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Site sensitivity verification of the proposed 132kV overhead powerline and 33/132kV onsite substation associated with the authorised Karreebosch wind energy facility (WEF), in relation to the bat sensitivity map and impacts on bats.

Animalia Consultants (Pty) Ltd completed the 12 months pre-construction bat monitoring for the now authorized Karreebosch Wind Energy Facility (WEF) (EA Ref: 14/12/16/3/3/2/807/AM3). The final preconstruction bat impact report also served as the environmental impact assessment (EIA) phase bat report and was submitted in 2014. It included the assessments of impacts relating to bat as required for the EIA phase.

The Karreebosch WEF and proposed 132kV overhead powerline (OHL) and 33/132kV onsite substation is situated north of the town of Matjiesfontein in the Karoo Hoogland Local Municipality and the Laingsburg Local Municipality in the Northern Cape Province and Western Cape Province. A separate application for Environmental Authorisation is being undertaken for the proposed Karreebosch OHL and substation, and this specialist opinion letter serves to form part of the Basic Assessment Report (BAR).

A site visit was conducted on 13 September 2021 by Animalia Consultants (Pty) Ltd to verify the Karreebosch 132kV OHL route alternatives and onsite substation alternatives, in relation to bat sensitivity. The impact of overhead powerlines and substations on bats are considered minimal in South Africa. However, pylon construction can pose a threat to underground bat cave roosts.

The proposed 132kV OHL will evacuate power from the authorized Karreebosch Wind Energy Facility (WEF) to the national grid via the existing Eskom Komsberg substation and Bon Espirange substation (**Figure 1**). The longest powerline route alternative is approximately 20.5 km long. The proposed 33/132kV onsite substation will be up to 3 hectares (ha) in size.



Figure 1: The proposed 132kV OHL route and substation alternatives. Green = Northern substation alternative (Option 2) with proposed grid OHL route alternatives. Blue = Southern substation alternative (Option 1) with proposed grid OHL route alternatives. Yellow = existing Bon Espirange substation. Red = existing Komsberg substation with proposed OHL route.

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The OHL will be a 132kV double circuit twin tern powerline (up to 40m above ground level). Standard overhead line construction methodology will be employed which implies drilling holes (typically 2 – 3m in depth), planting poles and stringing conductors. It is not envisaged that any large excavations and stabilized backfill will be required, however this will only be verified on site once the Geotech has been undertaken at each pole position (part of construction phase).

The proposed OHL route alternatives do not cross over any known bat caves and onsite substation alternatives are not located in proximity to any known bat caves, and therefore the proposed development is not predicted to have a significant negative impact on bat populations in the site area. All proposed OHL route alternatives and onsite substation alternatives are acceptable from a bat sensitivity perspective if all conditions of the EA and EMPs are adhered to.

If there are any queries, please do not hesitate to contact me.



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