
BACKGROUND INFORMATION DOCUMENT

ENVIRONMENTAL SCOPING ASSESSMENT FOR THE PROPOSED RELOCATION OF THE CURRENT 66kV & 132kV HOSEA KUTAKO INTERCHANGE TRANSMISSION LINE AND SUB STATION (KHOMAS REGION)

6 November 2023

1 THE PURPOSE OF THIS DOCUMENT

The purpose of this Background Information Document (BID) is to inform Interested and Affected Parties (I&APs) that an Environmental Scoping Assessment (referred to as the Study) is being undertaken for the proposed relocation of a small section of the 66kV & 132kV Hosea Kutako Interchange Transmission Line and Sungate Substation (referred to as the Project), located south within 5km of the Hosea Kutako International Airport.

Besides supplying information about the project, this BID provides an opportunity for I&APs and authorities to register their interest with the Environmental Assessment Practitioner (EAP) and to submit comments / questions / concerns they may have. Such comments / questions / concerns will ensure that all the issues of relevance to the Project are evaluated as part of the ESA.

2 BACKGROUND

This Project and Study being conducted is an outflow of the current road construction (B6 Windhoek Highway to Hosea Kutako International Airport) forming part of the new Trans-Kalahari Highway.

The new road extending from Windhoek to the Hosea Kutako International Airport (HKIA) provides for a large scale traffic interchange providing access of the new B6 Highway to the HKIA. The area affected by the large scale traffic interchange includes a section of the existing 66kV & 132kV Hosea Kutako Interchange Transmission Lines and portion of the Sungate Substation.

For purpose of the new B6 Highway and traffic interchange, it has become necessary to relocate the affected section of the 66kV & 132kV Hosea Kutako Interchange Transmission Lines and Sungate Substation.

The construction of facilities for the transmission and supply of electricity (i.e. power line) is a Listed Activity (GN. No. 29 of 2012) that requires an Environmental Clearance Certificate (ECC) before being implemented [Section 27(3) of the Environmental Management Act, No. 7 of 2007].

Urban Green cc has accordingly been appointed to apply for an ECC and undertake an environmental scoping assessment (ESA), as per the Environmental Impact Assessment Regulations (GN. No. 30 of 2012).

Transmission Consulting Services (TCS) was appointed by SMEC Consulting Engineers for the design and implementation of the relocation of the 66kV & 132kV transmission line.

3 PROJECT OVERVIEWⁱ

3.1 Locality

The section of the 66kV and 132kV OHTL being affected is located south of the existing B6 Highway, within 5km south of the HKIA (Appendix A).

3.2 Description

The Project entails the relocation of a 2km section of both of the existing 66kV & 132kV Hosea Kutako Interchange Transmission Line and a portion of the Sungate Substation. This entails the physical removal of the existing transmission lines and pole structure, and erection of new pole structures and reconnecting the transmission lines along a new route, as indicated by Appendix B.

3.3 Transmission Line Alignment and Substation

3.2.1 Transmission Lines

The 66kV OHTL extends from the Bismarck Substation to the Witvlei Substation, while the 132kV OHTL extends from the Auas Substation to the Omahere Substation supplying power to Witvlei and Gobabis respectively, as part of the transmission network of NAMPOWER. The

ⁱ Information obtained from the Project Coordinator and Project Engineers.

66kV OHTL feeds into the Sungate Substation, again distributing into the Sungate Development. The HKIA is supplied from the Dedmont Substation and the NamPower 11kV reticulation, which are not affected by the Project. The HKIA will accordingly not be affected by the relocation of the 66kV & 132kV OHTLs.



Photo 1 – View of existing 132kV OHTL (front) and existing 66kV OHTL (back).

3.2.2 Sub Station

The existing Sungate Substation, also located south of the existing B6 road, is partially located within the alignment of the proposed new B6 Highway and interchange. While the existing infrastructure will remain, the fence-in area of the Sungate Substation will be relocated from the existing locality $\pm 15\text{m}$ south to provide for enough space for the new B6 Highway (see Appendix B).

3.4 Infrastructure Design and Specifications

3.4.1 Pole Structures & Transmission Line

The to be constructed physical infrastructure consists of a single-circuit 66kV OHTL and single-circuit 132kV OHTL fixed to galvanized steel monopole structures, which are typical structures used by NAMPOWER throughout the rest of the Country.

The structures are a combination of freestanding intermediate (Photo 2) and angle structures to be stayed at bends (Photo 3), designed according to SANS10280 (IEC60826), as indicated by Photos 2 & 3 below.



The angle poles will be equipped with 5 or 7 12mm galvanized steel wires (see Photo 3), to which a yellow uPVC warning pipe is installed for visibility.

Pelican ACSR single circuit conductors will be installed on these steel monopoles with Line Post insulators on the suspension structures and Longrod tension insulators on the bend and/or terminal poles. The 132kV OHTL will be equipped with a 48FO Single Mode Fibre (SMF) Optical Ground Wire (OPGW) at the top of the monopoles to provide the communication between substations and lightning protection for the conductors below. The 66kV OHTL will be equipped with a 7 x 3.51mm Galvanized Steel Wire for lightning protection.

A lightning spike is situated at the top of the pole to attract the lightning to the pole in order to avoid strikes on the conductor and shield wire. A 7 x 4mm GSW pole earth wire will be attached to the bottom of the pole at an earth lug attachment point.

The monopole structures to be erected are 20.6 to 24.6m in length of which 2.6 to 3m will be underground, resulting in an above ground structure of 18 to 21.6m in height. The height of the monopole structures on both sides where the OHTLs crosses the B6 Highway will be 24m above ground to ensure a safe passing distance underneath.

The span width between the monopole structures will be approximately 200 to 260m. Aircraft warning spheres (600mm diameter) will be installed over the section of the relocated OHTLs crossings the B6 Highway. This is to ensure visibility of the OHTLs to approaching aircraft in the event of an emergency landing.

The line design will meet and possibly exceed, where necessary, all SANS 10280 standards and specifications (latest edition). The galvanizing drainage holes will be closed with the use of Bee Plugs supplied by the pole manufacturer. These will be installed by the contractor.

The Technical Submission Report from TCS Transmission Consulting Services is available from the offices of Urban Green cc.

3.4.2 Transmission Line Servitude

As both the 66kV OHTL and 132kV OHTL follows the same alignment within the vicinity of the study area, the relocated 66kV OHTL and 132kV OHTL will continue to follow the same alignment passing south of the planned traffic interchange. The section of the existing servitude affected will be cancelled and reregistered according to the new alignment (see Appendix B).

The required servitude width is 25m to either side of the OHTL centreline, i.e. 50m in total.

3.4.3 Sub-Station

The Sungate Sub-Station infrastructure will remain as is, with only the fenced-in area being relocated to provide for the required space for the new B6 Highway and traffic interchange.

3.5 Construction Phase

The relocation of the section of the 66kV OHTL and 132kV OHTL is expected to take ± 2 months and will involve the following tasks:

- Setting-out of the alignment of the new route and pole locality within the alignment;

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- Setting-out of the construction camp and laydown area for infrastructure;
 - Clearing of vegetation along the OHTL alignment;
 - Clearing of vegetation within the boundaries of the temporary construction camp with laydown area;
 - Transportation of construction material (i.e. steel mono poles, conductors, insulators, etc.) and storage at temporary construction camp;
 - Digging of holes (3m depth) for the monopole structures' foundations with a drill or TLB, depending on the underground conditions;
 - Placement of monopole structures within the excavated areas and backfilled with soilcrete or concrete;
 - Once the base is dry, insulators will be fixed to the monopole structures and conductors strung between poles making use of human labour and machinery; and
 - Rehabilitation of the disturbed areas.

4 THE RECEIVING ENVIRONMENT

The larger receiving environment can be characterised as having a rural agricultural nature, with smaller pockets of an urban character, i.e., Sungate Township, HKIA and Neudamm Campus. Various bulk infrastructures, i.e., powerlines, roads, and telecommunication, is prominent within the area.

4.1 Surrounding Land Uses & Infrastructure

The immediate area to the north is defined by the Sungate Township and Hosea Kutako International Airport, while to the south commercial agricultural and tourism activities are found, with various bulk infrastructure dissecting through the larger area.

4.2 Natural Environment

The area to accommodate the 2km section to be relocated can be characterised as disturbed natural environment forming part of the commercial agricultural activities at Farm Detmont No. 78.

The area to accommodate the new B6 Highway and traffic interchange has been totally stripped from any vegetation (Photo 4).



Photo 4 – View of disturbed natural environment within the area of the new B6 Highway and traffic interchange.

5 POTENTIAL ENVIRONMENTAL CONCERNS

Potential environmental concerns identified at this stage of the scoping assessment are of a social and biophysical nature, as listed below.

5.1 Social Impacts

The following social impacts (negative and positive) can be expected as part of the proposed project.

Negative:

- Nuisance (dust; noise);
- Change in land use and resulting impact on value;
- Health and safety;

- Civil aviation safety;
- Temporary restriction of vehicle movement; and
- Visual impact.

Positive:

- Employment creation (mostly temporary and unskilled) for people residing near the project area; and
- Increased development potential and unlocking of land (i.e. improved socio-economic conditions).

During this construction and implementation time no power outages will be experienced by the public as NamPower is able to reroute the power flow to the various substations from other sources to the customers. The planning of the implementation phase was also done with particular attention to keep the outages on these two transmission lines to a minimum.

5.2 Biophysical Impacts

The following biophysical impacts (negative) can be expected as part of the proposed project.

- Electrocutation and collision of bird species with power lines; and
- Habitat disturbance and removal associated with vegetation clearance (and associated impacts).

6 THE ENVIRONMENTAL SCOPING ASSESSMENT (ESA)

In accordance with Section 27(3) of Namibia's Environmental Management Act (EMA) (No. 7 of 2007), it is required that an ECC be obtained from the Environmental Commissioner for the proposed project, hence it is required to conduct an Environmental Scoping Assessment (ESA).

An ESA is conducted to ensure that a particular activity or activities have the least possible impacts on the immediate biophysical and social environments.

The purpose of any ESA is:

- to support the goals of environmental protection and sustainable development;
- to integrate environmental protection and economic decisions early in the project planning and design process;

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- to predict biophysical, social, and economic consequences of a proposed activity and to assess plans to mitigate any adverse impacts resulting from the proposed project, and
 - **to provide for the involvement of the public and the relevant authorities in review of the proposed project.**

The long-term objectives of an ESA are to protect human health and safety; to avoid irreversible changes and significant damage to the environment; safeguard valuable resources, natural areas and ecosystem components; and to enhance the social aspects of proposed activities.

Urban Green cc was accordingly appointed to apply for an ECC, as prescribed by the abovementioned legislation, and conduct an ESA. For purpose of the proposed project, a scoping study will be undertaken.

The process of conducting a scoping study is determined by the EIA Regulations (GN. No. 30 of 2012). In line with Regulation 21 of the EIA Regulations (GN. 30 of 2012), thorough public consultation is required as part of an ESA.

7 PUBLIC PARTICIPATION AND THE WAY FORWARD

In accordance with the public consultation process stipulated in the EMA (No. 7 of 2007) and the EIA Regulations (GN. No. 30 of 2012), all potentially Interested and Affected Parties are hereby given notice of the ESA being conducted for the proposed project and requested to register with the EAP.

In accordance with Regulation 21 of the EIA Regulations, you / your office has been identified as an Interested and Affected Party (I&AP) and are hereby requested to register as an I&AP by submitting your comments/concerns or input on the intended activity in writing to Urban Green cc by way of:

- **Fax** your comments/concerns or input to the office of Urban Green cc (**061 – 401 294**);
- **E-mail** your comments/concerns or input to Urban Green cc (**urbangreen@iway.na**) or
- **Post** your comments/concerns or input to Urban Green cc (**PO Box 11929, Klein Windhoek**).

DEADLINE FOR REGISTRATION AND SUBMISSION OF COMMENTS IS 21 November 2023.

Please note: Only comments submitted in writing will receive attention and be responded on and be included as part of this scoping assessment. I&APs may call for clarification of details,

but direct comments must be in writing or emailed to Mr Brand van Zyl (urbangreen@iway.na) at Urban Green cc.

As an identified and registered interested and affected party, you will be kept informed throughout the environmental assessment process in accordance with Regulation 23 of the EIA Regulations (GN. 30 of 2012).

APPENDIX A – LOCALITY MAP



