

CK RUMBOLL & VENNOTE / PARTNERS



PROFESIONELE LANDMETERS ~ ENGINEERING AND MINE SURVEYORS ~ STADS- EN STREEKSBEPLANNERS ~ SECTIONAL TITLE CONSULTANTS

25/04/2024

REF: BW/12484/NJdK

FOR ATTENTION: Mr. C.B. Wright

Beaufort West Municipality

Mid Town

112 Donkin Street

BEAUFORT WEST

6970

CONSENT USE & REGISTRATION OF LEASE AREAS: RENEWABLE ENERGY STRUCTURES:

PORTION 1, 5, 6, 7 AND THE REMAINDER OF FARM BOETEKA Nr. 319 &

THE REMAINDER OF FARM LOMBARDS KRAAL Nr. 330

BEAUFORT WEST REGISTRATION DIVISION

Dear Sir,

With reference to the abovementioned land use application, please find attached the following:

- A copy of the pre-submission consultation minutes as facilitated by Mr. Christopher Wright;
- The payment for application and advertisement fees to be confirmed by Municipality;
- Conveyancer certificates for all properties involved
- The Environmental Authorisations for all properties involved
- Comments from the Western Cape Department of Agriculture for all properties involved
- Comment from the National Department of Agriculture relating the establishment of lease areas to facilitate the development (as per Act 70 of 1970).
- Two copies of the motivational report which is accompanied by the following annexures:
 - ❖ Annexure A: Power of Attorney
 - ❖ Annexure B: Municipal Application Form
 - ❖ Annexure C: Title Deeds & Property Diagrams
 - ❖ Annexure D: Locality Map
 - ❖ Annexure E: Site Development Plans
 - ❖ Annexure F: Traffic Impact Assessment
 - ❖ Annexure G: Visual Impact Assessment

Please direct all correspondence to planning2@rumboll.co.za or contact me via telephone at 022 482 1845.

Kind regards

NJ de Kock

CK RUMBOLL AND PARTNERS

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CONSENT USE: RENEWABLE ENERGY STRUCTURES

Portions 1, 5, 6, 7 and the Remainder of Farm Boeteka No.

319 and the Remainder of Farm Lombards Kraal No. 330

Beaufort West Registration Division



Ref: BW/12484/NJdK

25 April 2024

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1. INTRODUCTION

ENERTRAG South Africa (Pty) Ltd ('ESA') is proposing to develop, own and operate three wind energy facilities (WEF's) known as Jessa M, S and Z. Jessa M will have a generation capacity of up to 220 megawatts, Jessa S will have a generation capacity of up to 203.5 megawatts and Jessa Z will have a generation capacity of up to 220 megawatts. All three facilities will have a Battery Energy Storage component (BESS) of up to 220MW/880MWh. The three facilities will be spread across six adjacent farms located near the town of Beaufort West. Once built, the facilities will connect directly to the nearby existing Eskom Dröerivier Main Transmission Substation

The proposed project aims to generate electricity from a renewable resource to feed into the national grid for public or private off-takers procured through power procurement programmes such as the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), or similar suitable private offtaker initiatives.

2. PURPOSE

The purpose of this application is to apply for:

- ☐ A Consent Use in accordance with Section 15(2)(o) of the Beaufort West By-Law on Municipal Land Use Planning (PG8046) in order to permit renewable energy structures on Portion 1, 5, 6, 7 and the Remainder of Farm Boeteka No. 319 and the Remainder of Lombards Kraal No. 330 Beaufort West Registration Division.
- ☐ A Registration of lease areas in accordance with Section 15(2)(d) of the Beaufort West By-Law on Municipal Land Use Planning (PG8046) in order to permit the registration of lease areas over Portion 1, 5, 6, 7 and the Remainder of Farm

Boeteka No. 319 and the Remainder of Lombards Kraal No. 330 Beaufort West
Registration Division.

3. LOCALITY

The proposed development area is located approximately 8 to 15km south-west of Beaufort West, in the Beaufort West Local Municipality, Western Cape Province. The development proposal forms part of the project known as the ‘Jessa Cluster’.

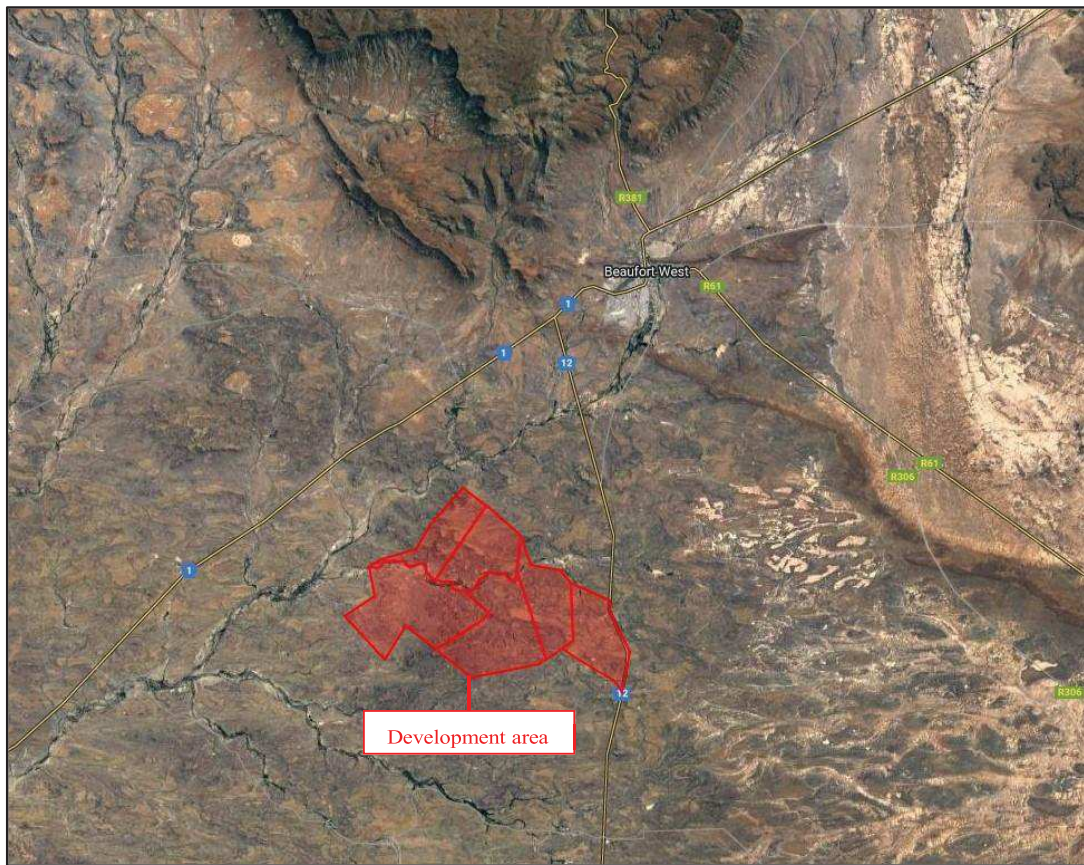


Figure 1: Locality of the ‘Jessa Cluster’ south-west of Beaufort West

4. PROPERTY DESCRIPTION

4.1. Summary of property particulars

Property description	Remainder of Farm Boeteka Nr. 319 Beaufort West Registration Division
Property size	2605,2134 Ha
Owner	Quickstep 479 (Pty) Ltd (Reg. No. 2017/497542/07)
Local Authority	Beaufort West
Title Deed	T49756/2018
Zoning	Agricultural Zone 1

Property description	Portion 1 of Farm Boeteka Nr. 319 Beaufort West Registration Division
Property size	1383,9216 Ha
Owner	Quickstep 479 (Pty) Ltd (Reg. No. 2017/497542/07)
Local Authority	Beaufort West
Title Deed	T49756/2018
Zoning	Agricultural Zone 1

Property description	Portion 5 of Farm Boeteka Nr. 319 Beaufort West Registration Division
Property size	1254,0056 Ha
Owner	Quickstep 479 (Pty) Ltd (Reg. No. 2017/497542/07)
Local Authority	Beaufort West
Title Deed	T107596/2004
Zoning	Agricultural Zone 1

Property description	Portion 6 of Farm Boeteka Nr. 319 Beaufort West Registration Division
Property size	2154,5792 Ha
Owner	Quickstep 479 (Pty) Ltd (Reg. No. 2017/497542/07)
Local Authority	Beaufort West
Title Deed	T49756/2018
Zoning	Agricultural Zone 1

Property description	Portion 7 of Farm Boeteka Nr. 319 Beaufort West Registration Division
Property size	1070,6650 Ha
Owner	Quickstep 479 (Pty) Ltd (Reg. No. 2017/497542/07)
Local Authority	Beaufort West
Title Deed	T49756/2018
Zoning	Agricultural Zone 1

Property description	Remainder of Farm Lombards Kraal Nr. 330 Beaufort West Registration Division
Property size	1242,4928 Ha
Owner	Quickstep 479 (Pty) Ltd (Reg. No. 2017/497542/07)
Local Authority	Beaufort West
Title Deed	T107596/2004
Zoning	Agricultural Zone 1

4.2. Restrictive title conditions

The title deeds¹ do not include any restrictive title conditions that prevent the development proposal.

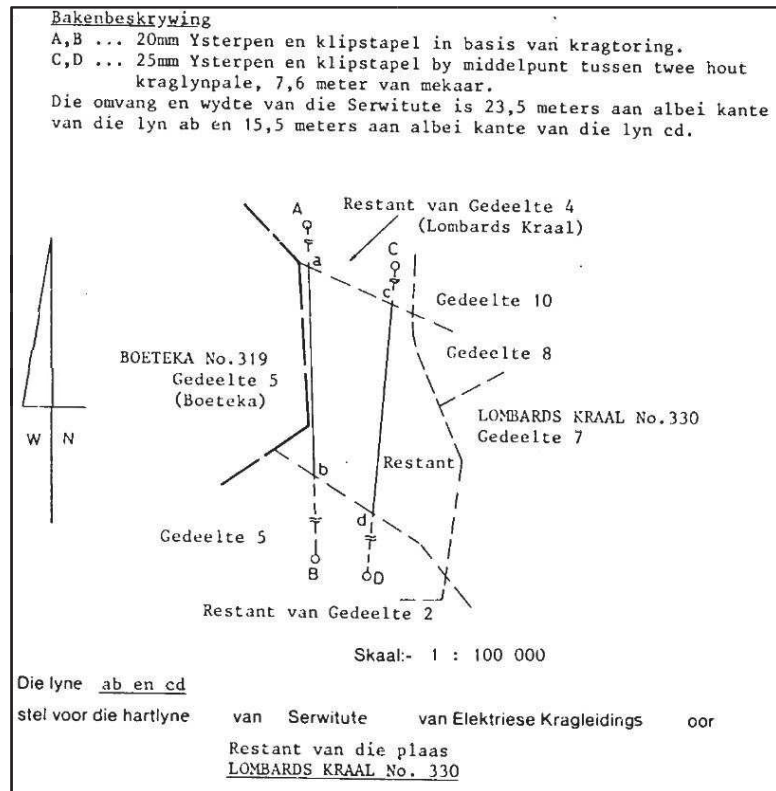
4.3. Bondholder

The bondholders consent is attached.

4.4. Servitudes

Two electric powerline servitudes run over the Remainder of Farm Lombards Kraal No. 330. One servitude measures 47m while the other measures 31m wide. These servitudes are depicted on servitude diagram 8089/1989. No servitudes are located on any of the other properties. The nearest a wind turbine is proposed to the servitude is approximately 450m away.

Figure 2:
Servitudes on
Remainder of Farm 330



¹ Title Deed & General Plan – Annexure C

4.5. Zoning and surrounding land uses

All subject properties are zoned agricultural zone 1 and all of the surrounding properties are also zoned Agricultural. The predominant land uses in the area include livestock and game farming, with some recreational seasonal hunting activities, and minimal manmade structures (dams and waterpoints) are also present however much of the development area is natural (shrubland and bare land) and relatively unmodified.

The development area is classified as agricultural land, however, no cultivation is undertaken there, and the area has only been used for grazing as an agricultural land use. There is evidence of an attempt to practice crop cultivation near the Boetekariver however the crops have evidently not survived the harsh climatic conditions of the area. Grazing of both sheep and game is the dominant agricultural land use in the area. Grazing capacity of the site for the projects is low at 36 hectares per large stock unit. There is little existing infrastructure present within the application site (with the exception of the landowner's small farmstead and supporting buildings).

4.6. Restrictions and Opportunities

There are no restrictions on-site or in the title deed that will prohibit the development of a renewable energy structure. No significant adverse impacts are anticipated and all impacts can be addressed through mitigation, rehabilitation, and management. An environmental process is underway and comments/approval from the Department of Environmental Affairs and Development Planning (DEA&DP) will be submitted once obtained. The benefits and related opportunities offered by the facility as an alternative renewable energy initiative are:

- ☐ Enhances energy security by assisting in diversifying generation (Since the project will produce electricity from (wind) renewable sources).
- ☐ Creates a more sustainable economy by promoting South Africa's energy policy towards energy diversification.

- ☐ Promotes local economic development by creating jobs and promoting skills development.
- ☐ Reduces the demand on scarce resources such as water, by

promoting energy generating facilities which are less resource intensive.

- Assists in meeting international commitments to carbon emission targets in line with global climate change commitments.
- Reduces pollution by using ‘cleaner’ energy generating mechanisms and reducing the demand on carbon-based fuels.

The proposed WEF development is viewed in a positive context due to the potential for employment creation within the local community. Furthermore, the proposed development is located in an area ear-marked by the South African Government for the proposed project of renewable energy facilities namely the Beaufort West REDZ (namely REDZ 11) and thus the proposal is aligned with the project strategies for the area. Lastly, the cumulative effect of the proposal and other developments in the area has the potential to result in positive socio-economic opportunities for the region. The proposal will support electricity constraints experienced in the country by generating, distributing, and evacuating clean energy into the Eskom national grid. The project will therefore contribute to improving the country’s electrification and increased electricity supply to houses and businesses.

4.7. Terrain and Environmental Characteristics

A brief outline of the terrain and environmental characteristics follows.

4.7.1. Topography

The landscape typically consists of extremely irregular to slightly undulating plains covered with dwarf spiny shrubland dominated by Karoo dwarf shrubs with rare low trees. According to the Heritage Impact Assessment the landscape is situated on a generally flat and featureless plain called “Die Vlakte”, characterized by low relief, gently rolling to hilly terrain with ridges and koppies between 1 000 to 1 100m above mean sea level (amsl) as well as dissected hilly terrain located some 5 to 25 km south of the Nuweveld Escarpment - part of the Great Escarpment of southern Africa. The highest points lie along a low, rock ridge trending west-east towards the northern edge of the study area.

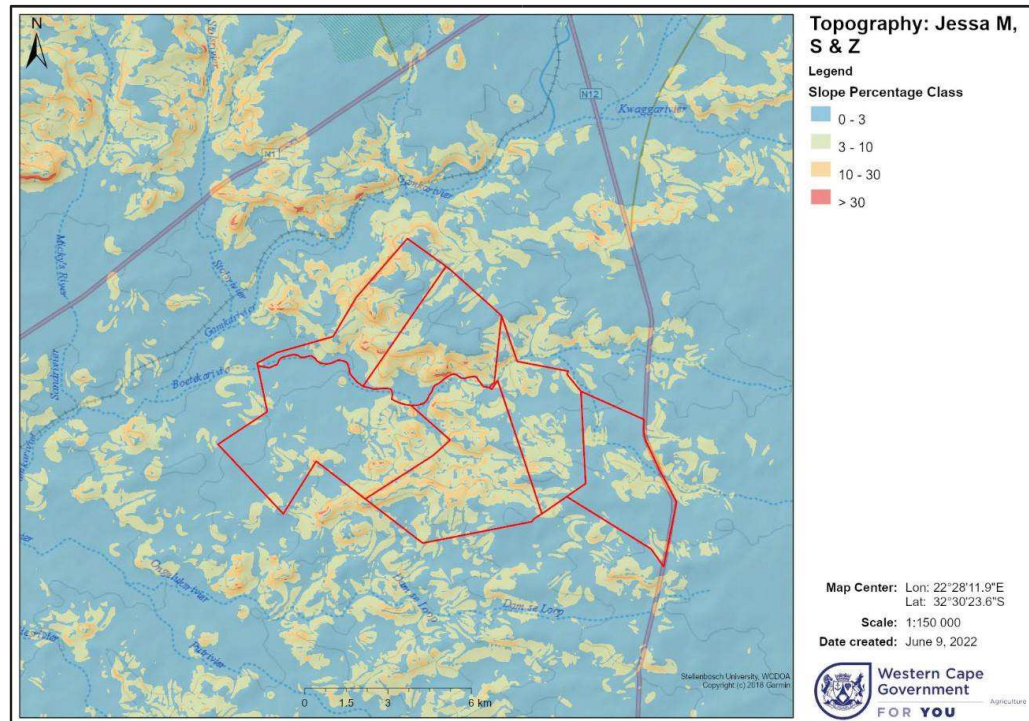
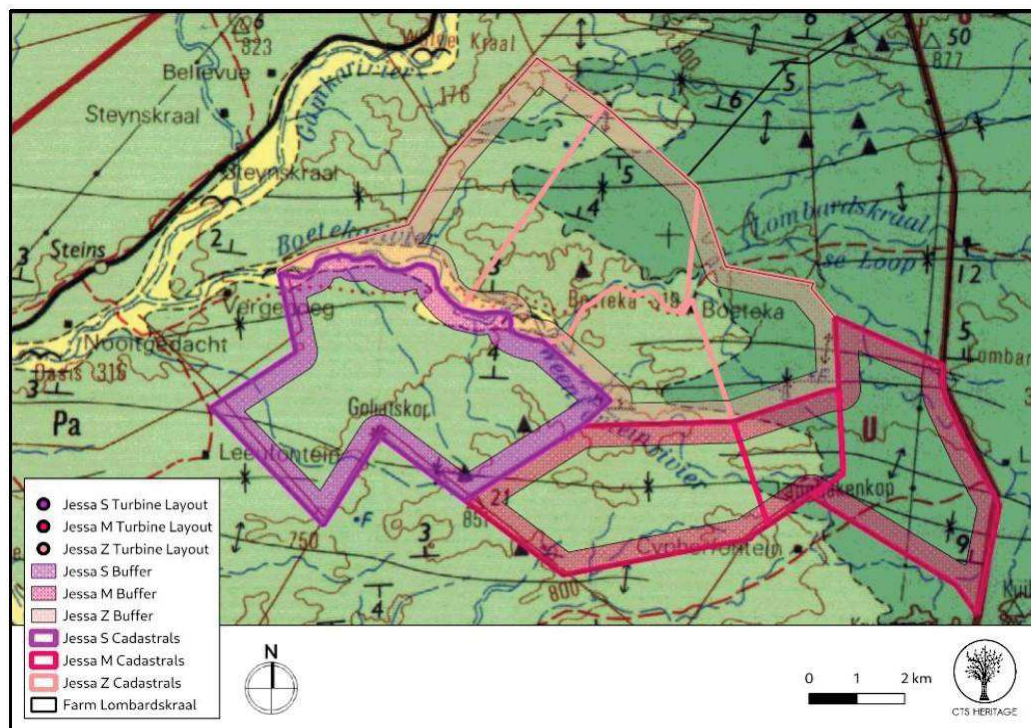


Figure 3: Development area topography (slopes)

4.7.2. Geology & Soils

The study area is located in the southwestern Karoo Supergroup Basin and the geology primarily comprises of mudstones and sandstones of the Beaufort Group (Adelaide Subgroup) with some Ecca (Fort Brown Formation) shales supporting very shallow and stony soils of the Glenrosa and/or Mispah forms. The sandstone and mudrock are well exposed along road cuttings and rivers. Based on the geotechnical report, the mudrock is characterised by a very fine to fine grained rock, massive in deposition with very widely spaced beds. Some sandstone beds have been classified as massive or weakly graded sandstone, due to the absence of sedimentary structures. Evidence of reworking by a process of bioturbation may be present. According to the Heritage Impact Assessment, the geology of the area is underlain by continental (fluvial/lacustrine) sediments of the Abrahamskraal Formation (Lower Beaufort Group).



as Least threatened. The Southern Karoo Riviere occur in the Western and Eastern Cape Provinces: Alluvia of the Buffels, Bloed, Dwyka, Gamka, Sout, Kariega, and Sundays Rivers and their tributaries), east of Laingsburg as far west as Graaff-Reinet and Jansenville. This vegetation unit is embedded within the Koedoesberge-Moordenaars Karoo, Prince Albert Succulent Karoo, Gamka Karoo, Eastern Lower Karoo, and southern parts of the Eastern Upper Karoo as well as some parts of the Albany Thicket Biome south of Cradock. Vegetation and landscape features consists of narrow riverine flats supporting a complex of *Acacia karroo* *Tamarixus neoides* thickets (up to 5 m tall), and fringed by tall *Salsola* dominated shrubland (up to 1.5 m high), especially on heavier (and salt laden) soils on very broad alluvia. In sandy drainage lines *Stipagrostis namaquensis* may occasionally also dominate. Mesic thicket forms in the far eastern part of this region (see Van der Walt 1980: Table 4) may also contain *Leucosidea sericea*, *Rhamnus prinoides* and *Ehrharta erecta*. According to scientific literature (Driver et al., 2005; Mucina et al., 2006), the Southern Karoo Riviere vegetation type is listed as Least threatened.

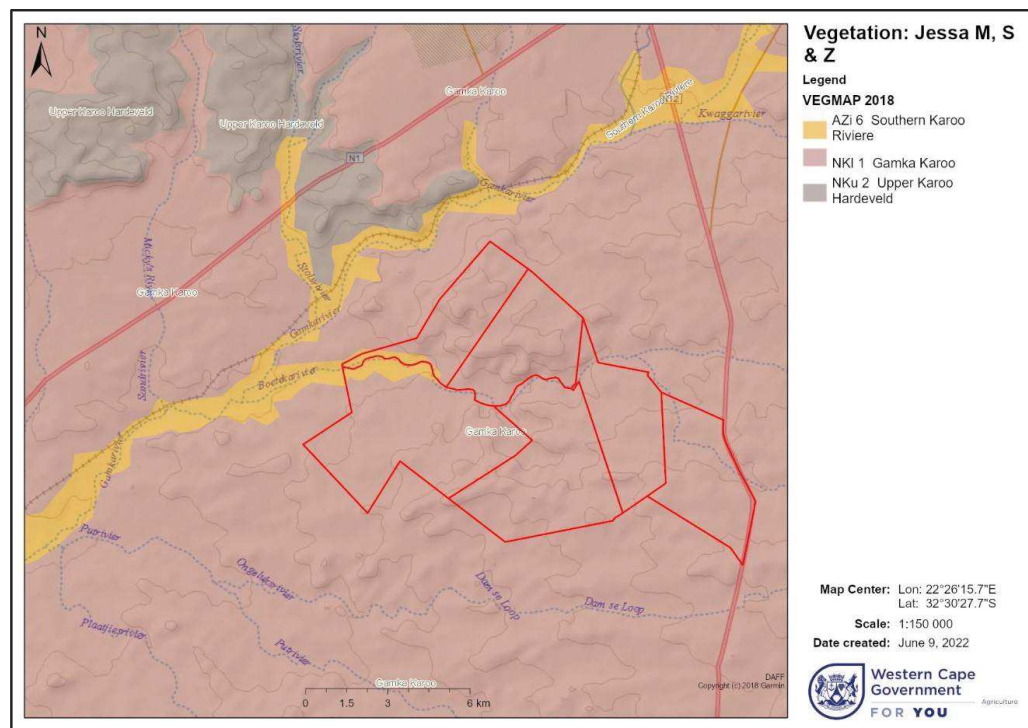


Figure 5: Development area vegetation

4.7.4. Rivers & Critical Biodiversity

The site contains patches of land classified as Ecological Support Area 1 (ESA1), as well as Critical Biodiversity Area 1 (CBA1), mainly along the river and drainage lines present on site.

ESAs are areas that are not essential for meeting biodiversity representation targets/thresholds but which nevertheless play an important role in supporting the ecological processes and functioning of critical biodiversity areas and/or in delivering ecosystem services that support socio-economic development, such as water provision, flood mitigation or carbon sequestration. The degree of restriction on land use and resource use in these areas may be lower than that recommended for critical biodiversity areas. In some cases, ESA areas provide habitat for red data plants as well as mammals and birds.

CBAs are areas of the landscape that need to be maintained in a natural or near-natural state in order to ensure the continued existence and functioning of species and ecosystems and the delivery of ecosystem services. In other words, if these areas are not maintained in a natural or near-natural state then biodiversity conservation targets cannot be met. Maintaining an area in a natural state can include a variety of biodiversity-compatible land uses and resource uses.

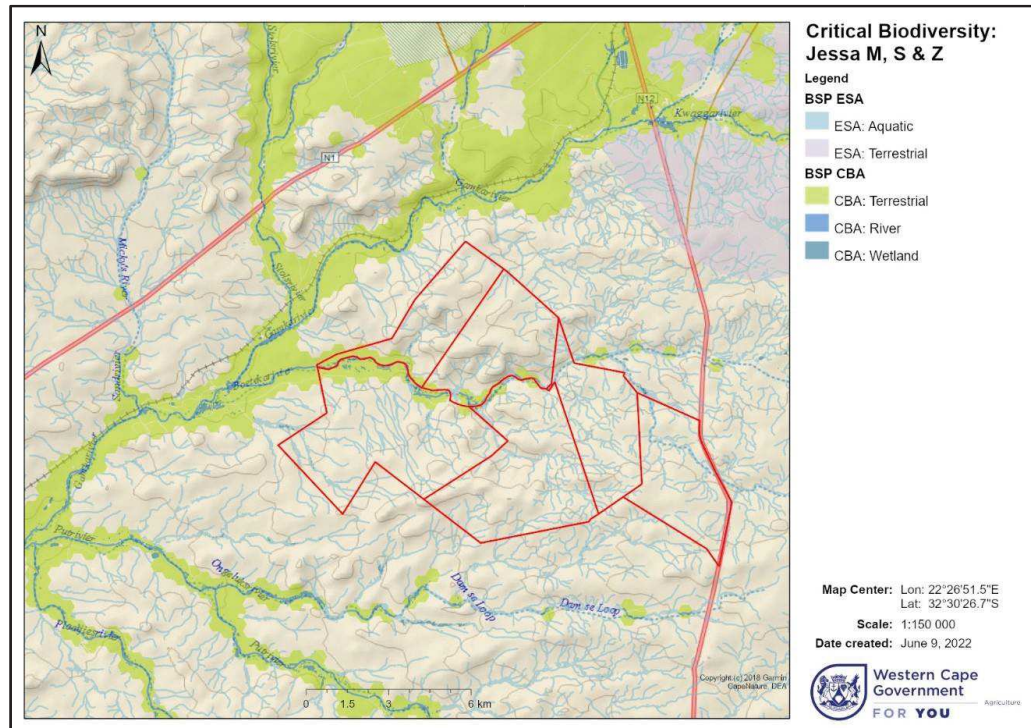


Figure 6: Development area CBA's and ESA's

5. DEVELOPMENT PROPOSAL

ENERTRAG South Africa (Pty) Ltd ('ESA') is proposing to develop, own and operate three wind energy facilities (WEF's) known as Jessa M, S and Z. Jessa M will have a generation capacity of up to 220 megawatts, Jessa S will have a generation capacity of up to 203.5 megawatts and Jessa Z will have a generation capacity of up to 220 megawatts. All three facilities will have a Battery Energy Storage component (BESS) of up to 220MW/880MWh. The three facilities will be spread across six adjacent farms located near the town of Beaufort West. The proposed project aims to generate electricity from a renewable resource to feed into the national grid. Once built, the facilities will connect directly to the nearby existing Eskom Dröerivier Main Transmission Substation through a powerline of up to 132kV (either single or double circuit). The proposed WEF projects

require several key components to facilitate the generation of electricity at a large scale, which includes:

- Wind turbines;
- Access and internal roads;
- An Operation and Maintenance Complex including the following:
 - o Operations and Maintenance (O&M) building; o Cement batching plant; o Temporary laydown or staging area;
 - o Underground cables and overhead low voltage power lines (up to 33kV); o Substation (including and operations and maintenance area for control, operation, workshop and storage buildings / areas); and
 - o Battery Energy Storage Facilities in the vicinity of the substations.

The proposed WEF project aims to supply clean energy to public or private offtakers procured through power procurement programmes such as the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), or similar suitable private off-taker initiatives. It should be noted that the proposed WEF's is located within the Beaufort West Renewable Energy Development Zone (REDZ) (namely REDZ 11).

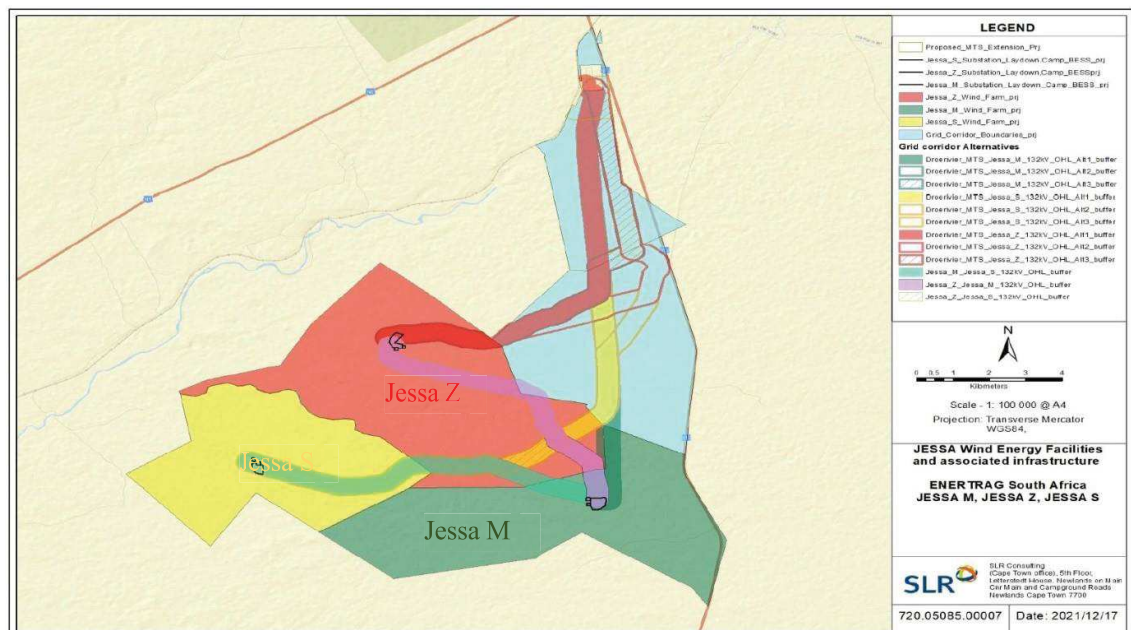


Figure 7: Development proposal consisting of Jessa M, S and Z

The three facilities will have a combined total of 92 wind turbines with 29 turbines in Jessa M, 28 turbines on Jessa S and 35 turbines on Jessa Z. Jessa S will be located on the Remainder of Farm Boeteka 319 while Jessa Z spans across the entire Portion 1 and 7 and portions of Portion 5 and 6 of Farm Boeteka 319. Jessa M spans across the entirety of the Remainder of Farm Lombards Kraal No. 330 and portions of Portion 5 and 6 of Farm Boeteka 319. The facilities will result in the following number of wind turbines on each respective property:

- ☐ 28 turbines on the Remainder of Farm 319 (Jessa S);
- ☐ 14 turbines on Portion 1 of Farm 319 (Jessa Z);
- ☐ 8 turbines on Portion 5 of Farm 319 (4x Jessa M and 4x Jessa Z turbines);
- ☐ 24 turbines on Portion 6 of Farm 319 (17x Jessa M and 7x Jessa Z turbines);
- ☐ 10 turbines on Portion 7 of Farm 319 (Jessa Z);
- ☐ 8 turbines on the Remainder of Farm 330 (Jessa M);

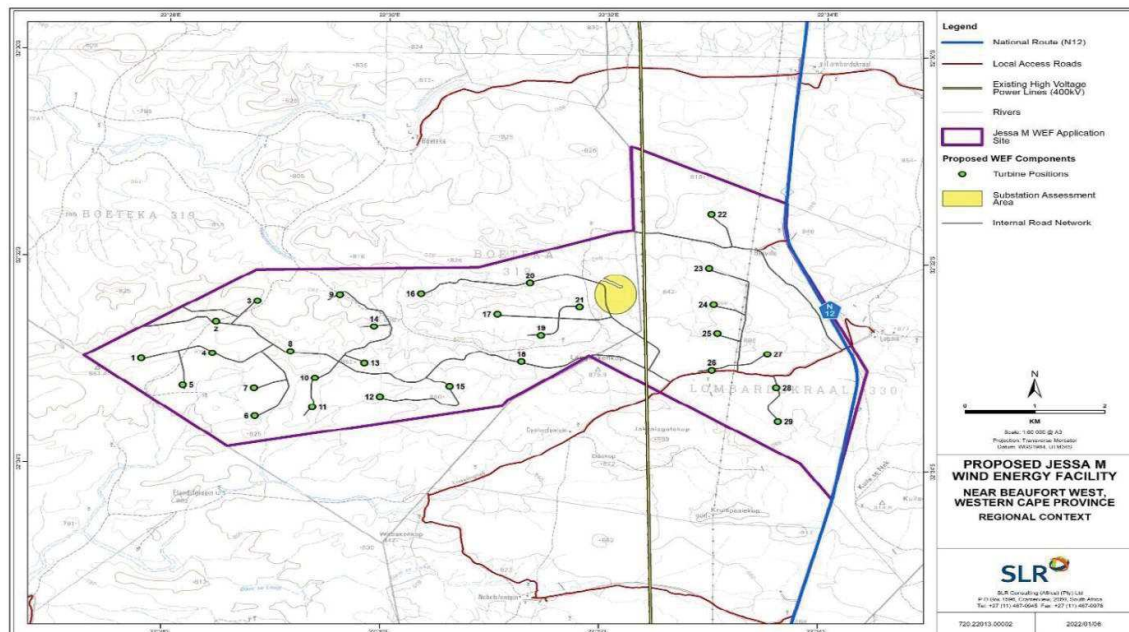


Figure 8: Jessa M cluster consisting of 29 wind turbines and substation area (yellow)

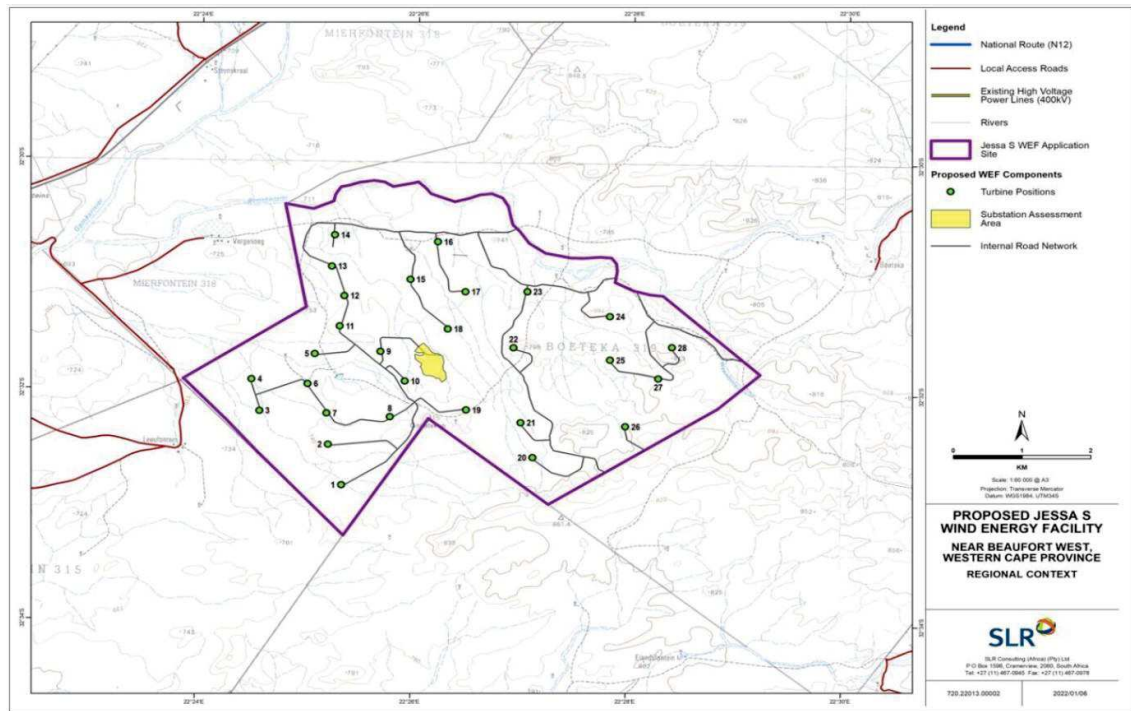


Figure 9: Jessa S cluster consisting of 28 wind turbines and substation area (yellow)

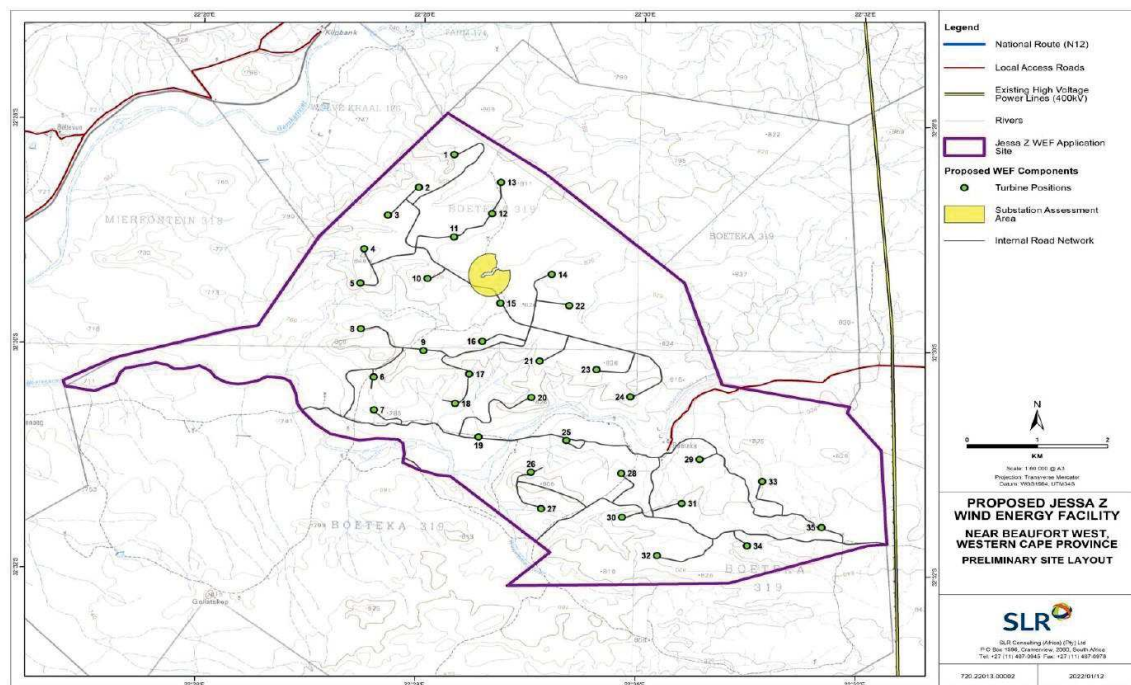


Figure 10: Jessa Z cluster consisting of 35 wind turbines and substation area (yellow)

5.1. Turbine Specifications

Since the turbine technology is continually evolving it is not possible for the developer, at this early stage in the proposed project process, to specify the exact turbine model and specification (or even what would be available in the marketplace). Assumptions have been made as to the maximum possible area of impact by the potential turbine blades based on a range of turbine sizes. This area of impact is referred to as the “exaggerated rotor swept area envelope”, as it 1) takes into account multiple turbine size scenarios at once, and 2) assumes each turbine has the largest blade it can from the lowest hub height and extends this all the way up to the highest hub height. This reflects an exaggerated worst-case area of impact that would never be realised in any scenario of turbine model.

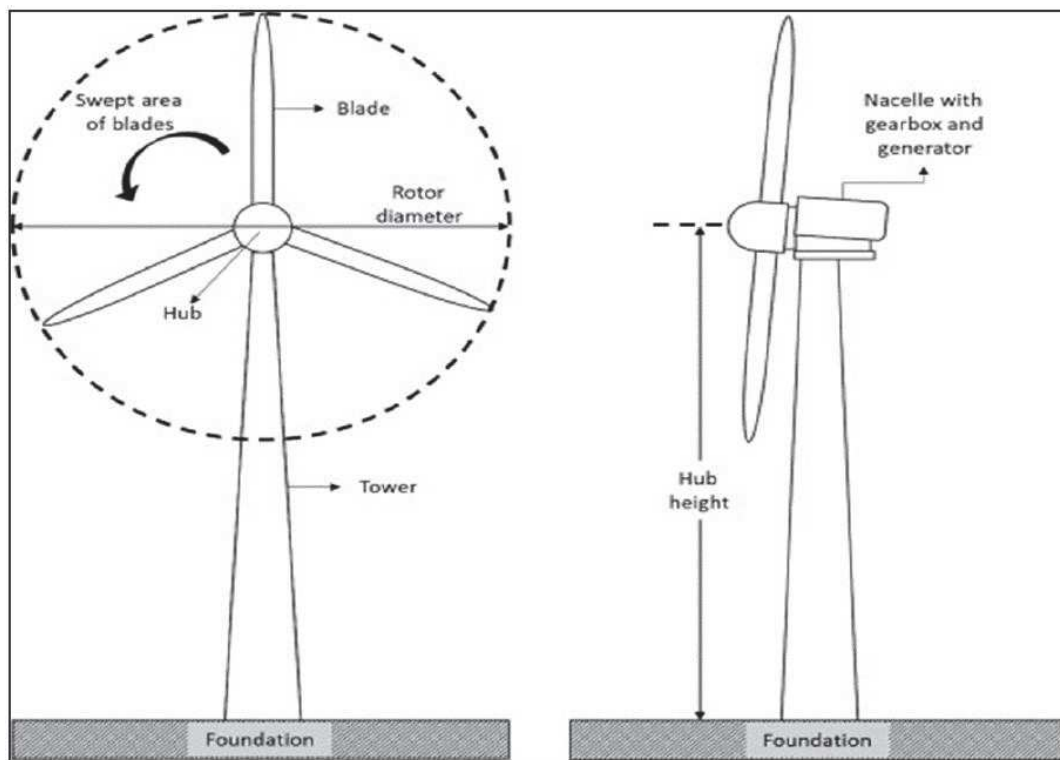


Figure 11: Exaggerated rotor swept area envelope

5.2. Power Transmission

Each turbine will be internally connected via 33kV internal power cables. For the most part cables will be laid underground in trenches, approximately 1m deep, generally

running alongside existing or proposed internal roads, but sometimes deviating from these. In limited instances, where burying of cables is not possible due to technical, geological, environmental or topographical constraints, short overhead powerlines will be erected to traverse these constrained areas. The Internal overhead powerlines will be spanned using short monopoles of not more than 20m in height. The typical design for the proposed internal overhead power line monopoles is depicted in below.

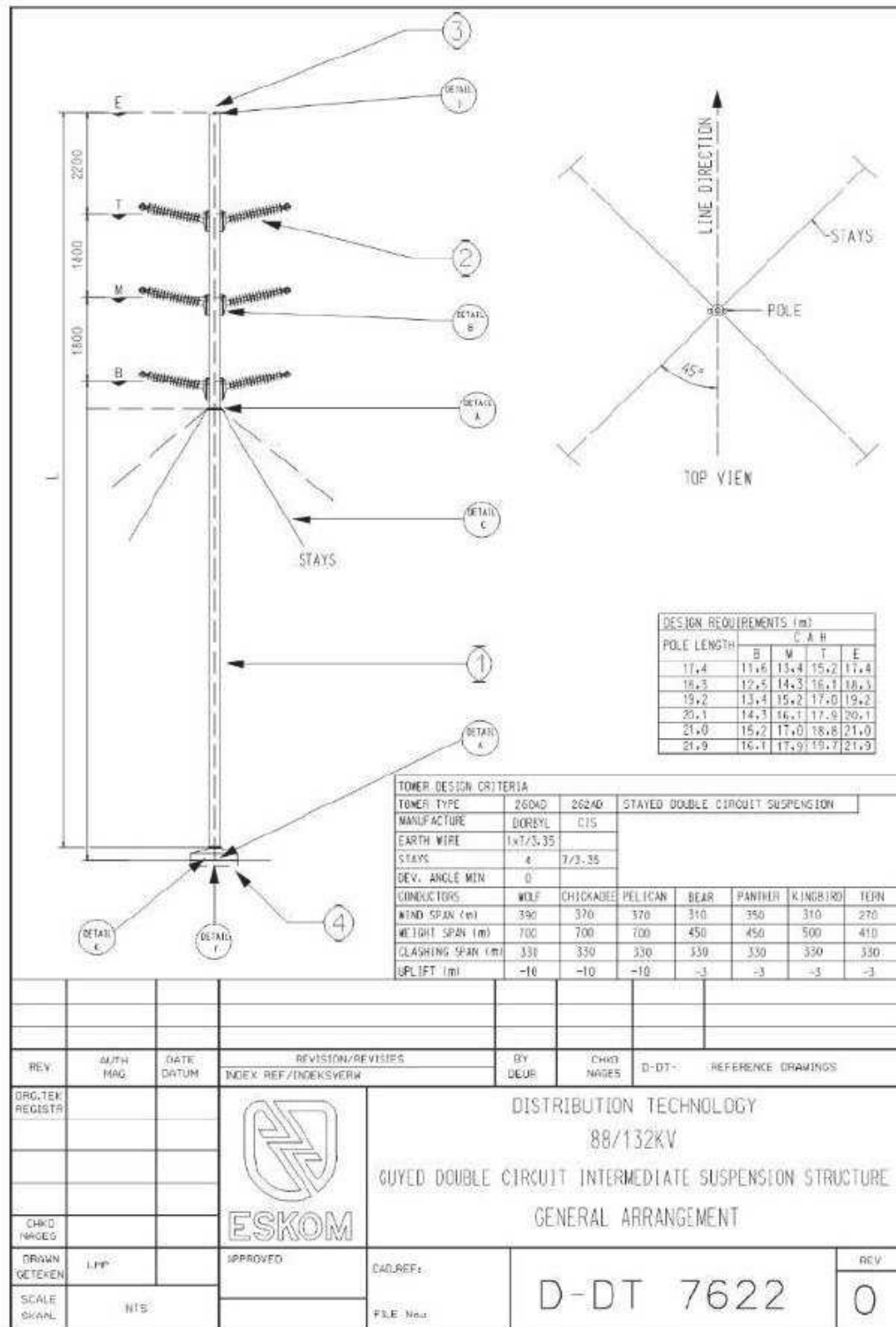
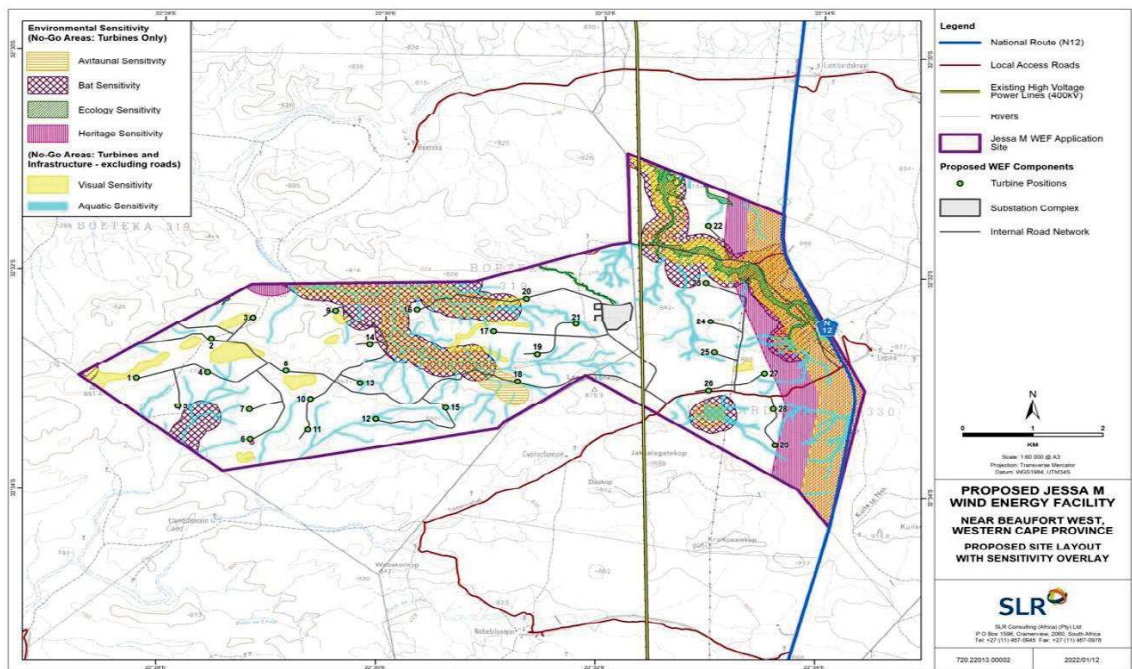
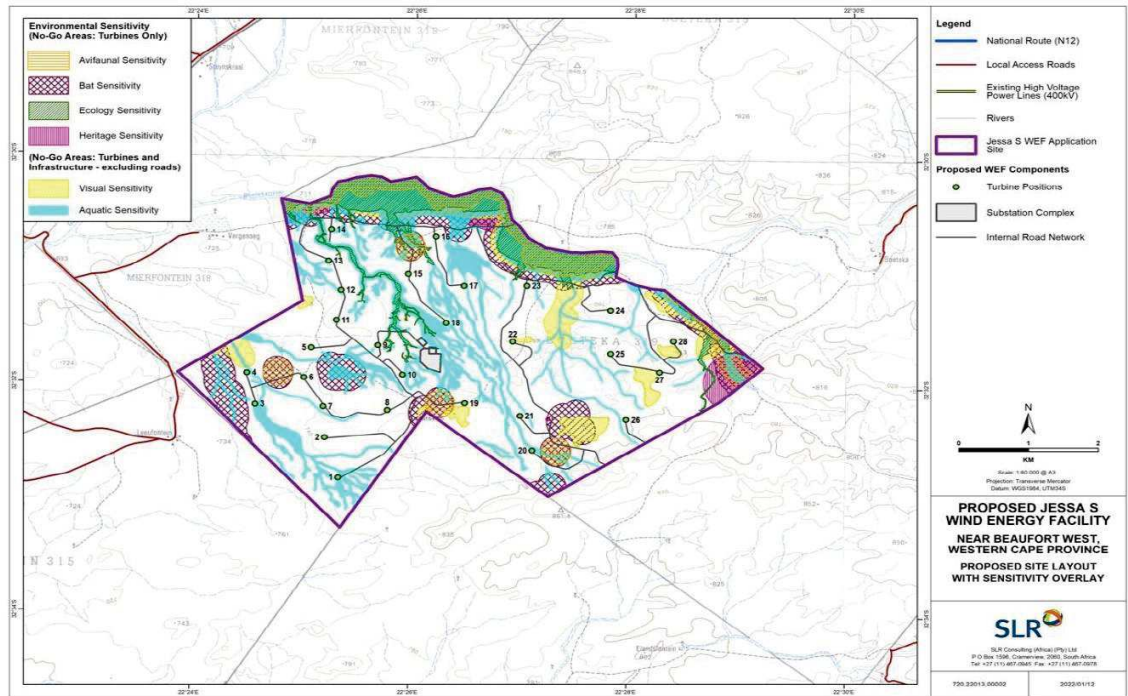


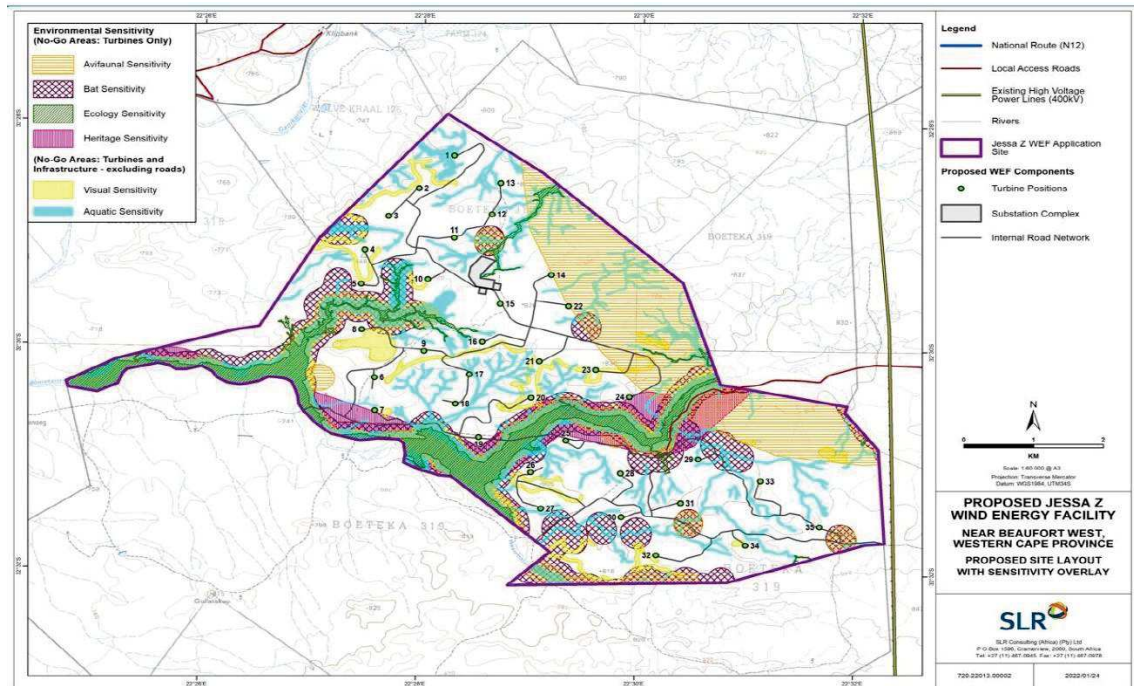
Figure 12: Typical design of the proposed monopoles to be used for the up to 132kV internal overhead power lines

5.3. Substations

The internal cables, as described, will collect at the three proposed Substations (with transformers). Each facility will include an on-site high voltage collector substation (33kV/132kV), covering an area of up to 4ha to allow for the potential of multiple feeder bays of up to 132kV, as well as transformers, control building, telecommunication infrastructure and access roads. The substations will also include a switching station component from where the 'stepped-up' 33kV to 132kV power will be distributed to through 132kV powerline to the Dröerivier MTS. The substation would typically include an area with a subterranean earthing mat onto which a number of concrete plinths are constructed. This, together with several earthing rods, will provide an earth for lightning and possible short circuit currents. Switching gear, step-up transformers and protection equipment are also mounted on concrete plinths as part of the substation.

It should also be noted that a site area of up to approximately 300 000m² (i.e., 550m x 550m or approximately 30ha) has been considered and assessed for the placement of the on-site substation, BESS, laydown area, O&M building and associated 33kV overhead powerlines. The assessment of a 30ha site area for the placement of the on-site substation, BESS, laydown area, O&M building and associated 33kV overhead powerlines, will provide sufficient extent for the placement of the WEF project infrastructure, whilst avoiding sensitive environmental features present within the study area. The layout of the proposed WEF (including associated infrastructure) has been based on both environmental constraints and design factors. The site selected for the substation is not considered as possible habitat, as the area is fairly flat, and the rocky material present is not considered to be suitable habitat for the species to use. Most of the areas between the proposed Jessa M WEF are flat or rolling terrain – again some rock material is present, but in general doesn't present good habitat for the species to utilise for habitation.





5.4. Battery Energy Storage Systems (BESS)

All three facilities include a Battery Energy Storage System (BESS) of up to 220MW/880MWh, which will subsequently be used to store ‘energy’ and will allow for a more continuous source of electricity to the grid (as battery facilities can help to smooth out the fluctuations in energy generation from the renewable energy sources and allow them to be closer to conventional generation systems in this regard). The BESS includes batteries, a power conversion system and transformer and will be placed on a platform that covers approximately 10ha (regardless of technology type), with a peak discharge value of 220MWac.

The BESS will be located in close proximity to the substations, will be fenced off and will be linked to the substations via internal cables and will not have any additional office / operation / maintenance infrastructure. The batteries will be assembled prior to delivery and come as ‘plug and play’ modular units. The BESS will be compliant with all local laws and regulations as well as health and safety requirements governing battery facilities.

It is proposed that Lithium Battery Technologies, such as Lithium-Ion Phosphate, Lithium Nickel Manganese Cobalt oxides or Vanadium Redox flow technologies will be considered as the preferred battery technology, however, the specific technology

will only be determined following EPC procurement. A brief description of some of the battery technology types is provided below.

Lithium-Ion (Li-Ion)

Charged lithium ions are carried via electrolytes between anode (negative electrode) and cathode (positive electrode) within each Lithium-Ion battery cell. There are a number of different battery chemistries that are available. These cells are combined into battery modules, which are housed in battery racks, a number of which are collectively enclosed in sealed containers. These are all assembled in factories and no electrolytic liquid is handled on site. In addition to the battery racks, other components within the containers includes a HVAC or air conditioning system, a fire detection and suppression system (that normally uses inert gas), battery management system and other electrical components required to manage the batteries. The containers are normally a standard size of about 12m long x 2.5m wide x 2.7-3m high. The BESS on the wind facilities site will comprise multiple containers (e.g., approximately 240, with an extra 3-5 containers for electrical connections and controls), an example of the installation is provided below. The main risk to health and the environment relating to for Lithium-Ion BESS is overheating that leads to spontaneous ignition and subsequent explosion i.e., fire. Since the batteries arrive on site sealed and kept in racks inside sealed containers the risk of chemical spills is extremely low.



Figure 13: Example of a Lithium-Ion BESS installation

Redox Flow:

Redox flow batteries are charged and discharged by means of the oxidation– reduction reaction of a chemical whereby ions are transferred from one element to another. Redox flow batteries therefore comprise an electrochemical battery cell and a flowable electrolyte which is pumped through the cell for charging or discharging electricity and is stored in electrolyte tanks (one tank acting as a cathode and one as an anode). The most common Flow battery electrolytes are based on a water solution including vanadium, zinc or iron salts. Electrolyte storage tanks and cells are typically installed in specially designed steel containers providing secondary and tertiary containment measures (double wall). The containers are filled with electrolyte on site during project installation. Adjacent to this is another container housing the conversion systems and auxiliary systems necessary for the operation of the system (these include HVAC, fire detection and suppression, leak detection and suppression, BESS management). The height of the installation will not exceed 3m. The main environmental risk specific to Flow batteries during construction and operation is the accidental leak or spillage to the environment of the liquid electrolyte. The risk of fire and explosion is low.



Figure 14: Indicative layout of a flow battery of approximately 0.1 ha

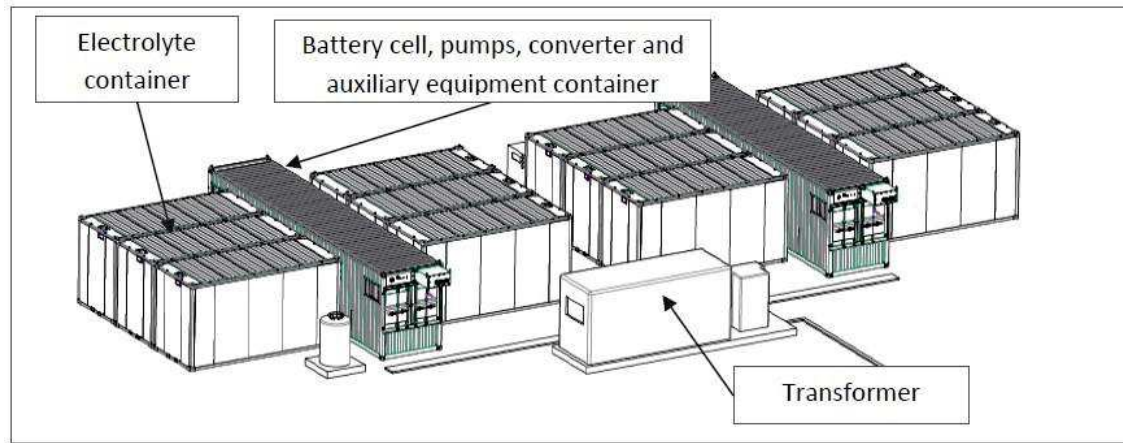


Figure 15: Indicative layout of Redox flow battery

5.5. Access

The all facilities can be accessed via the well-established existing road network in the area. The main access would be via the town of Beaufort West, using the N12 (TR03305). It is proposed that a local public road (OP08822), which connects to the N12 and provides access to the development area will be used to access the remaining parts of the site and connect to new internal access roads and tracks. These tracks will be developed within a 20m wide corridor to allow for fluctuating road widths as necessitated by cable trenches, stormwater channels and turning circle / bypass areas. These tracks would avoid steep areas and drainage lines and rather use existing roads / tracks to cross these features as far as possible.

5.6. Temporary Areas

During construction, temporary laydown areas will be identified for each Jessa project, with the main equipment and construction yards being based in one of the surrounding towns, or on one of the proposed Jessa wind energy facility projects. It is anticipated that the total area required for the temporary laydown areas is up to 5ha.

As part of the proposed WEF project, a site area of up to approximately 300 000m² (i.e., 550m x 550m or approximately 30ha) per project (Jessa M,S & Z) has been

considered and assessed for the onsite substation, BESS, laydown area, O&M building and associated 33kV powerlines. This may reduce in width as the study advances, but it is important to cover a broader area in earlier phases of the study to allow space, if required, to avoid constraints that may be identified.

5.7. Service Provision

Water Demand

During the construction phase of the proposed project, water will be sourced either from a local third party, existing boreholes within the study area or through surface water abstraction. The anticipated water usage for the project for the duration of the construction phase includes the following:

- ☐ Drinking;
- ☐ Ablution facilities;
- ☐ Access Road construction;
- ☐ Dust suppression;
- ☐ Fire-fighting reserve;
- ☐ Cleaning of facilities; and
- ☐ Construction of foundations for the WEF and grid connection infrastructure, i.e., turbines, powerline pylons and substation, etc.

During the operation phase, negligible water will be required for the operation of the WEF infrastructure and will mainly be for domestic use within the footprint of the WEF (inclusive of associated infrastructure).

Waste Management

- ☐ Wastewater– Effluent will be generated during the construction and operation phase of the proposed project. It is estimated that wastewater volume will be approximately 30m³ per day. This will, however, be confirmed during the detailed design phase, prior to construction commencing. A Service Level Agreement will be reached with a registered service provider for the collection of sewage from site using a “honeysucker” truck and would be disposed of at the nearby Wastewater Treatment Works (WWTWs) during the construction phase. A new Claris fusion system will be deployed during the construction phase of the

proposed project which will utilise a chemical process to recycle water from the substation. The recycled water will be used for domestic applications within the site, i.e., watering vegetation, etc.

- Solid Waste – Solid waste will be generated for the duration of the proposed project and will comprise of hazardous and non-hazardous waste components. During the construction and operation phase of the proposed project, non-hazardous solid waste components will comprise spoil from construction-related activities, general domestic waste (i.e., wooden pallets, cardboards, etc.) and concrete.

Hazardous materials used on site during operations will include fuels, oils, lubricants, cleaning products and specialised gases (for use in switchgear etc.). Minimal waste is expected to be generated during the operation phase. For certain types of transformers or backup generators, oil that needs to be replaced will be recycled, if possible, or safely stored and removed from the site and correctly disposed of.

All solid wastes generated (hazardous and non-hazardous) will be disposed of at a licensed landfill site by means of contracting a suitably registered waste handling company. This will be the responsibility of the Engineering Procurement Construction contractor during the construction phase of the proposed project and will have overall oversight to verify that the collection, transport, handling and disposal of these wastes is being undertaken in a suitable manner.

Waste during the decommissioning phase will be similar to that produced during the construction phase; this includes wooden and plastic packaging, cable off cuts, rubble, disused transformers, office, and domestic waste. All solid wastes generated will be disposed of at appropriately licenced landfill sites for general, and/or hazardous waste streams and recycled where practically possible.

- Air and Noise Emissions – Air emissions: Temporary air emissions will occur during the construction phase due to the use of construction machinery and the

clearing of vegetation which may result in wind-blown dust and fugitive dust emissions. Little to no emissions are anticipated during the operation phase through management of on-site vehicle speed and vegetation and soil landscaping.

Noise emissions: The key temporary noise sources during the construction phase will be from the mobile machinery, vehicles, workers and plant construction activities (including high speed ramming using percussion hammers). Some construction activities may be required afterhours.

- Traffic – A traffic study was not identified in the Department of Forestry, Fisheries and the Environment Screening Tool output, however, increased volumes of traffic will be generated during the construction phase of the proposed project for the delivery of project components, machinery and labour. The transportation route has not yet been determined but will be from one of the country's Ports (most likely the Saldanha or Ngqura ports) to the project site in Beaufort West. All relevant permits to transport the required components / infrastructure (especially turbine components) will be obtained by the developer.

Transport routes for the proposed project will be determined prior to construction. Traffic volumes are anticipated to diminish during the construction phase of the proposed project, and only a limited number of vehicles will travel to and from the project site for operation and maintenance purposes.

- Schedule and Life of Project– It is anticipated that after construction, the developer will own and operate the WEF and associated infrastructure until they require the WEF and associated infrastructure to be decommissioned. The proposal is anticipated to have a project operational life of approximately 20-25 years. Should the project need to be decommissioned at the end of the 20–25-year period, this will be the responsibility of the developer.

5.8. Project Development Phases

The proposed project will be carried out in the following phases: Preconstruction phase (i.e., development / planning and site preparation); Construction phase; Operational phase and Decommissioning phase.

5.8.1. Pre-construction Phase

During the proposed project and planning phase of the proposed project, ESA will assess the key parameters required for the construction and operation of the WEF infrastructure. This will include:

- Enviro-legal and other permitting (including the undertaking of Search & Rescue operations, if required);
- Survey of the project site;
- Survey of the powerline corridors;
- Servitude negotiations and site securement with the affected landowners;
- Detailed geotechnical investigations of the servitude and WEF footprint areas;
- Compilation of a detailed layout of the WEF infrastructure that meets Eskom grid connection requirements (including centre line pegging, etc);
- Installation of new access gates, where required; and
- Foundation nominations for the erection of the pylon and anchors / stays, where required.

During the proposed project and planning phase, the project will be adapted to meet regulatory requirements, time schedules and expectations of all relevant parties.

5.8.2. Construction Phase

This phase would include the clearance of vegetation, installation of perimeter fencing around the relevant project infrastructure and levelling of the site and preliminary earthworks. Thereafter the site will be marked out and a construction camp set up and the access roads to the project site be constructed. The clearance of vegetation is not anticipated to be site wide and will be limited to the footprint of the WEF (including all associated infrastructure). The extent of vegetation clearance within WEF footprint will depend on the outcomes of the detailed layout of the WEF infrastructure.

Construction of the proposed project will be initiated following the completion of the site preparation activities. The construction phase will include the following:

- Establishment of a site camp for the temporary storage of construction equipment and machinery;
- Clearance of selected areas within the project footprint for the placement of pylon foundations and clearance of the WEF infrastructure footprints;
- Excavation of pylon and anchor / stay and busbar foundations;
- Foundation steelwork (reinforcing)
- Concrete pouring within all foundations;
- Assembly of pylon tower sections on-site;
- Erection of pylon tower sections using a 50-ton crane to pick up pylon towers from the ground for final assembly;
- Stringing of the powerline cables;
- Sag and tension of the powerline to ensure minimum clearance heights are achieved;
- Rehabilitation of disturbed areas;
- Testing and commissioning of WEF and grid connection infrastructure; and
- Removal of equipment and disassembly of site camp.

Where possible, materials, plant and equipment will be locally sourced within the region. As far as practically possible bulk of the specialist equipment (i.e., distribution transformers, busbars, circuit breakers, lightening arrestors and air break switches / isolators, etc.) will be sourced locally in South Africa, alternatively it would have to be imported (should no supply be available in South Africa).

5.8.3. Operation Phase

The proposed WEF and associated infrastructure will be operated on a 24 hour, 7 days a week. The operation of the proposed project will comprise the following activities:

- Maintenance of the WEF infrastructure; and
- Bush clearing within the powerline servitudes for safety purposes in line with Eskom and IEC standards.

5.8.4. Decommissioning Phase

The WEF (including associated infrastructure) is expected to operate for at least 20 years. If decommissioned, all components will be removed, and the site rehabilitated. Where possible, all materials will be recycled, otherwise they will be disposed of in accordance with local regulations and international best practice.

5.9. Summary of the project and technical information

The technical and project-specific details of the key infrastructure components and support services are listed in the table below. Details of technical and project-specifics of the key infrastructure components and support services that will be required to support the operations of the WEF are listed, as well as a detailed breakdown of the impact footprints or sizes.

Temporary areas necessary for construction are also included.

5.10. Lease Areas

Each of the respective clusters (Jessa M, S & Z) will be located within a lease area:

- ☐ The Jessa S cluster will be situated within a lease area that follows the cadastral boundaries of the Remainder of Farm 319. The total lease area for Jessa S will measure ±2558,282Ha.
- ☐ Jessa M will have a lease area that includes the entirety of the Remainder of Farm 330 and Portions of Portion 5 and 6 of Farm 319. The total lease area for Jessa M will measure ±3099,028Ha.
- ☐ The Jessa Z cluster will have a lease area that includes the entirety of Portion 1 and 7 of Farm 319 and portions of Portion 5 and 6 of Farm 319. The total lease area for Jessa Z will measure ±3950,018Ha.

For this reason, it is requested that permission be granted to register the required lease areas to establish Jessa M, S and Z.

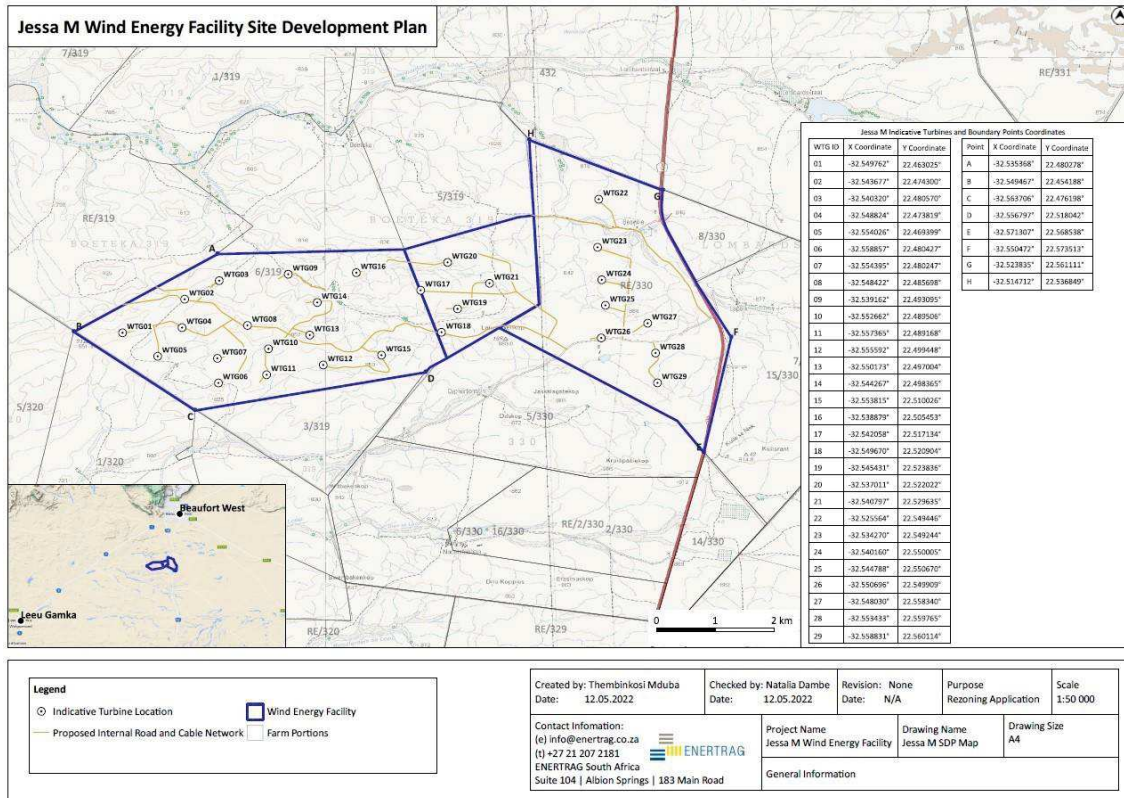


Figure 16: Jessa M lease area

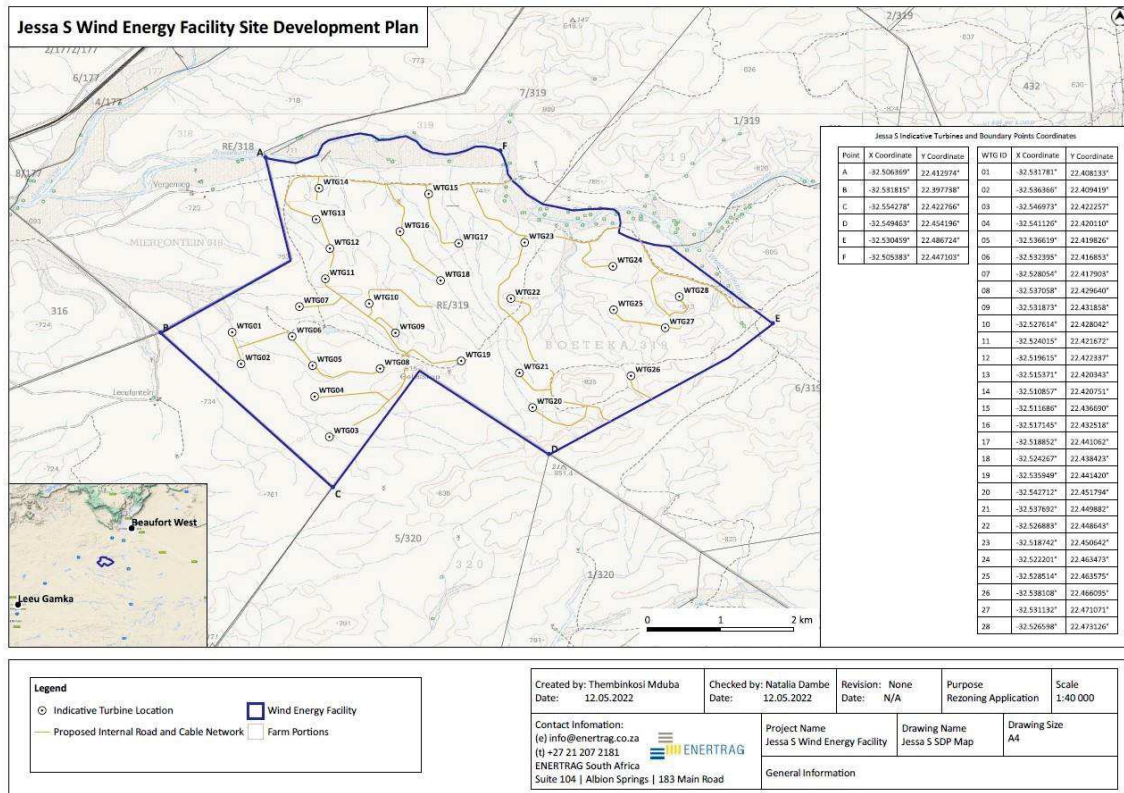


Figure 17: Jessa S lease area

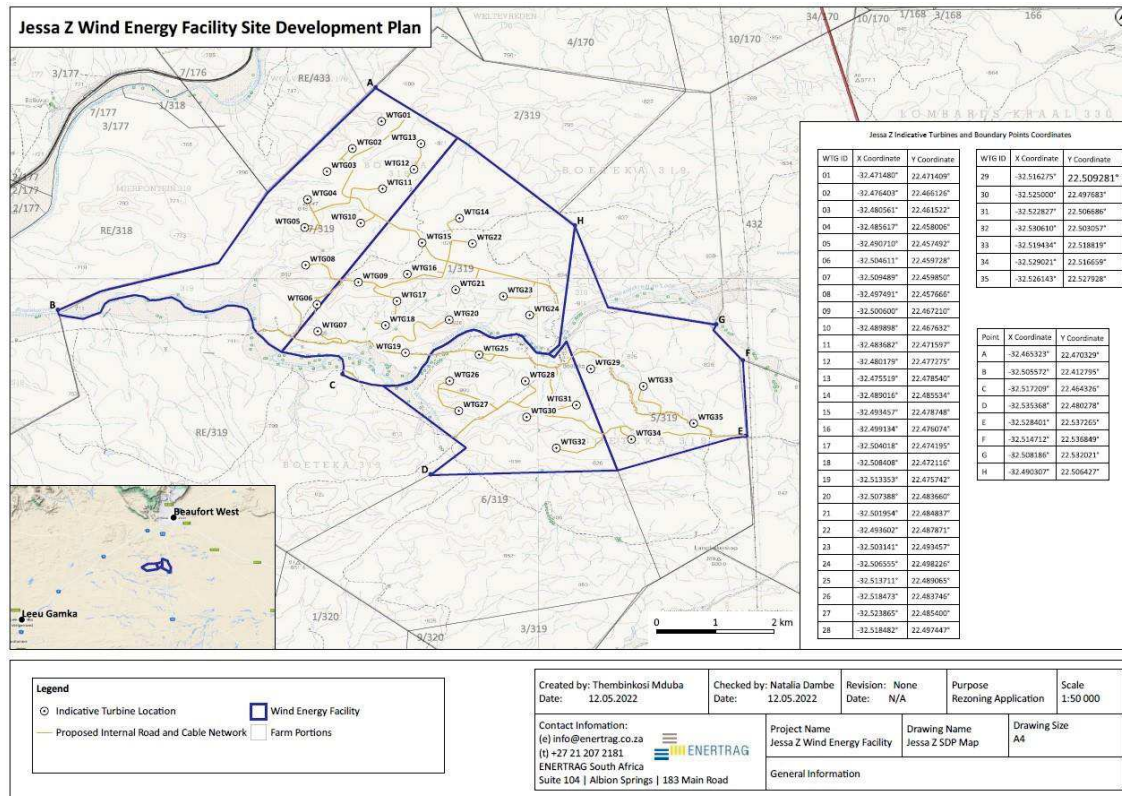


Figure 18: Jessa Z lease area




6. MUNICIPAL ZONING SCHEME BY-LAW

The subject property is zoned Agricultural Zone 1. The objective of this zone is to promote and protect agriculture on farms as an important economic, environmental and cultural resource. Limited provision is made for nonagricultural uses to provide rural communities in more remote areas with the opportunity to increase the economic potential of their properties, provided these uses do not present a significant negative impact on the primary agricultural resource. The land use description “Agriculture” does not include a renewable energy structures for commercial purposes as a primary use but this use is permitted with municipal consent.




“renewable energy structure” means (a) any wind turbine, solar energy generating apparatus, including solar photovoltaic and concentrated solar thermal, hydro turbines or bio mass facility or any grouping thereof, that captures and converts wind, solar radiation or bio mass into energy for commercial gain; and (b) includes any appurtenant structure necessary for, or directly associated with, generation of renewable energy, or any test

facility or structure that may lead to the generation of energy on a commercial basis, excluding electrical grid connections.





Development parameters

<p>Height:</p> <p>Max height of renewable energy structures is technology dependant, buildings may not exceed 8,5m.</p>	 300m to top of rotor
<p>Setback:</p> <p>In the case of a wind turbine the setback is:</p> <ul style="list-style-type: none"> (i) a distance equal to 1,5 times the overall blade tip height of the turbine, measured from the nearest residential, commercial or critical agricultural structures including animal housing, outbuildings, store rooms, excluding structures such as water troughs, feed dispensers, and windmills; (ii) a distance of 100m from the cadastral boundary of the land unit, unless the renewable energy structure straddles two or more cadastral boundaries, in which case no setback applies; (iii) a distance of 100m from any public road or private or public right of way, unless it provides access to the turbine; (iv) a distance of 100m from any electrical infrastructure; and (v) a distance of 1000m from towns, settlements or urban areas. 	 A setback distance of 450m will be maintained from all buildings and 100m from all public or private roads, electrical infrastructure and the outer perimeter of the proposed development
<p>Site Development Plan:</p> <ul style="list-style-type: none"> (i) A site development plan must be submitted to the Municipality for its approval. (ii) The site must be surveyed and the exact delineation of the construction footprint must be shown in the site development plan. (iii) To the extent necessary, any relevant measures contained in these regulations must be incorporated into the site development plans submitted to the Municipality for approval. 	 Site development plans, including coordinates of all wind turbines, are attached as annexure E.

<p>Land clearing, soil erosion and habitat impact:</p> <ul style="list-style-type: none"> (i) The clearing of natural vegetation is limited to that which is necessary for the construction, operation and maintenance of the renewable energy structure as regulated by applicable environmental legislation. (ii) Wind turbines, solar structures, access roads and other infrastructure must be located to minimise damage to natural vegetation, water courses and wetlands. (iii) All land cleared that does not form part of the footprint of a renewable energy structure must be rehabilitated according to a rehabilitation plan for the land concerned, approved by the Municipality. 	<div data-bbox="1177 451 1291 556" data-label="Image"> </div> <p>As confirmed in section 5.8.2 of this report.</p>
<ul style="list-style-type: none"> (iv) Constructing or operating the renewable energy structure may not cause soil erosion, and any high-risk erosion areas must be rehabilitated by the operator, to the satisfaction of the Municipality. (v) The applicant must prove, to the satisfaction of the Municipality, that planning for the renewable energy structure concerned has taken into account and mitigated the risk of all impacts on, and necessary distances that should be maintained from, wetlands, water bodies, threatened ecosystems, mountains, ridges, hills, coastal buffers, settlements, telecommunication towers, transmission towers and power lines. (vi) The applicant must provide exact coordinates relevant to land clearing, soil erosion and habitat impact to assist the Municipality to evaluate the risk of possible negative environmental impacts of the renewable energy structure concerned. 	

<p>Noise, air quality and nuisance:</p> <p>The renewable energy structure may not exceed a noise limit of 45 dB(A) during the night and 55 dB(A) during the day at the nearest dwelling.</p>	 <p>The Jessa Z WEF development will have insignificant impacts on sensitive receptors, however ambient sound levels will remain as is and the area would keep the rural noise character.</p>
<p>Finishing, colour and design:</p> <ul style="list-style-type: none"> (i) A wind turbine structure must be treated with a neutral, nonreflective exterior colour and designed to blend in with the surrounding natural environment, to the satisfaction of the Municipality. (ii) A solar structure must minimise any adverse effects related to its reflective surfaces and must be designed and built in a way that mitigates this impact, as required by the Municipality. 	
<p>Appurtenant structures:</p> <ul style="list-style-type: none"> (i) All appurtenant structures to a renewable energy structure prescribed by the Municipality concerning bulk, height, yard 	

<p>sizes, building lines, open space, parking and building coverage requirements are subject to applicable by-laws.</p> <ul style="list-style-type: none"> (ii) Appurtenant structures, including equipment shelters, storage facilities, transformers and sub-stations must be architecturally compatible with the receiving environment as required by the Municipality, and contained within a renewable energy structure site development plan submitted for approval by the Municipality. (iii) Appurtenant structures may only be used for the storage of equipment or other uses directly related to the operation of the particular facility that they are associated with. (iv) Appurtenant structures must be screened from view by indigenous vegetation or be joined and clustered to minimise adverse visual impacts. 	<p>All appurtenant structures will be located on site and will be screened.</p>
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<p>Lighting:</p> <ul style="list-style-type: none"> (i) A renewable energy structure or any part of such a structure may only be lit for safety and operational purposes and the lighting must be appropriately screened from abutting land units. (ii) A renewable energy structure must comply with the lighting air safety requirements of the South African Civil Aviation Authority in terms of the Civil Aviation Act, 2009 (Act 13 of 2009). 	 Consideration of pilot or radar activated red lights by the developer will occur.
<p>Signage and advertising:</p> <p>Signs on renewable energy structures must comply with the laws regulating signage and be limited to signage necessary to— identify the operator; provide 24-hour emergency contact numbers; and provide warning of any dangers associated with the structure. No commercial advertising, including advertising for the provider or operator, may be displayed on any renewable energy structure.</p>	 No advertising to take place on structures.
<p>Maintenance:</p> <p>The owner is responsible for maintaining a renewable energy structure in good condition, including any access road, unless deemed a public way, and for paying the cost of repairing any damage resulting from construction or operation. Maintenance includes—</p> <ul style="list-style-type: none"> (i) painting; (ii) structural repairs; (iii) rehabilitation measures; and 	
<p>(iv) the upkeep of security and safety measures.</p>	
<p>Modification:</p> <p>Any modification to a renewable energy structure, excluding inconsequential in situ technical improvements, made after approval and that is not in accordance with the approval and conditions of approval, requires authorisation from the Municipality within the parameters of these regulations by means of—</p> <ul style="list-style-type: none"> (i) the amendment of approved conditions; (ii) a new consent use approval; (iii) amendment of the approved site development plan; or (iv) amendment of the approved building plan. 	

Decommissioning:

- (i) Any renewable energy structure and associated infrastructure that has reached the end of its productive life or has been abandoned, including buildings, cables and roads, must be removed by the owner.
- (ii) A renewable energy structure is considered abandoned when the structure fails to continuously operate for more than two years.
- (iii) When a renewable energy structure is scheduled to be decommissioned or operations have been discontinued or it has been abandoned, the land owner must, by registered mail, notify the Municipality within 30 days after the operation ceased, and of plans for removal of the structure and infrastructure referred to in subparagraph (i).
- (iv) The owner is responsible for the removal of the structure in all its parts, within 150 days after the date of discontinued operation, or as agreed upon by the Municipality after submission of a plan for decommissioning. The Municipality may grant an extension of the deadline for removing the structure and its parts. The land must then be rehabilitated by the owner, to the satisfaction of the Municipality, to the condition prescribed in the approved environmental management plan and the approved decommissioning plan.
- (v) Decommissioning must include—
 - (aa) the removal of all renewable energy structures and appurtenant structures, including equipment, bases, foundations, security barriers and transmission lines directly related to the renewable energy;
 - (bb) disposal of all solid and hazardous waste in accordance



<p>with provincial and local waste disposal regulations; and</p> <p>(cc) the stabilisation and re-vegetation of the site with indigenous vegetation to minimise erosion.</p> <p>(vi) The Municipality may, in order to minimise erosion and disruption to natural vegetation and habitats, grant permission to the owner to depart from the decommissioning plan in respect of removing landscaping, underground foundations or other underground components, provided these do not cause any pollution.</p> <p>(vii) Before the construction of the renewable energy structure commences, the owner must make financial provision or an alternative reasonable arrangement, to the satisfaction of the Municipality, for protection against failure by the owner to comply with the obligations in terms of this By-law and in the event of the owner being unable to fulfil the necessary financial obligations for the rehabilitation or management of the negative environmental impact of decommissioning or of abandonment.</p> <p>(viii) If the owner fails to remove the structure or its parts in accordance with the requirements of these regulations within 150 days of abandonment or the date of decommissioning or an approved extension date, the Municipality may enter the property and remove the structure and its parts, and recover all removal costs incurred from the owner.</p> <p>(ix) If the owner fails to meet the requirements of subitem (i), the Municipality may, after written notice to the owner, use all or part of the financial provision or other provision referred to in subitem (vii) to rehabilitate or manage the negative environmental impact concerned, or to remove the facility.</p>	
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The development proposal is considered to be a “renewable energy structure” on the basis that it uses wind energy to generate electricity for commercial purposes. The proposal also conforms to the development parameters applicable to the land use.

7. BEAUFORT WEST MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK (SDF)

The Beaufort West SDF has identified the establishment of a wind power generation farm as a key strategy that is aligned with the IDP as it is “fast becoming clear that alternative ways of producing energy (electricity) should be considered in order to lessen the load on the national grid and the impact on the environment. The wind generation farm would be utilised to avoid power cuts and also to use energy in developing SMME”.

The SDF has little more to evaluate the appropriateness of the development proposal on but, the “hierarchy of plans and consistency” principle requires that lower-order plans and policies must be consistent with higher-order spatial plans and policies. Other policy and guideline documents, such as the NDP, WCPSDF and REDZ, include more detailed criteria for establishing the appropriateness of the development proposal. What can be said is that the development proposal does align with and support the higher-order spatial plans and policies that are discussed in the following sections and consequently is aligned with the SDF as per the “hierarchy of plans and consistency” principle

8. CENTRAL KAROO DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK (SDF)

At a District Municipal level, the 2019 Draft Central Karoo District Municipality CKDM SDF recognised the Karoo region’s potential in terms of wind energy generation and states “The Karoo should leverage this asset to encourage Independent Power Producers to locate in the region, also making the Central Karoo a well-managed and desirable place to locate, if one is connected to this industry.” The 2020 Central Karoo SDF was developed between 2018 and 2020 and was guided by the Central Karoo Municipal Council and an intergovernmental steering committee. The intention behind developing a new SDF, which resulted in the need for an IDP amendment, was to update the SDF with the latest intelligence, information and policies applicable to the Central Karoo.

Chapter 3 of the SDF (2020) provides a brief overview of the existing state of development of the Central Karoo District Municipality. The section provides an overview of the key biophysical, natural, socio-economic and built environment sectors, as well as their individual strengths, weaknesses, opportunities and constraints. This provides valuable

insight into the current state of the municipality. A synthesis was undertaken, identifying the key issues to be taken forward in the SDF. One (1) of the key issues identified include the up scaling of renewable energy production in the region and the creation of downstream opportunities. In addition, the SDF states that the town of Beaufort West needs to focus on infrastructure maintenance, appropriate infrastructure expansion and gearing the settlements to experience a degree of population and economic growth, leveraging their economic assets. Chapter 4 of the SDF provides the overarching spatial vision for the Central Karoo, determines the future growth needs, frames the spatial concept and sets out the spatial policies for the Central Karoo. In support of realising the vision of the 2017 – 2022 Central Karoo IDP, the SDF focuses on three (3) spatial strategies and one (1) underpinning governance strategy, which also informs the spatial concept.

The four (4) municipal-wide strategies have been unpacked into spatial policies and policy guidelines, one (1) of which includes support and promote the renewable energy economy. More detail around these policies can be found in the CK SDF (2020). Considering the above, the proposed WEF project is aligned with the policies and/or policy guidelines outlined in the SDF.

9. BEAUFORT WEST LOCAL MUNICIPALITY DRAFT INTEGRATED DEVELOPMENT PLAN (IDP)

The Beaufort West Local Municipality released its 3rd annual review 2020/2021 IDP in May 2020. The IDP flags electricity capacity and the disruption of electricity supply as one of the major constraints within the municipality and has been highlighted as a Key Performance Area (KPA) requiring intervention. The IDP also reports on energy losses of about 8.65% incurred by the municipality in the financial year, as well as backlogs in the supply of electricity.

The Municipality acknowledges the low international trade potential in the area, and therefore looks to explore and take advantage of the renewable energy sector as a means of injecting external investment and a catalyst for local economic growth and development. Furthermore, the municipality is in the process of developing a Local Economic Development (LED) strategy and infrastructure programs that include electrical supply and renewable energy amongst other developments.

The IDP also recognises the municipality's spatial planning projects arising from the Spatial Development Framework, including SDF7 (Renewable Technologies Strategy), which states that the Municipality will prepare a municipal renewable technology strategy focusing on implementation options for water management and energy generation in projects and developments.

10. RENEWABLE ENERGY DEVELOPMENT ZONES (REDZ) AND STRATEGIC TRANSMISSION CORRIDORS

In 2015, through the Council for Scientific and Industrial Research (CSIR), embarked on a programme of Strategic Environmental Assessments (SEAs) for large-scale developments to support Strategic Integrated Projects (SIPs). The intention of the SEAs was to pre-assess environmental sensitivities within development areas at a regional scale to simplify site-specific EIAs when they are undertaken and to focus the assessment on addressing the specific sensitivities of the site. The outcome of the programme led to the identification of eight (8) Renewable Energy Development Zones (REDZs) meant for the proposed project of large-scale wind and solar renewable energy facilities in terms of SIP 8: Green Energy in Support of the South African Economy, as well as the associated Strategic Transmission Corridors meant for the proposed project of grid connection infrastructure (namely powerlines and substation) in terms of SIP 10: Electricity Transmission and Distribution. Following the undertaking of further SEAs by the CSIR, the Department of Forest, Fisheries and the Environment (DFFE) (through GN R144 which was published on 26 February 2021) identified three (3) additional REDZs for the proposed project of large-scale wind and solar renewable energy facilities. These three (3) additional REDZs are within the Mpumalanga, Northwest, and Western Cape Provinces. The additional REDZs which have been identified and formally gazetted include the Emalahleni REDZ (namely REDZ 9), Klerksdorp REDZ (namely REDZ 10) and Beaufort West REDZ (namely REDZ 11). Furthermore, in 2021 the DFFE issued GN R383 which identifies two (2) additional Strategic Transmission Corridors within the Northern Cape and KwaZulu-Natal Provinces for the proposed project of large-scale grid connection infrastructure. The identified Strategic Transmission Corridors include the Expanded Western Corridor and Expanded Eastern Corridor.

As mentioned, the Strategic Environmental Assessment (ESA) for Electricity Grid Infrastructure (EGI) in South Africa has identified five (5) Strategic Transmission Corridors, which are considered integral in the support of large-scale electricity transmission and distribution infrastructure. Should the entire extent of gridconnection infrastructure (powerlines and/or substations) being proposed be located within one (1) of the Strategic Transmission Corridors which have formally been gazetted in South Africa, a BA process and a reduced decisionmaking timeframe (namely 57 days, as opposed to 107 days) for processing of applications for EA by the competent authority (namely the DFFE) will be applicable.

The development proposal and associated infrastructure (including the BESS and 33kV powerlines) are located within the Beaufort West Renewable Energy Development Zone (REDZ) (namely REDZ11, a solar and wind REDZ) and Central Strategic Transmission Corridor, as defined and in terms of the procedures laid out in Government Notices No. 113 and No. 145 which were formally gazetted on 16 February 2018 and 26 February 2021.

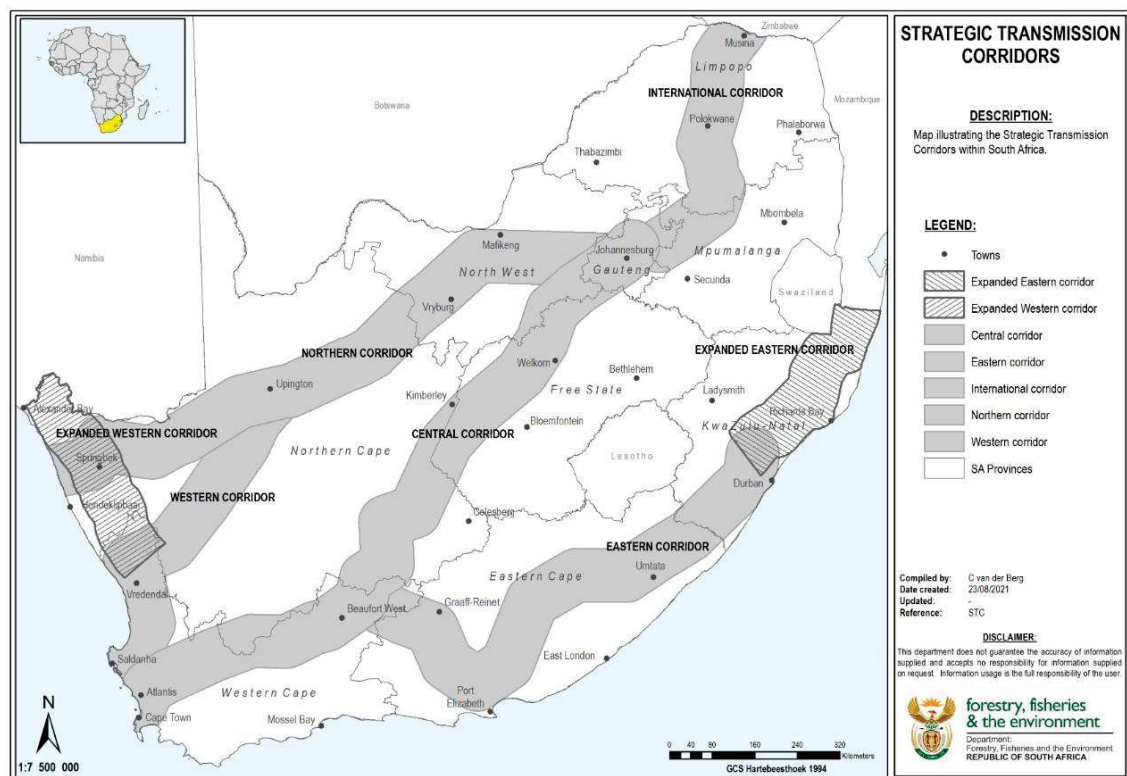


Figure 19: Strategic transmission corridors

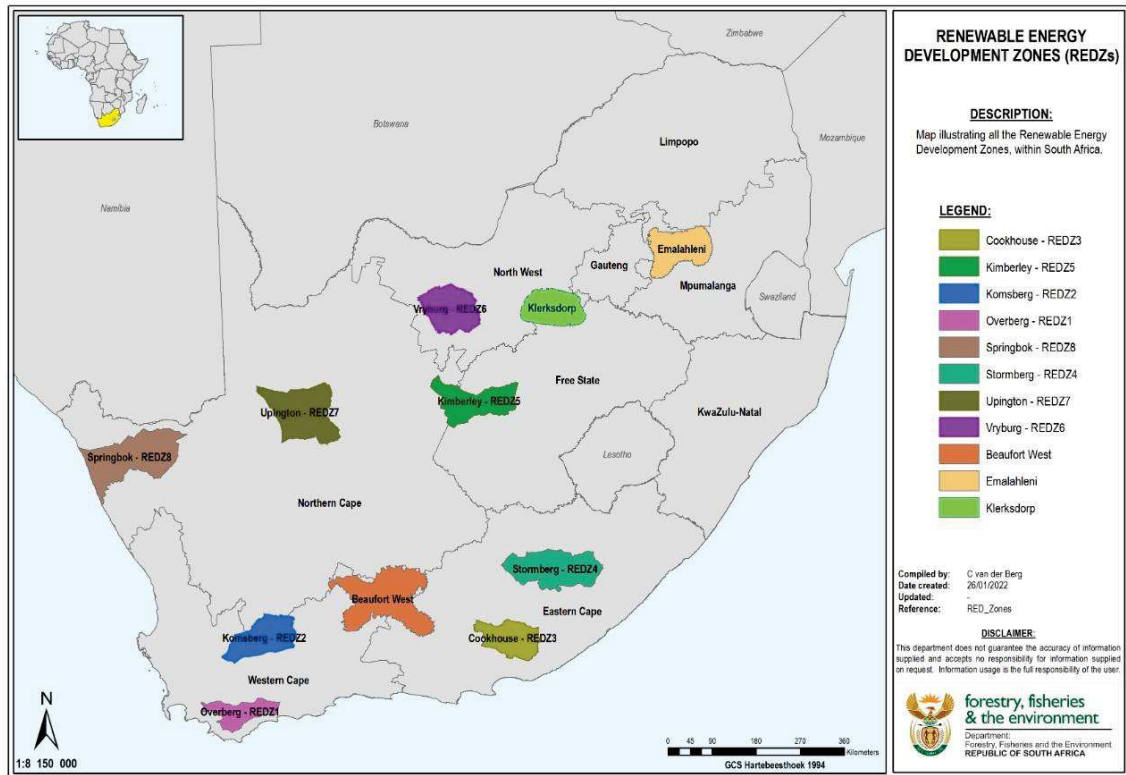


Figure 20: Renewable Energy Development Zones overview

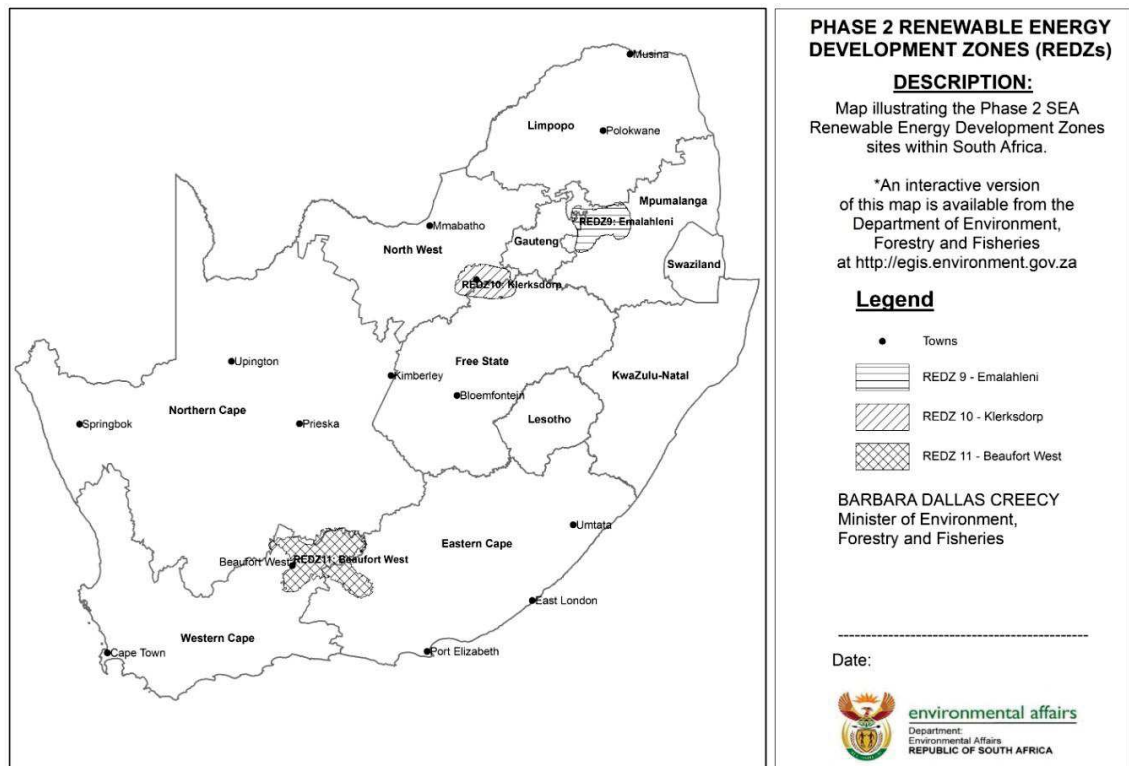


Figure 21: Phase 2 Renewable Energy Development Zones

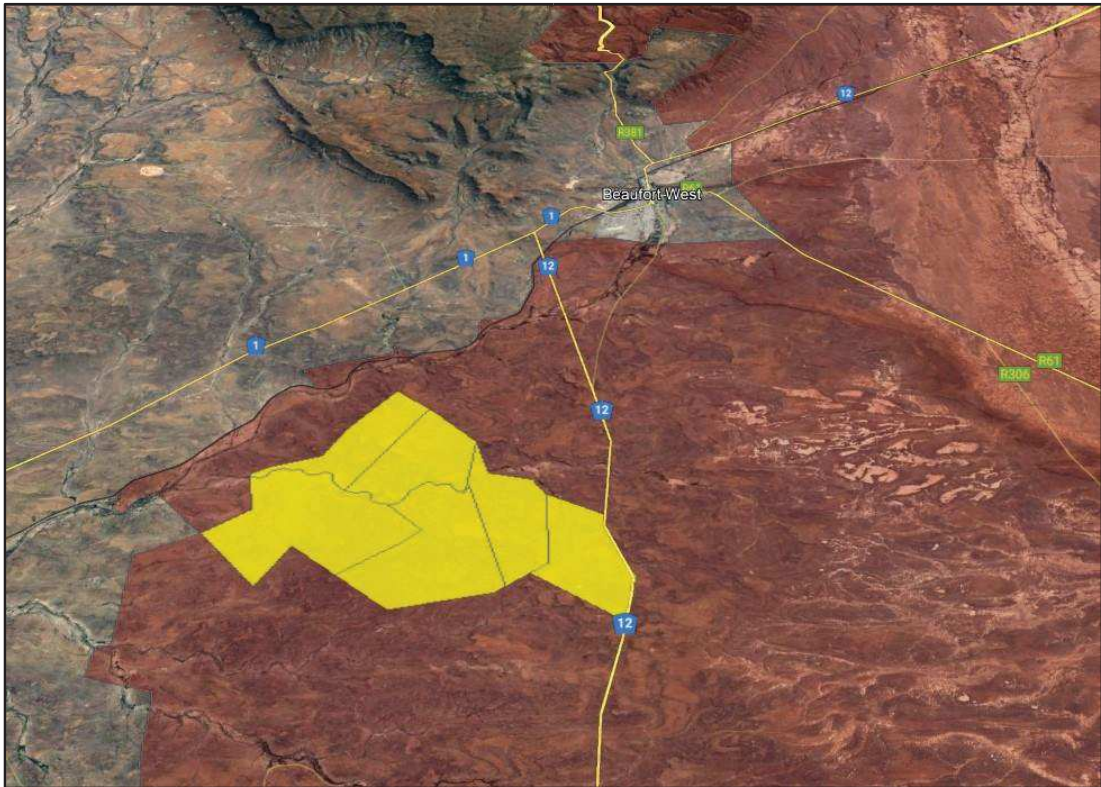


Figure 22: Development proposal (yellow) within REDZ 11 (red)

11. OTHER LEGISLATION & GUIDELINES

11.1. CONSTITUTION OF SOUTH AFRICA

Chapter 2 of the Constitution is the Bill of Rights. The Bill of Rights is a cornerstone of democracy in South Africa. It enshrines the rights of all people in our country and affirms the democratic values of human dignity, equality and freedom. Section 2(24) Environment affirms the right of every person to (a) an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that; (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. The proposal supports the rights of Section 2(24) of the Bill of rights by supporting reducing the impacts of a carbon based economy and greenhouse gasses to promote a transition to a low carbon, sustainable energy future, which delivers clean sources of energy to urban consumers, and mitigates the effects of climate change.

11.2. ELECTRICITY REGULATION ACT (ACT 4 OF 2006) & INTEGRATED RESOURCE PLAN (IRP 2019)

The Integrated Resource Plan for Electricity (IRP) provides South Africa's long-term plan for electricity generation to ensure the security of electricity supply, minimise the cost of that supply, limit water usage and reduce greenhouse gas (GHG) emissions while allowing for policy adjustment in support of broader socio-economic developmental imperatives. The IRP 2019 calls for 37 696 MW³ of new and committed capacity to be added between 2019 and 2030 from a diverse mix of energy sources and technologies as aging coal plants are decommissioned and the country transitions to a larger share of renewable energy. By 2030, the electricity generation mix is set to comprise of 33 364 MW (42.6%) coal, 17 742 MW (22.7%) wind, 8 288 MW (10.6%) solar photovoltaic (PV), 6 830 MW (8.7%) gas or diesel, 5 000 MW (6.4%) energy storage, 4 600 MW (5.9%) hydro, 1 860 MW (2.4%) nuclear and 600 MW (0.8%) concentrating solar power (CSP). Furthermore, a short-term gap of at least 2 000 MW is to be filled between 2019 and 2022, thereby raising new capacity requirements, while distributed or embedded generation for own use is positioned to add 4 000 MW between 2023 and 2030. In May 2020, NERSA concurred with a determination for the procurement of various technology solutions to close the 2 000 MW gap (between 2019 and 2022), while another determination is undergoing public consultation and awaiting concurrence by NERSA.

With reference to the above, it is clear that there is a shortage of alternative energy-producing facilities. The proposal will contribute to the generation of electricity that will be fed into the grid, thereby reducing strain on the already over-burdened electric network.

11.3. NATIONAL DEVELOPMENT PLAN 2030 (NDP 2012)

The National Development Plan (NDP, National Planning Commission, 2012) sets out six interlinked priorities (National Planning Commission, 2012 - p. 29):

- ☐ Uniting all South Africans around a common programme to achieve prosperity and equity;
- ☐ Promoting active citizenry to strengthen development, democracy and accountability;

- Bringing about faster economic growth, higher investment and greater labour absorption;
- Focusing on key capabilities of people and the state;
- Building a capable and developmental state; and
- Encouraging strong leadership throughout society to work together to solve problems.

Transforming the South African economy is a challenging, long-term project. The NDP proposes to enhance human capital, productive capacity, and infrastructure to raise exports, which will increase resources for investment and reduce reliance on capital inflows. Higher investment, supported by better public infrastructure and skills, will enable the economy to grow faster and become more productive. Rising employment and productivity will lead to improved incomes and living standards and less inequality. Shifting the economy towards more investment and lower consumption is thus necessary for long-term economic prosperity (p. 42). The proposed facility contributes to achieving this goal by providing infrastructure that supports the transition to renewable energy which contributes to reducing the carbon footprint of South Africa.

11.4. WESTERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK

Whilst the PSDF has limited influence on private sector investment patterns, it has an important contribution to make in reducing business risk (by providing clarity and certainty on where public infrastructure investment will be targeted) thereby opening-up new economic opportunities in these areas. The PSDF also gives consideration to the Western Cape's spatial relationships with neighbouring Provinces and the national space economy. The Western Cape's new PSDF has been framed to take forward the NDP's spatial agenda, as well as give effect to the Provincial Strategic Objectives. The OneCape 2040 initiative builds on these complementary national and Provincial development agendas. The PSDF ensure provincial spatial policies are aligned with national development agenda. The Western Cape Provincial Spatial Development Framework (Provincial Government of the Western Cape (2014), refers to the importance of a coherent framework for the Province's urban and rural areas that gives spatial expression to the National and Provincial development agendas. The Spatial Development Plan proposed a number of spatial policies, including policy R4 which

relates to “Recycle and recover waste, deliver clean sources of energy to urban consumers, shift from private to public transport, and adapt to and mitigate against climate change”. Specific objectives related to energy include pursuing energy diversification and energy efficiency for the Western Cape to transition to a low carbon, sustainable energy future, and delink economic growth from energy use. Furthermore, emergent Independent Power Producers (IPPs) and sustainable energy producers (wind, solar, biomass and waste conversion initiatives) should be supported insuitable rural locations. In short, The Western Cape’s energy is primarily drawn from the national grid which is dominated by coal-based power stations and the goal is to develop the renewable energy sector. The proposal supports the objectives of the PSDF by proposing a land use that contributes to the transition to a low carbon, sustainable energy future, which delivers clean sources of energy to urban consumers, and mitigates the effects of climate change. Taking the above into consideration, the proposal supports the objectives of the PSDF.

12. LEGISLATION

12.1. National Environmental Management Act (Act 107 of 1998)

The EIA Regulations of 2014 (as amended) set out the procedures and documentation that need to be complied with when applying for an EA. A BA process must be applied to an application if the authorisation applied for is in respect of an activity or activities listed in Listing Notices 1 and/or 3, and a Scoping and EIA process must be applied to an application if the authorisation applied for is in respect of an activity or activities listed in Listing Notice 2. As the proposed project triggers activities listed in Listing Notices 1, 2 and 3 it is necessary that a full Scoping and EIA process is undertaken for the DFFE to consider the application in terms of the NEMA. However, since the proposed project is located in the Beaufort West REDZ (namely REDZ 11), a BA process is required, with a reduced 57-day decision-making timeframe for the CA (instead of the usual 107 days as stated in the EIA Regulations of 2014, as amended). SLR consulting is undertaking the task procuring environmental authorisation. Environmental Authorisation will be provided as soon as it is available.

12.2. Subdivision of Agricultural Land Act (Act 70 of 1970)

The Subdivision of Agricultural Land Act, 1970 (Act No. 70 of 1970, as amended) (SALA) provides for the subdivision of all agricultural land within the Republic, thereby prohibiting certain activities from being undertaken without consent from relevant authority, namely the Minister of the Department of Agriculture, Land Reform and Rural Development. This Act finds relevance to the proposed project as any portion of land that is zoned for agriculture and will need to be leased for a period exceeding ten (10) years is regulated by the Act. Application will be made to obtain approval in accordance with Act 70 of 1970 to register the required lease areas.

12.3. Western Cape Land Use Planning Act (Act 3 of 2014)

The Western Cape Land Use Planning Act, 2014 (Act No. 3 of 2014) (LUPA), was enacted in terms of SPLUMA and consolidates legislation in the Province pertaining to provincial planning, regional planning and development, urban and rural development, regulation, support and monitoring of municipal planning and regulation of public places and municipal roads arising from subdivisions. The Act also makes provision for provincial spatial development frameworks and provides for minimum standards for, and the efficient coordination of, spatial development frameworks. In addition, the Act provides for minimum norms and standards for effective municipal development management, regulates provincial development management, regulate the effect of land development on agriculture and provides for land use planning principles. The Act effectively enables municipalities in the Western Cape to implement their own land use planning bylaws.

The areas where the wind turbines and associated infrastructure will be constructed are used for agriculture in the sense that it is used for grazing and therefore consists of natural “veld”. These areas have not been cultivated or irrigated and due to this factor an approval of the development is required in terms of Section 53 of LUPA. A copy of this application has been provided to the Western Cape Department of Environmental Affairs and Development Planning to ensure the development proposal is compliant with LUPA.

12.4. National Heritage Resource Act (Act 25 of 1999)

The National Heritage Resources Act, 1999 (Act No 25 of 1999) (NHRA) provides for the identification, assessment and management of the heritage resources of South Africa. The NHRA protects a range of heritage resources, while Section 38(1) of the NHRA lists development activities that would require authorisation by the responsible heritage resources authority. Activities considered applicable to the proposed project include the following:

- a. The construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- c. Any development or other activity which will change the character of a site;
 - i. exceeding 5 000m² in extent”.

The NHRA requires that a person who intends to undertake a listed activity notify the relevant provincial heritage authority at the earliest stages of initiating such a development. The relevant provincial heritage authority would then, in turn, notify the person whether a HIA should be submitted. However, according to Section 38(8) of the NHRA, a separate report would not be necessary if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act (ECA) (Act No 73 of 1989) (now replaced by the NEMA) or any other applicable legislation. The decision-making authority should, however, ensure that the heritage evaluation fulfils the requirements of the NHRA and take into account in its decision-making any comments and recommendations made by the relevant heritage resources authority.

It should be noted that the South African Heritage Resources Agency (SAHRA) do not have the jurisdiction to provide comments on development applications located within the Western Cape Province and HWC must be contacted for comments in this regard. It should also be noted that a HIA has been undertaken and provides the specialist archaeological and palaeontological studies which are a component of the heritage report.

13. PRINCIPLES OF LAND USE PLANNING

In accordance with Article 42 of the SPLUMA, a Municipal Planning Tribunal must be guided by the development principles as set out in Chapter 2 when considering an application. In terms of section 6(1), the general principles set out in Chapter 2 apply to all organs of state and other authorities responsible for the implementation of legislation governing the use and development of land. The following principles apply in terms of section 7 to spatial planning, land development and land use management, namely: Spatial justice, Spatial sustainability, Efficiency, Spatial resilience and Good administration. Accordance to section 59(2) of LUPA, a municipality considering a land-use application should take into account, among other things, the principles referred to in Chapter VI. Pursuant to Rule 58, the Land Use Planning Principles set out in Chapter VI apply to all organs of state responsible for implementing legislation that governs land use planning and development.

These principles correspond with those of SPLUMA namely: Spatial justice, Spatial sustainability, Efficiency, Spatial resilience and Good administration.

Spatial Justice: The proposed development is in line with provincial goals and to generate renewable energy in order to pursue sustainable energy initiatives. The application will not result in the exclusion of any groups. The proposed facility will create job opportunities in the construction phase and will subsidise the farms' income.

Spatial Sustainability: The proposal supports a transition to a low carbon, sustainable energy future, which delivers clean sources of energy and mitigates the effects of climate change without threatening any ecological resources. The application will not result in extensive loss of agricultural land with high potential or critical biodiversity. The development will be selfsustaining, making use of electricity generated by the facility. Water and waste-related infrastructure will be provided and maintained by the developer. These services will not be similar to those provided for residential occupancy as the facility will be remotely operated with inspections and occupancy only recurring from time to time. The facility will promote long-term financial sustainability for the property.

Spatial Efficiency: Natural resources will be used and less pressure will be on non-renewable resources. The proposal will result in the efficient use of land by capitalising

on the opportunity created by the unique climate, without threatening the prosperity of the larger agricultural landscape.

Spatial resilience: The proposed development can be easily decommissioned and demolished allowing for the reinstatement of farming activities.

Principles of Good Administration: The application will be taken through the advertisement process by the Municipality and all relevant departments will be notified to comment. The decision-making process will be guided by statutory land use planning systems.

14. CONCLUSION

The proposed renewable energy facility contributes to the goals of the White Paper on Renewable Energy. Renewable energy provides an environmentally friendly alternative to energy generation and can contribute to the restriction of pollution and global warming. The application can be seen positively in the light of the following:

- ☐ The facility will Increase electricity capacity to contribute to the alleviation of SA's energy crisis;
- ☐ The facility will meet the demand for diversified energy sources;
- ☐ Ensure the future of sustainable energy use;
- ☐ Provide local employment opportunities;
- ☐ Reduce CO2 emissions and the nation's carbon footprint;
- ☐ The proposed development is supported by the SDF;
- ☐ The proposed development supports spatial sustainability in terms of LUPA and SPLUMA;
- ☐ The proposed development is supported by the Western Cape Provincial Spatial Development Framework (WCPSDF) which guides sustainable future development in the Western Cape area;
- ☐ The proposed development is supported by the National Development Plan 2030 (NDP);
- ☐ The proposal has an array of socio-economic benefits including:
 - o Increased energy security: The current energy crisis in South Africa emphasizes the important role that renewable energy can play to generate electricity.

- o Reduced pollution levels: The emissions of carbon dioxide by-products generated from burning fossil fuels to generate power have a very harmful impact on human health and contribute to the deterioration of ecosystems. The generation of electricity will not result in any emissions.
- o Acceptability to the community: Energy generation through wind has a number of benefits to the community such as reduced pollution, improved human and ecosystem health, generation of jobs in the short term, and no contribution to factors that cause climate change.

It is therefore clear that in terms of the above, the proposed application can be supported. For all the above reasons, the application is strongly recommended by CK Rumboll & Partners and requests that Council consider it positively.

Regards

Nical Grobbelaar

Pr. Pln A/2777/2019

A handwritten signature in black ink, appearing to read 'Nical Grobbelaar', with a horizontal line underneath it.

CK RUMBOLL & PARTNERS