



F.E.N. Consulting

Applying science to the real world

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Attention: Maggie Logan

MEMORANDUM: FRESHWATER SPECIALIST OPINION REGARDING THE PROPOSED 132 KV OVERHEAD POWERLINE BETWEEN THE EXISTING BON ESPIRANGE AND KOMSBERG SUBSTATIONS, NORTHERN AND WESTERN CAPE PROVINCES.

FEN Consulting undertook a freshwater ecological assessment in July 2021 as part of the Environmental Authorisation (EA) and Water Use Authorisation (WUA) processes for the proposed 132 kV overhead powerline (OHPL) between the proposed 33/132kV Kareebosch substation to the existing Bon Espirange substation, and between the Bon Espirange and existing Komsberg substations. This OHPL development formed part of the Kareebosch Wind Energy Facility (WEF) development which was bid as part of the Renewable Energy IPP Procurement Programme (REIPPPP) bid window 5. The Kareebosch WEF and associated OHPL development did not achieve preferred bidder status when the outcome of the REIPPPP bid window 5 was announced in October 2021.

Nonetheless, the proponent wishes to go forward with the EA and WUA processes for the proposed OHPL located between the existing Bon Espirange and Komsberg substations (Appendix A - Figure 1), which was assessed as part of the Kareebosch OHPL development freshwater ecological assessment (FEN Consulting, 2021¹). This letter serves to inform the relevant environmental and water use authorisation processes regarding the potential impact of the proposed OHPL development on any watercourses in the vicinity of the development.

Watercourse Assessment

Based on the outcome of the freshwater ecological assessment (FEN Consulting, 2021) to proposed OHPL development between the existing Bon Espirange and Komsberg substations will traverse

¹ FEN Consulting. 2021. Freshwater ecological assessment as part of the Water Use Authorisation process for the 132 kV overhead powerline and substation associated with the proposed Kareebosch Wind Energy Facility, between Sutherland and Matjiesfontein in the Western and Northern Cape Provinces. Report Reference: FEN 20-2114

several episodic drainage lines² (EDLs) without riparian vegetation associated with the Meintjiespoort River which is the dominant drainage feature in the region (Appendix A - Figure 1). These systems flow into larger ephemeral tributaries which support riparian vegetation, which ultimately flow into the larger riverine systems. Although these EDLs cannot be classified as riparian resources in the traditional sense, due to the lack of saturated soil and riparian vegetation, they do still function as waterways, through episodic conveyance of water. However, based on the definition of a watercourse³ water flows regularly or intermittently within these EDLs, conveying water from the upgradient catchment area into the downgradient tributaries and eventually into the larger river systems. As such, they can be considered as watercourses due to their importance for hydrological functioning as they do function as waterways and therefore enjoy protection in terms of the National Water Act, 1998 (Act No. 36 of 1998). Please refer to the outcome of the freshwater ecological assessment (FEN Consulting, 2021) for a detailed description of these watercourses.

DWS Risk Assessment

The outcome of the DWS Risk Assessment as per the freshwater ecological assessment (FEN Consulting, 2021) indicated that the construction and operation of the various OHPL options, were all of 'Low' risk significance to the assessed watercourses, with the implementation of the recommended mitigation measures. In this regard, the risk assessment was undertaken assuming that the location of the proposed OHPL support structures will be located, as far as possible, at least 32 m (outside the 32 m regulated zone in accordance with the National Environmental Management Act, 1998 (Act No. 107 of 1998)) from the delineated extent of a watercourse.

As such, the outcome of the DWS Risk Assessment as per the freshwater ecological assessment (FEN Consulting, 2021) is also applicable to the proposed OHPL between the existing Bon Espirange and Komsberg substations, which was determined to pose a 'Low' risk significance to the nearest watercourses to each facility. It is recommended that the mitigation measures as provided in the freshwater ecological assessment (FEN Consulting, 2021) be implemented to prevent and direct/indirect impacts from occurring on the watercourses. The proposed OHPL development is not considered to be fatally flawed.

Water Use Authorisation by means of General Authorisation (GA) in terms of Section 21(c) and (i) water uses are likely be obtained based on the outcome of the risk assessment, but must be confirmed in consultation with the Department of Water and Sanitation (DWS) regarding the findings of the study and the risk assessment.

It can be concluded that the proposed OHPL between the existing Bon Espirange and Komsberg substations does not pose any additional positive or negative impacts to any watercourses, and the FEN Consulting (2021) freshwater ecological assessment is applicable, acceptable, accurate and comprehensive to inform the required legislative processes for the proposed OHPL authorisation and subsequent development.

We trust we have interpreted your requirements correctly. Please feel free to contact me if you have any queries in this regard.

Yours Faithfully,

Digital Documentation Not Signed for Security Purposes

Stephen van Staden
Pr. Sci. Nat.

² "Highly flashy systems that flow or flood only in response to extreme rainfall events, usually high in their catchments. May not flow in a five-year period or may flow only once in several years." (Uys and O'Keeffe, 1997, in Rossouw et. al, 2006).

³ As per the National Water Act, 1998 (Act No. 36 of 1998), a Watercourse means: (a) A river or spring; (b) A natural channel in which water flows regularly or intermittently; (c) A wetland, lake or dam into which, or from which water flows; and (d) Any collection of water, which the Minister may, by notice of the Gazette, declare a watercourse.

APPENDIX A

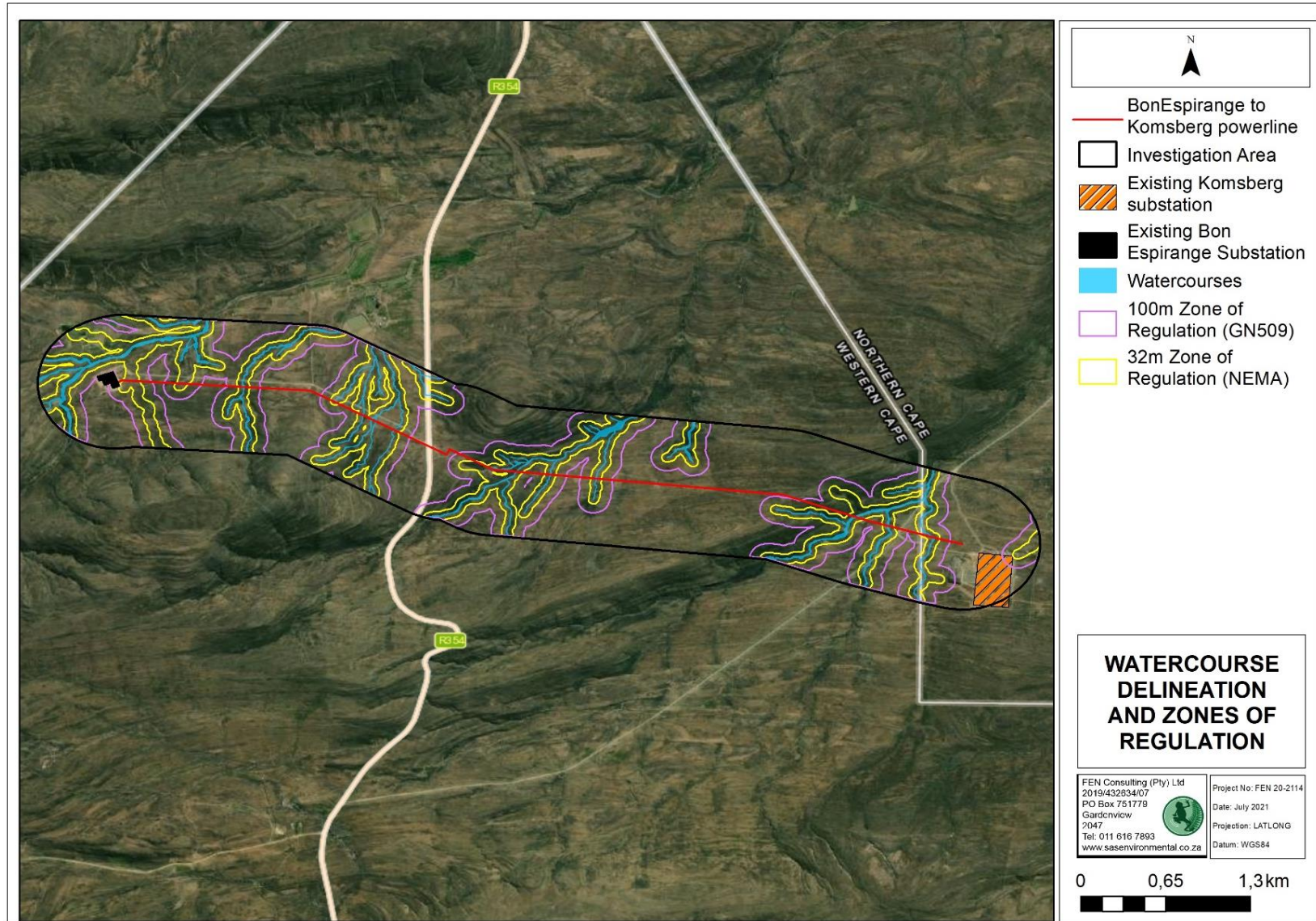


Figure 1: The conceptual presentation of the zones of regulation in relation to the delineated watercourses that form part of the Meintjiesplaas River system proposed to be traversed by the OHPL between the Bon Espirange and Komsberg substations.