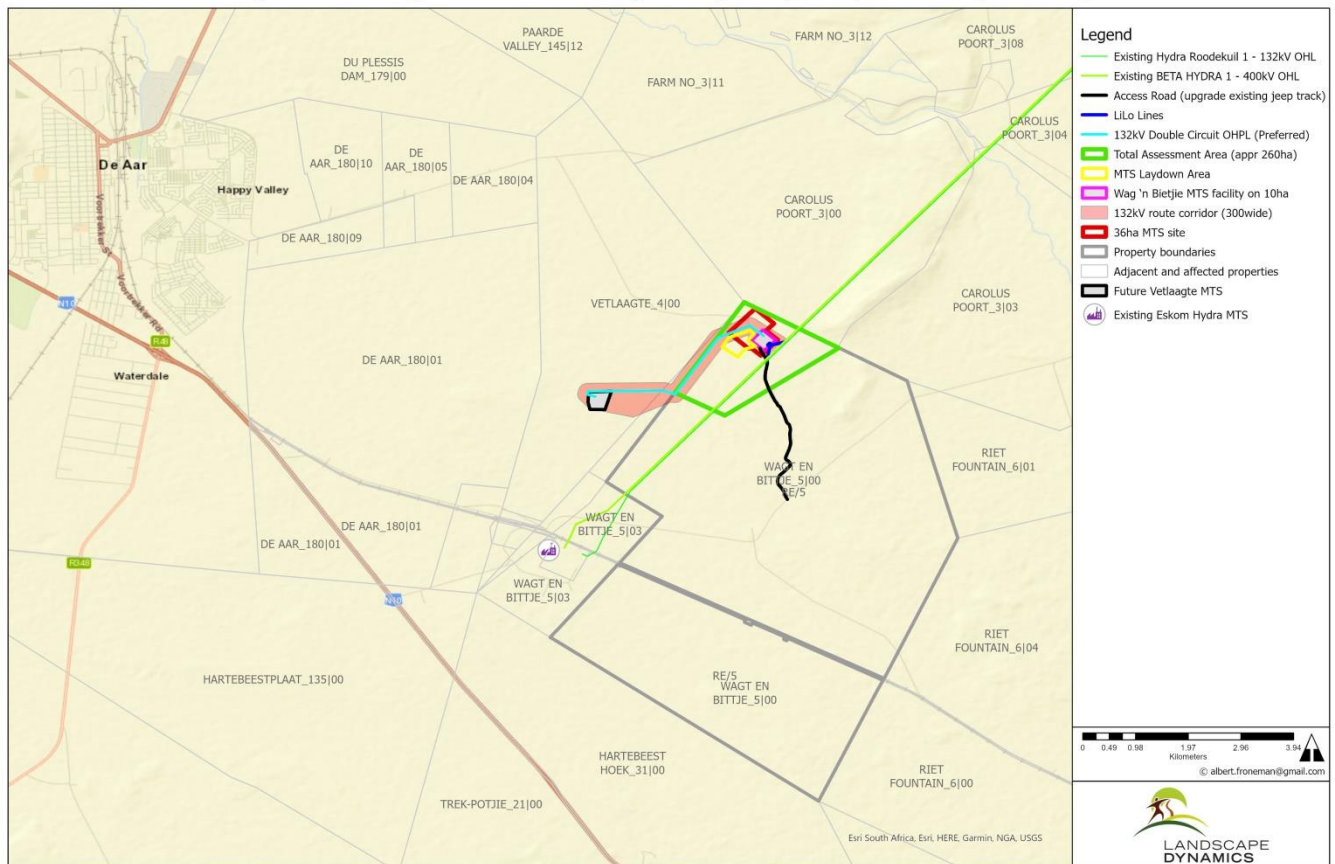


Figure 1 Locality Map

- **Properties Description**

The following farms are directly affected by the proposed project:-

- The Remaining Extent of the Farm Wagt en Bittje No 5
- The Remaining Extent of Wag 'n Bietjie Annex C No 137
- The Remaining Extent of the Farm Vetlaagte No 4

The following SG21 Digit Codes are relevant to the Wag 'n Bietjie MTS 400kV Project:

C	0	5	7	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
C	0	5	7	0	0	0	0	0	0	0	0	0	1	3		0	0	0	0	4
C	0	5	7	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0

The project components are listed as follows:

Infrastructure	Specifications
Development footprint (permanent infrastructure)	A 36-hectare site is required by Eskom to be authorised to allow for future expansion of the MTS. The Wag 'n Bietjie MTS facility will initially have a construction footprint of 10ha within this 36ha area.
Main Transmission Substation (MTS)	<ul style="list-style-type: none"> Capacity : 400kV Height of structures: <ul style="list-style-type: none"> Stringer strain beam: Up to 20m Tubular busbar: Up to 13m Associated Infrastructure: <ul style="list-style-type: none"> Lighting Fencing Buildings required for control, storage, operations and maintenance
Loop-In Loop-Out (LiLo)	The connection of the Wag 'n Bietjie 400kV MTS to the national grid will be via new loop-in loop-out 400kV power lines of approximately 600m total length that will connect into the existing 400kV Beta-Hydra 1 power line.
132kV MTS Connection Powerline(s)	<ul style="list-style-type: none"> There exist different possible connection scenarios for Wag 'n Bietjie MTS to meet the connection requirements of renewable energy projects within the vicinity of De Aar to the national grid. The connection scenarios are reliant on aspects such as grid capacity, Eskom requirements and the specific requirements of renewable energy projects connecting to the national grid via the MTS. To cater for the possible connection scenarios the Applicant requires authorisation for the following connection infrastructure: <ul style="list-style-type: none"> Up to a maximum of five adjacent 132kV overhead powerlines within the assessed corridor Approximately 3,8km Authorisation of a 300m wide corridor as assessed
Potential upgrades required at the Vetlaagte MTS	<ul style="list-style-type: none"> 400kV and 132kV yard extensions new 500MVA 400/132kV transformer 400kV busbar extensions 132kV busbar extensionnew 132kV feeder bay (maximum of five)
Access and internal roads	<ul style="list-style-type: none"> The access road to the Wag 'n Bietjie MTS is an existing gravel road which will be upgraded to a maximum width of 8 meters. The total length of this road is approximately 3km. Internal access roads within the MTS site of less than 8m wide will be constructed An access route of approximately 6m wide will be constructed inside the 400kV LiLo line servitude. This road will be used for construction and later maintenance purposes. An approximately 6m wide access road will be constructed along the line route for construction and maintenance purposes – this road will be inside the powerline servitude
Laydown area	<ul style="list-style-type: none"> A temporary construction site area of approximately 14ha directly adjacent to the MTS

	will be required.
	<ul style="list-style-type: none"> All temporary infrastructure will be rehabilitated following the completion of the construction phase, where it is not required for the operation phase.
Storage of diesel	<p>Diesel storage of less than 80m³ for the MTS for the following purposes:-</p> <ul style="list-style-type: none"> During construction, diesel is required for construction vehicles as well as generators for the construction camp and commissioning whilst waiting for the Eskom grid connection works to be completed During operations, diesel is required for Operations & Maintenance vehicles at the PV plants but also required for backup diesel generators at the substations. The Generators supply auxiliary power to the substation's protection and communications systems, should there be outages on the grid. This is an Eskom requirement together with a battery room at the substations to act as UPS for these critical systems.
Temporary Services	During the construction phase, temporary sanitation facilities will be provided (i.e. chemical toilets) and these toilets will be regularly serviced by a licensed company.

Table 1 Project Components

• **Project Coordinates**

MTS Site – 4 corners

NW:	30°41'14.65"S	24° 5'35.20"E
NE:	30°41'14.21"S	24° 5'48.93"E
SE:	30°41'25.25"S	24° 5'45.08"E
SW:	30°41'25.11"S	24° 5'35.96"E

400kV LiLo Lines Bend Coordinates

1	400kV LiLo	24° 7' 23.27" E	30° 40' 54.15" S
2	400kV LiLo	24° 7' 23.27" E	30° 40' 54.15" S
3	400kV LiLo	24° 7' 23.27" E	30° 40' 54.15" S
4	400kV LiLo	24° 7' 23.27" E	30° 40' 54.15" S
5	400kV LiLo	24° 7' 23.27" E	30° 40' 54.15" S
6	400kV LiLo	24° 7' 23.27" E	30° 40' 54.15" S

132kV Double Circuit OHPL 250m Coordinates

1	Wag 'n Bietjie MTS	24° 7' 20.98" E	30° 40' 40.75" S
2	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 7' 13.86" E	30° 40' 35.46" S
3	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 7' 5.57" E	30° 40' 37.12" S
4	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 6' 57.00" E	30° 40' 40.44" S
5	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 6' 50.44" E	30° 40' 45.81" S
6	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 6' 45.25" E	30° 40' 52.58" S
7	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 6' 40.06" E	30° 40' 59.35" S
8	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 6' 34.87" E	30° 41' 6.11" S
9	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 6' 29.68" E	30° 41' 12.88" S
10	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 6' 22.72" E	30° 41' 14.53" S
11	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 6' 13.50" E	30° 41' 13.89" S

12	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 6' 4.11" E	30° 41' 13.97" S
13	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 5' 54.71" E	30° 41' 14.05" S
14	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 5' 45.32" E	30° 41' 14.14" S
15	132kV Double Circuit OHPL Wag 'n Bietjie MTS - Verlaagte MTS (Preferred)	24° 5' 35.93" E	30° 41' 14.22" S
16	Verlaagte MTS	24° 5' 48.51"E	30° 41' 16.68"S

Access Road 250m coordinates

1	Turn-off	24° 7' 35.39" E	30° 42' 19.58" S
2	Access Road	24° 7' 31.36" E	30° 42' 12.30" S
3	Access Road	24° 7' 30.76" E	30° 42' 4.94" S
4	Access Road	24° 7' 36.95" E	30° 41' 58.92" S
5	Access Road	24° 7' 35.19" E	30° 41' 51.95" S
6	Access Road	24° 7' 37.14" E	30° 41' 44.12" S
7	Access Road	24° 7' 36.92" E	30° 41' 36.06" S
8	Access Road	24° 7' 33.41" E	30° 41' 28.71" S
9	Access Road	24° 7' 29.07" E	30° 41' 21.66" S
10	Access Road	24° 7' 24.85" E	30° 41' 14.43" S
11	Access Road	24° 7' 21.88" E	30° 41' 6.75" S
12	Access Road	24° 7' 22.95" E	30° 40' 58.72" S
13	Access Road	24° 7' 20.26" E	30° 40' 51.27" S
14	Wag 'n Bietjie MTS entrance	24° 7' 18.71" E	30° 40' 48.27" S

2.4 Development Footprint Site Map: Screening Tool

This section includes a map of the site sensitivity overlaid with the preliminary infrastructure layout. The sensitivity maps were prepared from the national web based environmental screening tool: <https://screening.environment.gov.za/screeningtool>.

Refer to Addenda B of this EMPr for the Screening Tool Report as obtained on 28 April 2022 from the website mentioned above. A "Verification Assessment of the DFFE Screening Tool Report" is also provided.

2.5 Amendments to Site Specific Information (Part B; Section 2)

Should the EA be transferred to a new holder, Part B: Section 2 must be completed by the new holder and submitted with the application for an amendment of the EA in terms of Regulations 29 or 31 of the EIA Regulations, whichever applies. The information submitted for an amendment to an environmental authorisation will be considered to be incomplete should a signed copy of Part B: Section 2 not be submitted. Once approved, Part B: Section 2 forms part of the EMPr for the development and the EMPr becomes legally binding to the new EA holder.

Note:

Should any of the electrical infrastructure associated with this project be handed over to Eskom or another third party, the Environmental Authorisation as well as this EMPr must be transferred to Eskom at that time.

2.6 Declaration of the EA Holder

The proponent/applicant or holder of the EA affirms that he/she will abide and comply with the prescribed impact management outcomes and impact management actions as stipulated in Part B: Section 1 of the generic EMPr and have the understanding that the impact management outcomes and impact management actions are legally binding. The proponent/applicant or holder of the EA affirms that he/she will provide written notice to the CA 14 days prior to the date on which the activity will commence or commencement of construction to facilitate compliance inspections.



Signature Proponent/applicant/ holder of EA

22 June 2022

Date

CHAPTER 3: Site Specific Sensitivities / Attributes

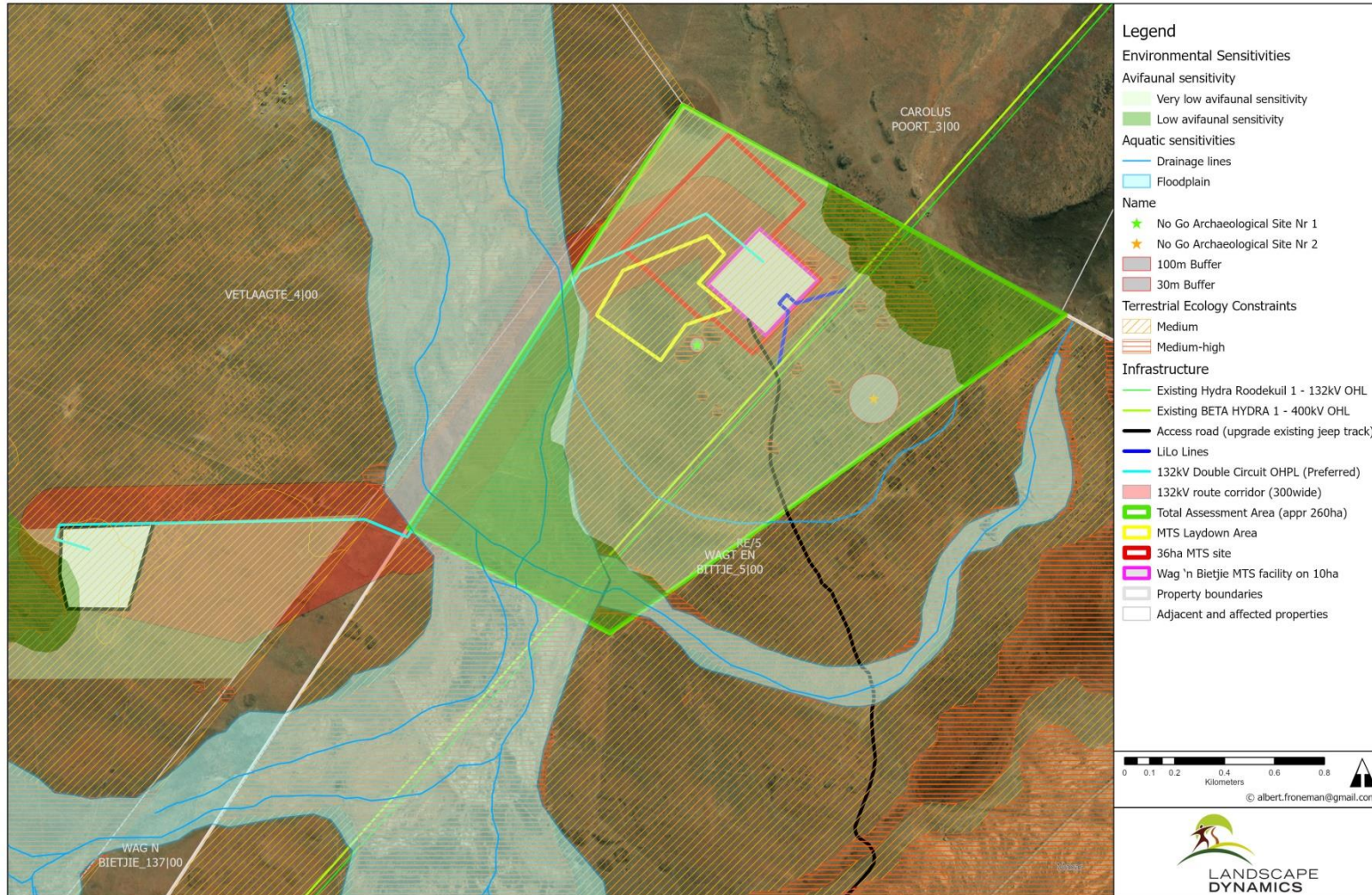
Specific environmental sensitivities/attributes which are present on the site and which require more specific impact management outcomes and actions are included in this section. These outcomes and actions are not covered in the generic EMPr template.

The management controls including impact management outcomes and impact management actions are presented in the format of the preapproved generic EMPr template.

Part C is submitted to the CA together with the BAR for consideration of, and decision on, the application for EA. Once approved, Part C forms part of the EMPr for the **Wag 'n Bietjie 400kV MTS Project** site and is legally binding.

3.1 Environmental Sensitivity and Constraints Map

ENVIRONMENTAL SENSITIVITY MAP - Wag 'n Bietjie MTS Project
(on the Remaining Extent of the Farm Wagt en Bittjie No 5, De Aar, Northern Cape Province)



3.2 Planning and Design Phase

This section provides actions and mitigation measures that need to be undertaken during the Planning and Design Phase as specified by the specialists which undertook impact assessment studies as part of the BAR process. These studies are appended to the Basic Assessment Report and can be provided on request should in-depth detailed be required.

PLANNING & DESIGN PHASE

Impact Management Outcome: Prevention of Failure of Structures, Erosion and Groundwater Contamination

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
<ul style="list-style-type: none"> • Continuous communication should take place with Eskom to ensure compliance with their most recent policies, design standards and specifications. The following Eskom policies must be adhered to and compliance must form part of the conditions of the EMPR : <ul style="list-style-type: none"> ○ Renewable Energy Generation Plant Setbacks to Eskom Infrastructure, dated 15 September 2020 ○ Standard Eskom requirements for work in or near Eskom servitudes ○ LES and SE inputs for new substations to IPP requirement, dated 3 March 2022 • The approved substation site should be 600m x 600m (36 hectares) to allow best for future expansion. • A Safety Officer must be appointed to ensure compliance with the Occupational Health and Safety Act, No 181 of 1993, as amended (Responsibilities must include the provision of Personal Protective Equipment, the undertaking of safety inspections, safety awareness training, etc.) 	EA holder Project Engineers Health & Safety Officer	The EA holder must appoint the relevant professional consulting engineers to do the detail design of the facility; undertake a geotechnical study and compile a detailed Storm Water Management Plan.	Prior to any construction activities taking place	EA holder	Prior to commencement of construction activities compliance of design requirement must be confirmed by the ECO During the Operational Activity the	Engineering reports and ECO Reports

<ul style="list-style-type: none"> • A Fire Management Plan must be compiled. <p><i>Diesel Storage Facility (Design considerations)-</i></p> <ul style="list-style-type: none"> • Compliance with SANS 10089-1:2008; Part 1: Storage and distribution of petroleum products in above-ground installations must be done. • Provision must be made for a thick reinforced concrete spillage containment slab laid to fall to a catch pit connected to an oil/grease separator • The storage tank must be fully contained within the bunded area to contain spillage of hydrocarbons and contaminated rainwater and prevent the ingress of hydrocarbon spillages and contaminated rainwater into the ground or surface water. • Spillages from the tank bund must be retained and released in a controlled manner to an oil separator. • Allowance must be made for the removal of hazardous substances to an appropriate waste facility. • Spillages of hydrocarbons and contaminated water must be collected from the following areas : <ul style="list-style-type: none"> ▪ Diesel tank bunded area ▪ Product receiving station and receiving pipelines ▪ Vehicle servicing area • Hydrocarbon (oil, diesel, petrol) waste as well as hydrocarbon containing material must be regarded as hazardous waste and separated from general waste. • All hazardous substances at the site must be adequately stored and accurately identified, recorded and labelled prior to removal to a registered hazardous waste facility. • A Safety Officer must be appointed to ensure compliance with the Occupational Health and Safety Act, No 181 of 1993, as amended (Responsibilities must include the provision of Personal Protective Equipment, the undertaking of safety inspections, safety awareness training, etc.) 		<p>The Applicant must also appoint a SHEQ officer to ensure compliance of the OHSA through allphases of project development.</p>			<p>Environmental Officer of the EA Holder must confirm continued compliance</p>	
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<p><u>Geotechnical Studies</u></p> <p>Appropriate geotechnical study must be undertaken to confirm the geotechnical constraints associated with the site. Appropriate specifications in terms of materials and foundations must be provided to inform the detail design of the MTS facility. Specific requirement in terms of pylon positions and foundations must also be supplied for both the LiLo and the 132kV powerlines.</p> <p><u>Stormwater Management</u></p> <p><i>General stormwater management mitigation measures:</i></p> <ul style="list-style-type: none"> • The plan must generally ensure the following : <ul style="list-style-type: none"> ○ Compliance with applicable regulations ○ Implementation of appropriate design measures that will allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. ○ Drainage measures must promote the dissipation of stormwater run-off. ○ Prevent off-site migration of contaminated storm water or increased soil erosion. ○ Contaminated stormwater must be separated from general stormwater. <p><i>Specific stormwater management measures proposed for the Wag 'n Bietjie 400kV MTS Project:</i></p> <ul style="list-style-type: none"> • Prior to the detailed design stage and implementation, a physical high resolution topographical survey needs to be conducted. Based on this the development site drainage needs to be designed on this elevation basis, with the full consideration of the final infrastructure layout on site. The final infrastructural layout and drainage design mutually impact on each other and will therefore be an iterative process. • The Stormwater Management Plan must specifically address the MTS Site ; the diesel storage facility and the upgrade of the existing access gravel road. • Where practically feasible, the design and construction of cut-off trenches and outlet drains is recommended to prevent water from higher ground to 					
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<p>flow onto the site. Cut-off trenches should run approximately parallel to the upper contour onsite.</p> <ul style="list-style-type: none"> • Allowance must be made in the design to approximately equal the concentration time under natural conditions to minimise the flow impact downstream. • It is proposed that a cut-off drainage furrow be constructed on the south-eastern boundary of the MTS site to prevent water from outside to flow onto the development site. The site will then not be subjected to flooding from any higher land. • It is recommended that suitable diversion canals be installed as required approximately parallel to contours to lead accumulated water out from the site. • Diverted flow must be disposed of into a flood channel (drainage line) in such a way that the energy is dissipated suitably to prevent erosion or the deposit of suspended material at the disposal point. • The on-site systems must be carefully designed using contour following canals and storm water canals, in order to follow natural flow patterns in such a way that : <ul style="list-style-type: none"> ○ Flood water within the limits of 1:100-year floods are contained. ○ Erosion is prevented. ○ Infrastructural damage is prevented. • To limit future maintenance cost, the on-site drainage canal slope and profile must be designed in such a way that neither erosion of the trenches nor the deposit of material occurs. • It is recommended that only the essential portion of land be cleared of vegetation. Vegetation, even though sparse, serves a very important function to limit erosion through the dissipation of energy as physical objects in the flow path, and by their roots binding the soil. • At all points where transmission lines and associated service roads traverse streams, Water Use Licencing in terms of Section 21(c) of the National Water Act is compulsory. The essence of these is to install sufficient mitigation measures to ensure that the integrity of any such downstream areas of the 					
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<p>amended without appropriate consideration of relevant environmental (ecological & heritage) sensitivities and relevant approvals.</p> <p><u>Demarcation of areas</u> Clear demarcation must take place by method to be determined between the ECO and the Contractor of the following areas:</p> <ul style="list-style-type: none"> • Laydown Area • Two heritage sites with buffer zones as per heritage impact study. • The outside boundaries of the buffer zones of the delineated watercourse where it will be affected by the 132kV Powerline and the access road upgrade. <p><u>Alien Invasive Management</u> Appoint an ecologist to compile an Alien Invasive Management Plan for implementation during the construction and the operation phases of the project.</p> <p><u>Habitat Restoration/Rehabilitation Plan</u> Appoint an ecologist to compile a Habitat Restoration/Rehabilitation Plan for implementation before the end of the construction phase, prior to the operational phase.</p> <p><u>Avi-Fauna</u> The engineering design of the powerlines must accommodate the following:</p> <ul style="list-style-type: none"> • The most appropriate and up-to-date marking devices must be selected in consultation with the Endangered Wildlife Trust (EWT) Wildlife and Energy Programme. • Appropriate marking devices must be attached on all spans of all new power lines in accordance with installation guidelines to increase visibility. • The pylons to be constructed must have bird deterrent devices mounted on relevant parts of the structure where necessary to reduce the chances of electrocution. 	<p>EA Holder & Project Engineers & Contractors</p>				<p>The project engineers must confirm in writing that the design of the infrastructure complies with the requirement for the protection of avi-fauna.</p>
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<ul style="list-style-type: none"> Pylon positions of the proposed lines should be staggered between the pylon positions of the existing, adjacent overhead power line where practically possible to increase visibility of both lines to flying birds. Perimeter or security fences should be spaced a minimum of 2.5m apart if double-layered fencing is installed to prevent entrapment of larger bodied birds that may find themselves between the fences. 						
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Impact Management Outcome: Adhering to all permit and license requirements during the Planning & Design Phase						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
<p>SA Civil Aviation Authority (SACAA) SACAA is required to follow International Standards and Requirements in order to keep a database on <i>Obstacles</i> and it is therefore required to follow the <i>Obstacle application process</i>. The SACAA process whereby permission is applied for with regards to obstacles which could pose an aviation hazard must be followed.</p>	EA holder	Follow the Obstacle Application Process as per the CAA's website	Prior to any construction activities taking place	ECO must confirm approval has been obtained	Once prior to commencement of construction activities	The obstacle permit must be kept on site in the ECO file
<p>Water Use Authorisation Because disturbance will take place within the relevant delineated watercourses; Section 21(c) and 21(i) of the NWA are triggered. Water Use Authorisation must be obtained. The aquatic specialist confirmed that General Authorisation (GA) will be applicable. This GA is only required for the 132kV powerline and the upgrade of the existing access road where it cross the delineated watercourse with buffer zones.</p> <p>All conditions of the WUA must form part of the conditions of this EMPR.</p>	EA holder	Follow the relevant DWS procedures	Prior to construction activities taking place	ECO must confirm that environmental authorisation has been obtained	Once prior to commencement of construction activities	The Water Use Authorisation must be kept on file.

3.1 Construction Phase

CONSTRUCTION PHASE

Impact Management Outcome: Protection of the Natural and Cultural Environment during Construction

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
<p><u>Fauna and Flora</u></p> <ul style="list-style-type: none"> Minimise vegetation clearing and disturbance to footprint areas only. Implement the Alien Invasive Management Plan. Restrict access to sensitive areas during construction by ensuring that the labourers do not go outside the approved route corridor. Rehabilitate all disturbed areas to the satisfaction of the ECO whilst labourers and appropriate tools are still on site as per Habitat Rehabilitation Plan compiled during the Design & Pre-Construction Phase. <p><u>General</u></p> <ul style="list-style-type: none"> Constant monitoring needs to be undertaken during the entire construction period to evaluate the effectiveness of the proposed mitigation and whether further measures are required 	EA holder & Contractor	The ECO must confirm that conditions as per the EMP are being implemented	During the entire construction period	EA holder	Once every two weeks	The ECO must keep record of site inspections and findings

Impact Management Outcome: Protection of Avifauna during Construction

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
<u>Mitigation: Disturbance and Displacement</u>						

<ul style="list-style-type: none"> • An Environmental manager from the construction team must be appointed to oversee activities and ensure that the site-specific operation environmental management plan is implemented and enforced; • All vehicles should adhere to clearly defined and demarcated roads, no off-road driving should be allowed; • Speed limits (30 km/h) should be strictly enforced to reduce unnecessary noise; • The movement of personnel should be restricted to the access roads on the project site; and • No dogs or cats other than those of the landowners should be allowed on site. <p><u>Mitigation: Electrocutation during operation</u></p> <ul style="list-style-type: none"> • Bird perch deterrents and physical exclusion barriers, frames and covers may reduce incidence of birds perching and nesting on infrastructure; • Insulating, covering or isolating hardware may reduce electrocutions and outages; • Electrocutions to be monitored and recorded, and reported to the Endangered Wildlife Trust's (EWT) Wildlife and Energy Programme (WEP) to determine if further mitigation action is required; • No nests may be removed, without first consulting EWT; and • Any mortalities must be reported to the EWT. <p><u>Mitigation: Collision of Powerlines during Operation</u></p> <ul style="list-style-type: none"> • There is opportunity to potentially reduce the risk of collision with the LILO lines by attaching flappers and bird flight diverters (BFDs) where practically possible – as was confirmed to be addressed during the Design Phase of the project; • Attach appropriate marking devices on all spans of all new power lines in accordance with installation guidelines to increase visibility; • Flappers and BFDs must be maintained and replaced where necessary, for the life span of the project; • Pylon positions of the proposed line should be staggered between the pylon positions of the existing, adjacent overhead power line where practically possible to increase visibility of both lines; • An operational monitoring programme must be implemented and include 	EA Holder Contractor	The ECO must confirm that conditions as per the EMPr are being implemented	During the entire construction period	EA holder	Once every two weeks	The ECO must keep record of site inspections and findings
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<p>regular monitoring (i.e. quarterly) of the entire length of the power lines for collision incidents for the lifespan of the project; and</p> <ul style="list-style-type: none"> ○ Collision incidents must be recorded and reported to the Endangered Wildlife Trust (EWT). 																		
<p>Archaeological Resources</p> <ul style="list-style-type: none"> • The two heritage sites must be demarcated with the required buffers of 30m and 100m respectively. No access in these areas is allowed. Demarcation must take place via practical means to be agreed between the ECO and the Contractor. • <u>Detail of heritage sites to protect</u> <table border="1" data-bbox="159 603 1032 868"> <thead> <tr> <th>Site name</th> <th>Description</th> <th>Coordinates</th> <th>Mitigation</th> </tr> </thead> <tbody> <tr> <td>Wag 'n Bietjie 004</td> <td>Still bay point, blades, hornfels, burnt bone, on top of dolerite outcrop with good views</td> <td>-30.68097 & 24.11972</td> <td>30m No Go Buffer</td> </tr> <tr> <td>Wag 'n Bietjie 014</td> <td>LSA and MSA site with mainly LSA hornfels flakes and pottery</td> <td>-30.68296 24.12708</td> <td>100m No Go Buffer</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Should any buried archaeological resources or burials be uncovered during the course of development activities, work must cease in the vicinity of these finds. The South African Heritage Resources Agency (SAHRA) must be contacted immediately in order to determine an appropriate way forward. • The contact details of SAHRA are as follows: SAHRA APM Unit 111 Harrington Street, Cape Town, 8000 Care of Ms Natasha Higgitt nhiggitt@SAHRA.org.za Tel 021 462 4502 	Site name	Description	Coordinates	Mitigation	Wag 'n Bietjie 004	Still bay point, blades, hornfels, burnt bone, on top of dolerite outcrop with good views	-30.68097 & 24.11972	30m No Go Buffer	Wag 'n Bietjie 014	LSA and MSA site with mainly LSA hornfels flakes and pottery	-30.68296 24.12708	100m No Go Buffer	EA holder	The ECO must confirm that conditions as per the EMP are being implemented	During the entire construction period	EA holder	Archaeological findings may occur during the earthworks	The ECO must keep record of site inspections and findings
Site name	Description	Coordinates	Mitigation															
Wag 'n Bietjie 004	Still bay point, blades, hornfels, burnt bone, on top of dolerite outcrop with good views	-30.68097 & 24.11972	30m No Go Buffer															
Wag 'n Bietjie 014	LSA and MSA site with mainly LSA hornfels flakes and pottery	-30.68296 24.12708	100m No Go Buffer															
<p>Palaeontology</p>	Contractor	The ECO must	During the entire	ECO	Palaeontologi	The ECO												

<p>The Chance Fossil Finds Procedure must be implemented during the course of construction activities. The following procedure is only required if fossils are seen on the surface and when drilling/excavations commence.</p> <ul style="list-style-type: none"> • When excavations begin underground rocks are exposed, the rocks must be given a cursory inspection by the ECO (or other designated person). Any fossiliferous material (plants, insects, bone, coal, tracks, plant impressions) should be put aside in a suitably protected place. This way the project activities will not be interrupted. • Photographs of similar fossils are provided under Appendix C of the EMPR to assist in recognising the fossil plants, vertebrates, invertebrates or trace fossils in the shales and mudstones. • Photographs of the putative fossils must be sent to a palaeontologist for a preliminary assessment. • If the above-mentioned palaeontologist found any possible fossil material, a qualified palaeontologist should visit the site to inspect the selected material and check the dumps where feasible. • Fossil plants or vertebrates that are considered to be of good quality or scientific interest by the palaeontologist must be removed, catalogued and housed in a suitable institution where they can be made available for further study. Before the fossils are removed from the site a SAHRA permit must be obtained. Annual reports must be submitted to SAHRA as required by the relevant permits. <p>If no good fossil material is recovered then no site inspections by the palaeontologist will be necessary. A final report by the palaeontologist must be sent to SAHRA once the project has been completed and only if there are fossils.</p> <ul style="list-style-type: none"> • SAHRA Contact details are as follows:SAHRA APM Unit 111 Harrington Street, Cape Town, 8000 Care of Ms Natasha Higgitt nhiggitt@SAHRA.org.za Tel 021 462 4502 • If no fossils are found and the excavations have finished then no further 	ECO	confirm that conditions as per the EMPr are being implemented.	construction period		cal findings may occur during the earthworks	must keep record of site inspections and findings
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monitoring is required.						
<u>Impact of an uncontrolled labour force</u> <ul style="list-style-type: none"> • Labourers should be trained in general principles of environmental management that includes the following: <ul style="list-style-type: none"> ○ Removal of agricultural products is prohibited. ○ No plants may be collected. ○ No firewood may be collected. ○ No open fires are to be made. ○ No wandering on adjacent properties is allowed. ○ No access to the watercourse areas is allowed. ○ No watercourse may be used for any purpose (i.e. drinking water, washing, laundry, etc.) ○ The veld may not be used for any toilet needs. • Secure accommodation facilities must be provided for guarding personnel (if applicable). • Supervision of labourers must at all times take place. 	EA holder Contractor	The ECO must confirm that conditions as per the EMPr are being implemented, which includes training before construction commences as well as regular follow-ups	During the entire construction period	EA holder	Constantly during the entire construction period	The ECO must keep record of site inspections and findings

Impact Management Outcome: Prevent Impact on Aquatic Environment during Construction

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
<ul style="list-style-type: none"> • The recommended buffers of at between 30m and 50m between the delineated aquatic ecosystems and all the proposed project activities should be maintained. Any works within the aquatic features should be within existing disturbed areas. • Clearing of indigenous vegetation should not take place within the aquatic features and the recommended buffers. 	EA holder & Contractor	The ECO must confirm that conditions as per the EMPr are being	During the entire construction period	EA holder	Constantly during the entire construction period	The ECO must keep record of site inspections

<ul style="list-style-type: none"> The existing road infrastructure to access new infrastructure should be utilised as far as possible to minimise the overall disturbance. During the construction phase, site management must be undertaken at the laydown and construction sites. This should specifically address on-site stormwater management and prevention of pollution measures from any potential pollution sources during construction activities such as hydrocarbon spills. Any stormwater that does arise within the construction sites must be handled appropriately to trap sediments and reduce flow velocities. The conditions of the Water Use Authorisation must be implemented. 		<p>implemented, which includes demarcation, training before construction commences as well as regular follow-ups</p>				and findings
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Impact Management Outcome: Prevent Groundwater Pollution

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
<p>Strict measures must be implemented :</p> <ul style="list-style-type: none"> Emergency incident reporting and remedial measures must be in place Adequate oil containment precautions must be taken. A bio-remediation contractor must be appointed to rehabilitate large oil spills. The regional officer of the Department of Water & Sanitation will advise in this regard. Small oil spills must be cleaned immediately with an oil spill kit. Proper maintenance procedures for vehicles and equipment must be followed. Servicing of vehicles may only take place in designated areas, in this case on a concrete surface within the switching station site. Drip trays should be used during the servicing of vehicles. The content thereof must be disposed in accordance with relevant hazardous material disposal requirement. 	EA holder Contractor	The ECO must confirm that conditions as per the EMP are being implemented, which includes training before construction commences as well as regular follow-ups	During the entire construction period	EA holder	Constantly during the entire construction period	The ECO must keep record of site inspections and findings

<ul style="list-style-type: none"> Measures to contain accidental spills must be readily available on site (spill kits). All hazardous substance spills must be reported to the Contractor and the ECO, recorded and investigated. <p>Waste Management Procedures must include the following:-</p> <ul style="list-style-type: none"> <u>General household waste</u> (i.e. strict control over labourers; no burning or burying of waste; provision of dustbin and garbage bags; regular removal preferably by municipal waste removal; etc.) <u>Construction waste</u> (i.e. stringent daily clean-up and either disposal at registered waste site or preferably sold for recycling purposes) <u>Sewage waste</u> (labourers to be provided with proper ablution facilities- chemical toilets must be provided and serviced by a reputable outside company; no effluent to be dumped on adjacent land). Written proof of servicing of the chemical toilets must be obtained and kept on site in the ECO file. <u>Hazardous waste</u> (i.e. oil contaminated waste to be moved to registered hazardous waste landfill site; adequate storage and labelling of hazardous materials on site). Stormwater should not be discharged into the working areas and it should be ensured that stormwater leaving the footprint of the proposed development areas is not contaminated by any substance, whether that substance is solid, liquid, vapour or any combination thereof. Way slips or written proof of disposal at an appropriately <u>registered</u> waste facility must be obtained and kept on site in die ECO File. 					
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Impact Management Outcome: Effective Storm Water Management and the Prevention of Erosion						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance

<ul style="list-style-type: none"> • It is recommended that access and service roads, as well as stormwater systems are constructed at the commencement of the construction phase to ensure that suitable stormwater management measures are in place at the least additional cost. • These permanent routes must be used also for construction purposes. In order to preserve the natural state of the surface and vegetation as far as practically possible, off-road driving should be restricted to the absolute essential. • Space for lay-down areas for construction material and for construction facilities is restricted on site. The flowing should however be taken into account: <ul style="list-style-type: none"> ○ Temporary or permanent soil stockpiles should be placed in such a way to minimize the impact on surface flow. ○ High resolution site survey data must be used to design stormwater ditches to direct surface flood water past any stockpiles. • Site clearing should be limited to the essential. • Construction waste must be collected and stored safely for disposal in accordance with the relevant waste regulations, protocols, and product specifications. • Care must be taken not to leave any waste on site that can lead to future contamination of the site or the downstream area. • Training with regards to stormwater management of construction personnel must be undertaken as part of their induction. 	EA holder Contractor	The ECO must confirm that conditions as per the EMPr are being implemented, which includes training before construction commences as well as regular follow-ups	During the entire construction period	EA holder	Constantly during the entire construction period	The ECO must keep record of site inspections and findings
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3.2 Operational Phase

OPERATIONAL PHASE

Impact Management Outcome: Effective Storm Water Management and Prevention of Erosion						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
<ul style="list-style-type: none"> • Regular conditional inspection of all storm water infrastructure is required. Inspection data must be recorded and accumulated for tracking purposes. Regular reporting should be a scheduled management task. • Any item that may be found to be out of order, for instance accumulation of settled sand in a trench, or erosion, must be addressed and corrected without delay to keep the storm water system in a good and fully functional condition. Record must be kept on all repairs. • Specific attention must be given to inspection during and after any rain and/or flood event to kerb any damage that may occur. 	EA holder	Regular site inspections and monitoring	Continuous	EA holder	Twice a year and after severe rainstorm events	Site inspection registers must be kept.
Impact Management Outcome: Prevent Groundwater Pollution						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
<ul style="list-style-type: none"> • Prevent impact rather than manage impact: <ul style="list-style-type: none"> ○ Permanent staff as well as maintenance and inspection personnel must be appropriately trained in terms of waste management, specifically with regards to hazardous waste, inclusive of risk 	EA holder Contractor	An Environmental Manager must	Continuous	EA holder	Once a month	The ECO must keep record of

<p>associated with the diesel storage facility, vehicle maintenance, etc. Appropriate Personal Protective Equipment (PPE) must at all times be provided.</p> <ul style="list-style-type: none"> ○ Spillages of hydrocarbons and contaminated water must be collected from the following areas : <ul style="list-style-type: none"> ▪ Diesel tank bunded area ▪ Product receiving station and receiving pipelines. ○ The storage tank must be fully contained within the bunded area to contain spillage of hydrocarbons and contaminated rainwater and prevent the ingress of hydrocarbon spillages and contaminated rainwater into the ground or surface water. ○ Spillages from the tank bund must be retained and released in a controlled manner to an oil separator from where it could be temporarily stored and ○ The storage tank must be fully contained within the bunded area to contain spillage of hydrocarbons and contaminated rainwater and prevent the ingress of hydrocarbon spillages and contaminated rainwater into the ground or surface water. ○ Provision must be made for a thick reinforced concrete spillage containment slab laid to fall to a catch pit connected to an oil/grease separator. ○ Spillages of hydrocarbons and contaminated water must be collected from the following areas : <ul style="list-style-type: none"> ▪ Diesel tank bunded area ▪ Product receiving station and receiving pipelines ▪ Vehicle servicing area ○ Proper maintenance procedures for vehicles and equipment must be followed. ○ Servicing of vehicles may only take place in designated areas, in this case on a concrete surface within the switching station site. ○ Drip trays should be used during the servicing of vehicles. The content thereof must be disposed in accordance with relevant 		<p>be appointed to confirm that ensure that conditions as per the EMP are being implemented.</p>				<p>site inspections and findings</p>
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<p>hazardous material disposal requirement.</p> <ul style="list-style-type: none"> ○ As part of routine maintenance, the Applicant must undertake regular engineering inspections of the tank, tank valves and pumps to ensure that there are no leaks. ● Hydrocarbon (oil, diesel, petrol) waste as well as hydrocarbon containing material must be regarded as hazardous waste and separated from general waste. ● All hazardous substances at the site must be adequately stored and accurately identified, recorded and labelled prior to removal to a registered hazardous waste facility. ● Provide measures for emergency incident reporting and remedial measures and personnel must be appropriately trained. ● A bio-remediation contractor must be appointed to rehabilitate large oil spills. The regional officer of the Department of Water & Sanitation will advise in this regard. ● Small oil spills must be cleaned immediately with an oil spill kit. Measures to contain accidental spills must always be readily available on site (spill kits). ● All hazardous substance spills must be reported to the Contractor and the ECO, recorded and investigated. ● Follow acceptable maintenance and operational practises to ensure consistent, effective and safe performance of the infrastructure ● Also refer to the <i>Generic EMPr</i>. 					
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Impact Management Outcome: Protection of Avifauna						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
<p><u>Mitigation: Disturbance and Displacement</u></p> <ul style="list-style-type: none"> ● A site specific Operational Environmental Management Plan (OEMP) must 	EA holder	Site inspections	Continuous	EA holder	Twice a	Site

<p>be implemented, which gives appropriate and detailed description of how the running of activities must be conducted to reduce unnecessary disturbance to birds;</p> <ul style="list-style-type: none"> • Environmental manager to oversee activities and ensure that the site-specific operation environmental management plan (OEMP) is implemented and enforced; • All vehicles should adhere to clearly defined and demarcated roads, no off-road driving should be allowed; • Speed limits (30 km/h) should be strictly enforced to reduce unnecessary noise; • The movement of personnel should be restricted to the access roads on the project site; and • No dogs or cats other than those of the landowners should be allowed on site. <p><u>Mitigation: Electrocutation during operation</u></p> <ul style="list-style-type: none"> • Bird perch deterrents and physical exclusion barriers, frames and covers may reduce incidence of birds perching and nesting on infrastructure; • Insulating, covering or isolating hardware may reduce electrocutions and outages; • Electrocutions to be monitored and recorded, and reported to the Endangered Wildlife Trust's (EWT) Wildlife and Energy Programme (WEP) to determine if further mitigation action is required; • No nests may be removed, without first consulting EWT. <p><u>Mitigation: Collision of Powerlines during Operation</u></p> <ul style="list-style-type: none"> • There is opportunity to potentially reduce the risk of collision with the LILO lines by attaching flappers and bird flight diverters (BFDs) where practically possible – as was confirmed to be addressed during the Design Phase of the project; • Attach appropriate marking devices on all spans of all new power lines in accordance with installation guidelines to increase visibility; 		and monitoring			year	inspection registers must be kept.
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<ul style="list-style-type: none"> • Flappers and BFDs must be maintained and replaced where necessary, for the life span of the project; • Pylon positions of the proposed line should be staggered between the pylon positions of the existing, adjacent overhead power line where practically possible to increase visibility of both lines; • An operational monitoring programme must be implemented and include regular monitoring (i.e. quarterly) of the entire length of the power lines for collision incidents for the lifespan of the project; and • Collision incidents must be recorded and reported to the Endangered Wildlife Trust (EWT). 					
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Impact Management Outcome: General protection of natural habitat during the Operational Phase

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
<ul style="list-style-type: none"> • Implement the Alien Invasive Management Plan • Any water supply, sanitation services as well as solid waste management services that may be required for the operation purposes should preferably be provided by an off-site service provider. • Maintenance and inspection of the electricity infrastructure must take place as per the Eskom Generic EMPR. • Bush clearing during servitude maintenance: <ul style="list-style-type: none"> ▪ All permit and landowner conditions shall be adhered to. ▪ Bush clearing must be undertaken with the knowledge of the landowner. ▪ Under no circumstances shall natural vegetation (veld), forests or protected vegetation be removed, harvested, mowed, brush-cut or altered in any way without a permit (where applicable). ▪ Only selective bush clearing is allowed: only vegetation which interferes with the safe operation of the power line or where the height exceeds the 	EA holder	The environmental manager must confirm regular monitoring, servitude maintenance and site inspections take place and that any faults or accidents or deterioration of the natural	Continuously	EA holder	As per generic EMPR	Site inspection registers must be kept.

<p>requirements as set by the Electrical Machinery Regulations and the Occupational Health and Safety (OHS) Act may be trimmed / removed in agreement with the landowner.</p> <ul style="list-style-type: none"> ▪ No damage or destruction of vegetation shall be permitted outside the footprint of the line servitude. ▪ No plant material may be removed if not part of identified vegetation clearance. ▪ No scalping shall be allowed on any part of the servitude unless absolutely necessary. Smaller vegetation can be flattened with a machine, but the blade should be kept above ground level to prevent scalping. ▪ Bush clearing must be done in accordance with the Vegetation Clearance and Maintenance within Overhead Power line Servitudes and on Eskom Owned Land procedure (EPC 32-247). ▪ Bush cuttings shall not be burned. Unwanted cuttings shall be removed and disposed of at a registered waste site and such records kept on file. ▪ The maintenance contractor must have the necessary knowledge to be able to identify protected species in the area as well indigenous species not interfering with the operation of the line due to their height and growth rate. 		<p>habitat is immediately reported and addressed.</p>				
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