

## Final Amendment Report

Veld PV North Solar Energy Facility and  
associated infrastructure near Aggeneys in  
the Northern Cape  
**Veld PV North (Pty) Ltd**

Submission date: 2021/08/31



# Document control record

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# 1 Introduction

Veld PV North (Pty) Ltd (the Applicant) is proposing amendments to the authorised Veld PV North Solar Energy Facility and associated infrastructure located on the remainder of the farm 53 Haramoep, near Aggeneys within Khai-ma Local Municipality in the Northern Cape Province.

1. The applicant has been authorised to construct the project which currently comprised of photovoltaic (PV) component, comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy. Aurecon (Pty) Ltd<sup>1</sup> was the appointed Environmental Assessment Practitioner (EAP) that undertook an Basic Assessment (BA) process for the proposed development in terms of the EIA Regulations (GN R982 of December 2014, as amended) which concluded on the 08 June 2020 upon issue of the Environmental Authorisation (EA) by the department of Environmental Affairs (DEA)<sup>2</sup>. Refer to the EA in Appendix A (DEA: 14/12/16/3/3/1/2102)
2. Subsequently a Part 2 amendment process was conducted by Terramanzi Consultants in November 2020. During this amendment process the Applicant applied for the inclusion of a Battery Energy Storage System (BESS) to be included within the site footprint which has already been authorised. Refer to the EA in Appendix A (DEFF Ref: 14/12/16/3/3/1/2102/AM1).
3. The motivation for this Amendment process and “second” Part 2 Amendment application is because after construction, the grid infrastructure relating to Eskom will be handed over to Eskom. This includes the Eskom side of the onsite substation, powerline (or LILO), and upgrades at the Aggeneis MTS substation. With this physical grid infrastructure handover, all permits relating to this grid infrastructure must also be provided to Eskom. Thus, the current grid infrastructure approved under the existing Environmental Authorisation needs to be split into the IPP portion and the Eskom portion to facilitate this handover. The approved site layout has also been updated based on the latest optimised technological solution for the facility. The applicant has therefore appointed Zutari (Pty) Ltd (Zutari) to manage the Amendment process in terms of the 2014 EIA Regulations (GN R 982 of December 2014, as amended). Please refer to Section 3.2 for a detailed motivation in this regard.

This Amendment report is in fulfilment of the legal requirements for a Part 2 Amendment as defined in terms of Regulation 31(a) of GN R 982. It provides:

- (i) a Description and motivation for the proposed changes,
- (ii) an Evaluation of the advantages and disadvantages of the changes; and
- (iii) Mitigation measures in respect of any impacts resulting from the change to fulfil the requirements of Regulation 32. The nature of the changes and sensitivities on the site have required input from all of the original specialist.

This report has been subjected to a 30-day public participation process (as detailed in Appendix C) which commenced on 10 July 2021 and ended on 10 August 2021. All the comments received during this period have been captured and addressed. Please refer to the Comments and Response Report (CRR) appended in Appendix C. Herewith, the Final Amendment Report is now submitted to DFFE, who will have 57 days to decide whether the amendments in scope are environmentally and socially acceptable, or whether the original scope as previously authorised should be retained.

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<sup>1</sup> Aurecon (Pty) Ltd now operates as Zutari (Pty) Ltd.

<sup>2</sup> Now called the Department of Forestry, Fisheries and Environment (DFFE)

## 2 Description of development

### 2.1 Authorised activities

The project, as authorised by the DFFE (as per the original EA and the first Amended Part 2 EA), allows for the construction of the Veld PV North Solar Energy Facility and associated infrastructure. Figure 1 provides the project locality and Figure 2 shows the authorised layout for Veld PV North Solar Energy Facility.

The authorised facility and its associated infrastructure include the following major components as described in the EA (see Appendix A, page 1):

- A PV Photovoltaic component, comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy;
- Inverters, to convert the direct current (DC) generated by the PV modules into alternative current (AC), with transformers in each block to step up the 400V to 33kV
- On site substation including transformers to step up the 33kV power generated by the inverters to 132kV to connect to the new 132kV overhead transmission line or to 220 kV to connect via LILO to the existing transmission line;
- Internal cabling laid underground when feasible to connect the PV modules to the on-site substation and inverters;
- Internal access roads for servicing and maintenance of the site;
- Stormwater infrastructure;
- Temporary construction areas for use during construction;
- Buildings, including an operations and maintenance building, a connection building, control building, guard cabin;
- Weather stations within and along the fenced perimeter of the site;
- Perimeter fencing; and
- Grid connection for Veld PV North will consist of a 132 kV overhead power line, approximately 27km in length that would feed into the national electricity grid at the Aggeneys substation.
- Installation of a Battery Energy Storage System (BESS), approximately 2.5ha in extent within the authorised development footprint

### 2.2 Listed Activities

The following listed activities in terms of GN R 983, GN R984 and GNR 985 (as amended) were authorised for the proposed development. These activities are listed in **Error! Reference source not found.** below.

**Table 1: Listed activities in terms of the NEMA 2014 EIA Regulation.**

2014 NEMA EIA Regulations		
No	Description of Listed Activities	Triggered
GN R.983 Item 11	The development of facilities or infrastructure for the transmission and distribution of electricity-  (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts.	The proposed grid connection will consist of a 132 Kilovolt (kV) overhead powerline, approximately 25km in length and an on-site substation. The bulk of the power line will run in length within a rural and agricultural area.
GN R.983 Item 12	The development of- ii. Infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs- (a) Within a watercourse; (b) if no development setback exists within 32m of a watercourse, measured from the edge of a watercourse”	A few drainage lines are scattered across the proposed property and one or more roads and/ or other infrastructure will cross these lines and be within 32m thereof.
GN R.983 Item 19	The infilling or depositing of any material of more than 10m <sup>3</sup> , or the dredging, excavation, removal or moving of soil, sand, shell grit, pebbles or rock of more than 10m <sup>3</sup> from a watercourse.	The infilling or depositing of any material of more than 10m <sup>3</sup> into a watercourse will likely be triggered with the construction of internal service roads or cables across drainage lines as well as the widening of the existing access road which crosses numerous small drainage lines.
GN R.983 Item 28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 1 April 1998 and where such development:  (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 ha	The proposed development of a Solar PV facility will be used for agriculture as extensive livestock grazing. The total area to be developed is approximately 204ha
GN R.984 Item 1	The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more, excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs (a) within an urban area (b) on existing infrastructure	The proposed project would have a maximum generation capacity of 75MW.



**2014 NEMA EIA Regulations**

No	Description of Listed Activities	Triggered
GN R.985 Item 4	<p>The development of a road wider than 4meters with reserve less than 13,5 metres.</p> <p>g.Northern Cape</p> <p>ii. Outside urban areas:</p> <p>(bb) National Protected Area Expansion strategy Focus areas;</p> <p>(cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or bioregional plans.</p>	<p>The construction of a road wider than 4m with a reserve less than 13.5m (no reserve) will be required outside the urban area and within an area containing indigenous vegetation as the existing road will need extension in some places. The project is located within a National Protected Area Expansion Strategy Focus Areas well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.</p>
GN R.985 Item 12	<p>The clearance of an area of 300 square metres (m<sup>2</sup>) or more of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>g. Northern Cape:</p> <p>(ii) Within critical biodiversity areas identified in bioregional plans</p>	<p>The clearance of more than 300m<sup>2</sup> of indigenous vegetation will be required for the project. The total area to be transformed is approximately 204ha. The project is located within areas designated as Critical Biodiversity areas.</p>
GN R.985 Item 14	<p>The development of –</p> <p>(xii) infrastructure or structures with a physical footprint of 10 square metres or more;</p> <p>Where such development occurs-</p> <p>(a)within a watercourse;</p> <p>© if no development setback has been adopted within 32 metres of a watercourse, measured from the edge of a watercourse;</p> <p>g. Northern Cape</p> <p>ii. Outside urban areas:</p> <p>(bb)National Protected Area Expansion Strategy Focus areas;</p> <p>(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ff) critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority.</p>	<p>Associated infrastructure (eg fencing, substation, transmission lines, buildings, roads etc) will be located within or within proximity to a watercourse.</p> <p>The project is located within a National Protected area Expansion Strategy Focus area as well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.</p>

**2014 NEMA EIA Regulations**

No	Description of Listed Activities	Triggered
GN R.985 Item 18	<p>The widening of a road by more than 4 metres or the lengthening of a road by more than 1 kilometer.</p> <p>g. Norther Cape</p> <p>ii. Outisde Urban areas:</p> <p>(bb) National Protected Area Expansion Strategy Focus Areas;</p> <p>(cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority</p> <p>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.</p>	<p>Access roads of approximately 6 to 8 m in width would be required to develop the proposed project the combination of which would exceed 1 kilometre. Existing roads will be used as far as practically possible and feasible but would require widening by more than 4m and new roads greater than 1 kilometre in length are likely to be required in some areas. The project is located within a National Protected Area Expansion Strategy Focus areas as well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.</p>

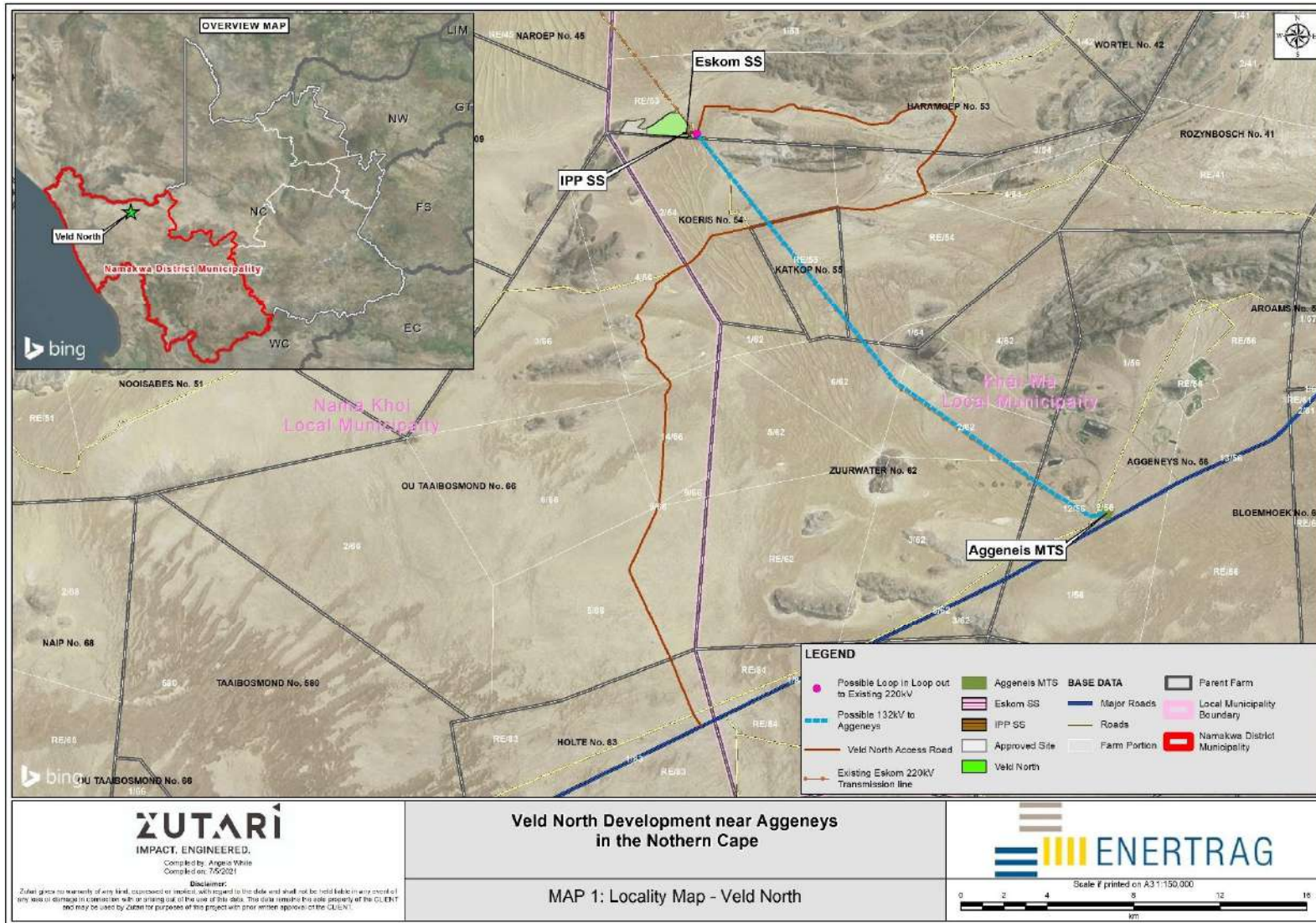


Figure 1: Project Locality Map for the Veld PV North Energy Facility



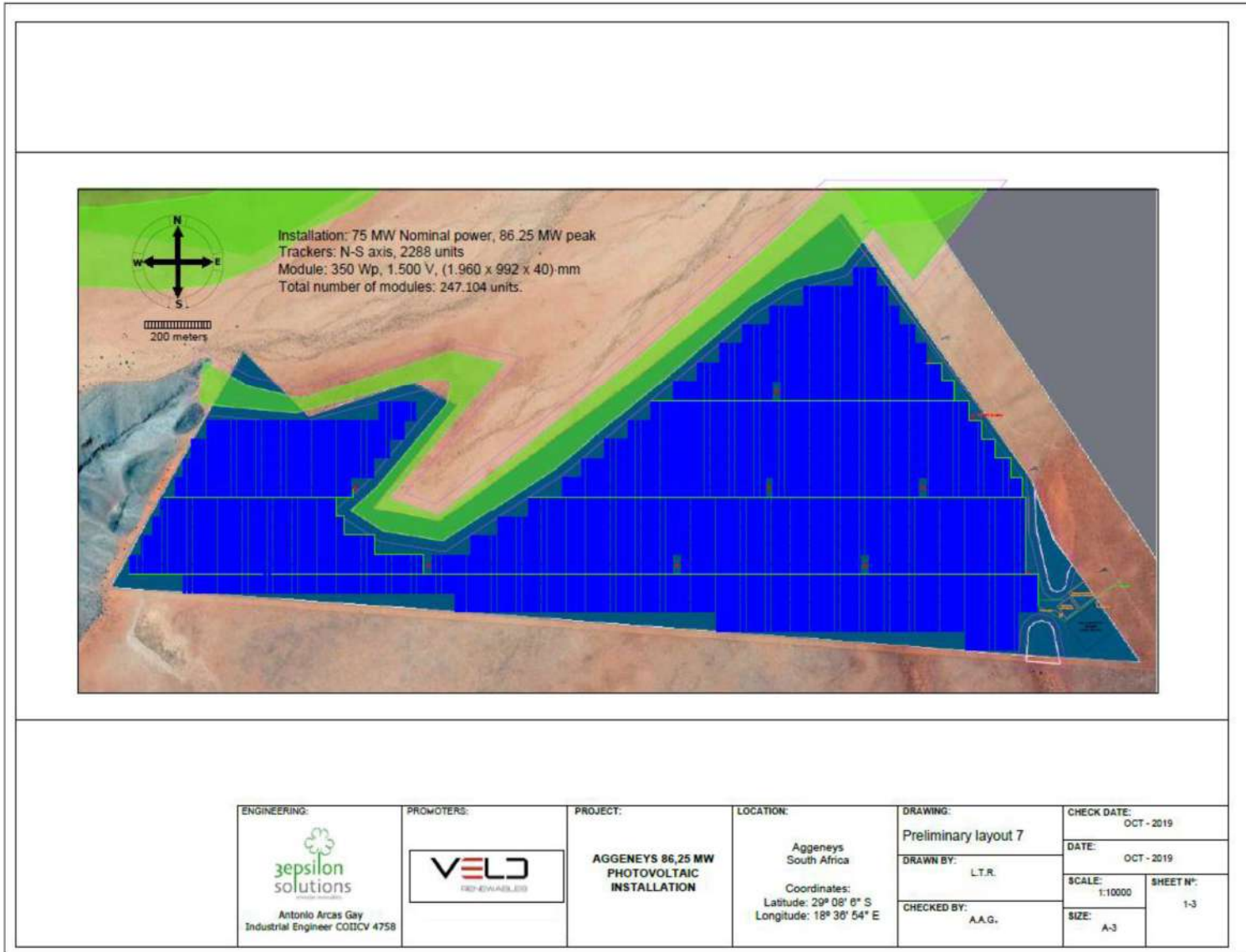


Figure 2: Authorised layout of the Veld PV North

## 2.3 Approach to assessment of cumulative impacts

In the BAR, Aurecon (2020) describes that there were 21 renewable energy projects with the associated transmission lines within 30km of the proposed site. The Majority of the specialist ratings for the cumulative impacts were rated low, minor or neutral (Agriculture, Aquatic, Avifauna, Botany, Heritage and Hydrology). Visual rated the impact as Medium (-) and Socio-economic rated the impact as High (+). The specialists appointed to assess the proposed amendment have commented on the cumulative impacts considering the other associated projects, along with the other existing and approved applications in the area. This amendment report therefore considers any changes to these initial ratings.

# 3 Description and motivation for the proposed amendments

## 3.1 Details of proposed amendments

Veld PV North (Pty) Ltd wishes to apply for an amendment to the project description and scope as authorised by DEA (now DFFE). The amendments are in respect to:

1. Separate the powerline and Eskom on-site substation from the Veld PV North Solar Energy Facility (and IPP portion of the on-site substation) EA.
2. A new layout and EMPr for approval for Veld PV North Solar Energy Facility falling within the assessed and authorised areas.
3. Correct description of the Gridline length: Change “approximately 27 km in length to” to “approximately 25 km in length”.
4. Change coordinates of the start point of Transmission line.
5. Change address of applicant

### 3.1.1 Clarification re Eskom

Comment from DFFE dated 27 July 2021 stated the following:

*Clarity on whether the EA for power line and on-site substation would be transferred to Eskom. Should the holder be transferred to Eskom, please provide a letter of acceptance of responsibilities and obligations of the EA from Eskom, indicating the details of the holder of the EA from Eskom;*

Veld PV North will be the Holders of both the powerline and on-site substation EA and Solar PV Facility EA. Veld PV North is responsible to construct the powerline and on-site substation. Transfer of the powerline and on-site substation EA will only take place after the powerline and on-site substation have been constructed and Eskom is satisfied that the grid infrastructure was built to their standards. Veld PV North will then apply to DFFE for a Part 1 Amendment to change the holder of the powerline and on-site substation EA to Eskom.

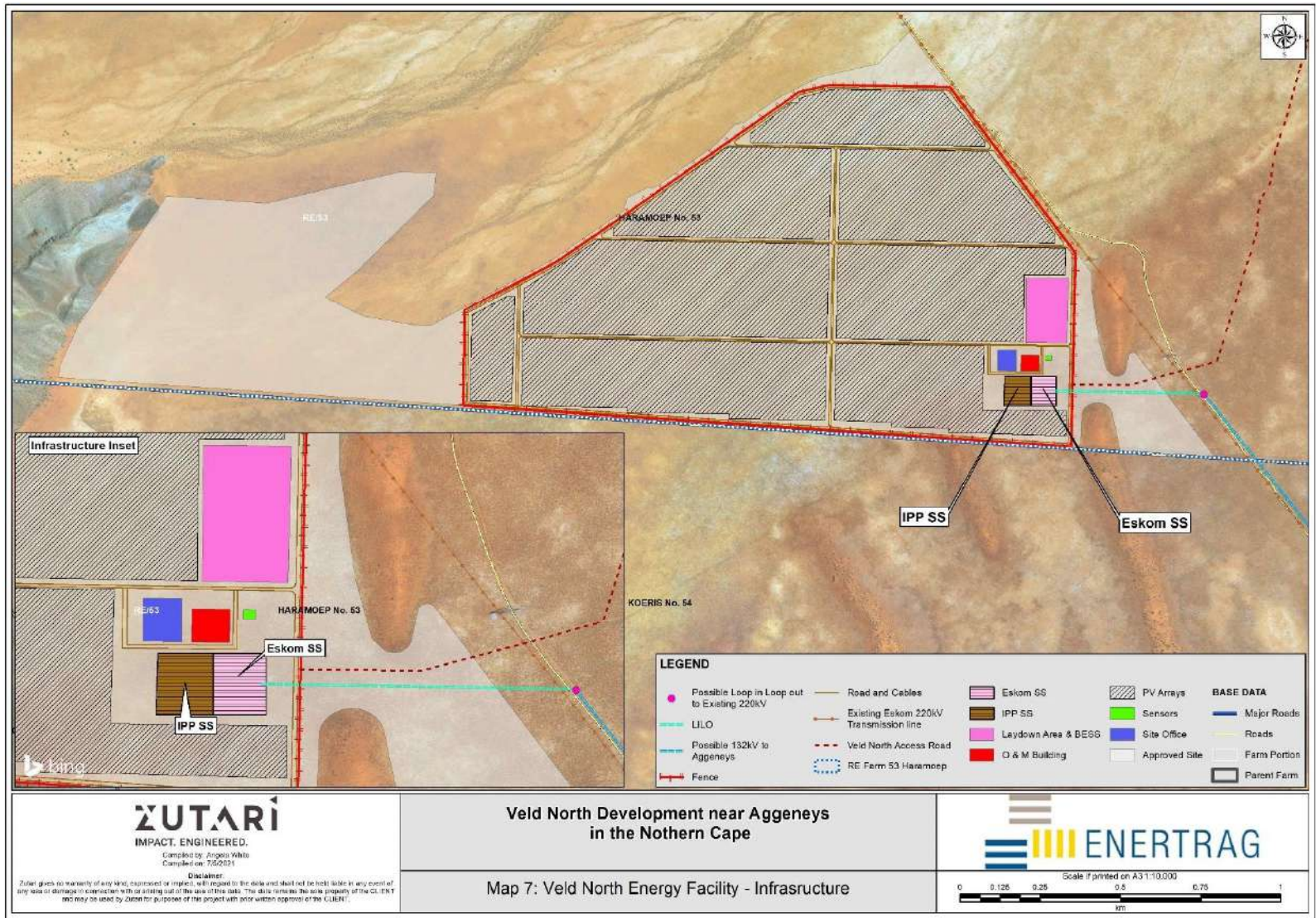


Figure 3: Proposed amended site layout for Veld PV North (inclusive of the BESS, powerline and infrastructure)



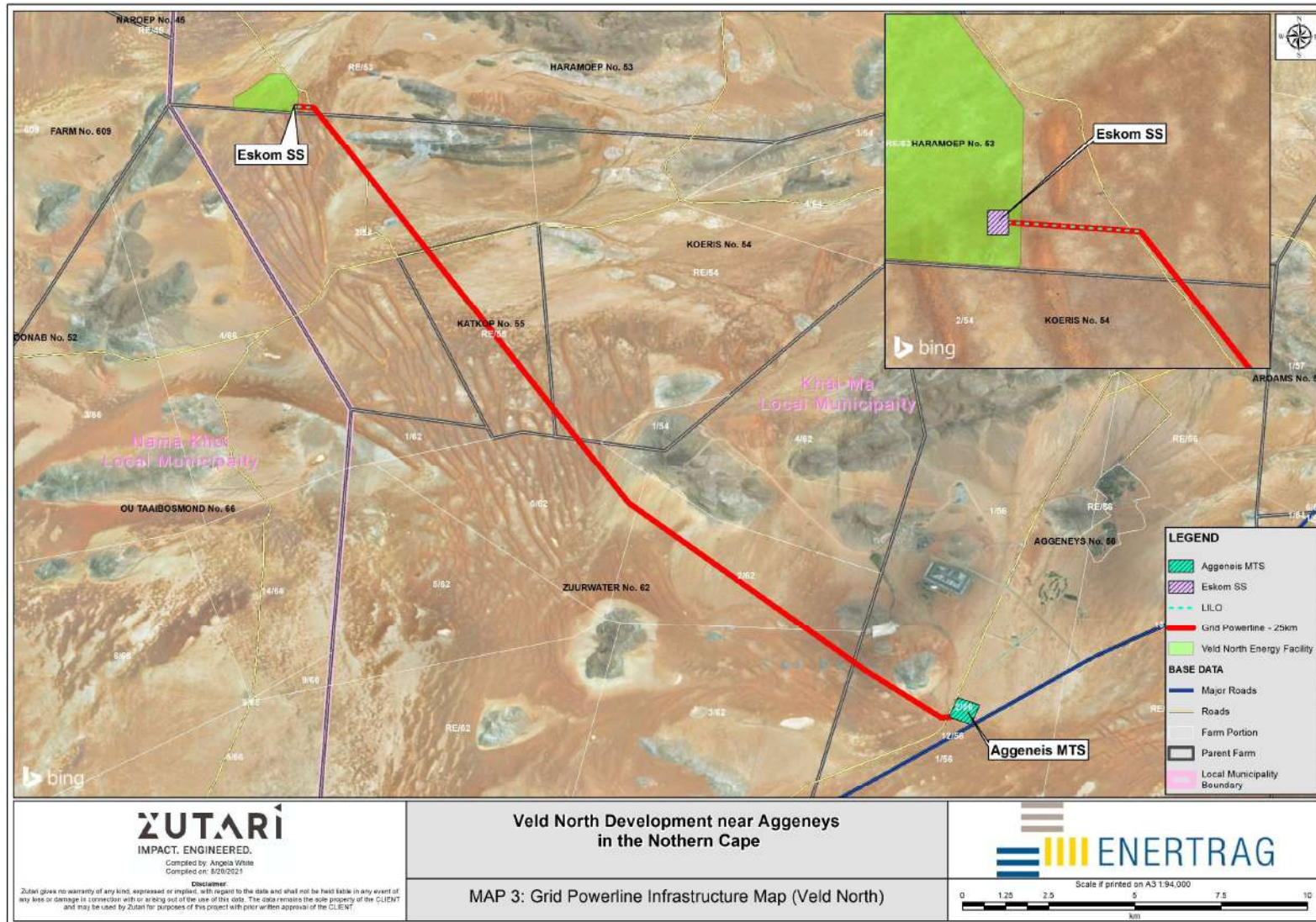


Figure 4: Proposed site layout for Veld North Grid connection infrastructure

## 3.2 Motivation for proposed amendments

The Veld PV North (Pty) Ltd is planned to be bid under the Renewable Energy Independent Power Producer Procurement Programme.

Currently the Eskom grid connection infrastructure is included in the Veld PV North (Pty) Ltd's Environmental Authorisation (14/12/16/3/3/1/2102 and 14/12/16/3/3/1/2102AM1). This grid infrastructure connection consists of either a 132 kilovolt (kV) overhead power line approximately 25 km in length and an on-site substation or a 220kV connection via a Loop In Loop Out connection ('LILO') onto the existing transmission line ('grid infrastructure'). Eskom will decide which option will be implemented at the time of construction.

1. The motivation for this Part 2 amendment is that after construction, the grid infrastructure relating to Eskom will be handed over to Eskom. This includes the Eskom side of the onsite substation, powerline (or LILO), and upgrades at the Aggeneis MTS substation. With this physical grid infrastructure handover, all permits relating to this grid infrastructure must also be provided to Eskom. Thus, the current grid infrastructure approved under the existing Environmental Authorisation needs to be split into the IPP portion and the Eskom portion to facilitate this handover.

The applicant is further splitting the current approved EMPR (Condition 14) into a Facility EMPR and an Eskom grid infrastructure EMPR.

2. The approved final site layout plan (Condition 13), submitted as part of the BAR dated 25 February 2020, is being updated to reflect an updated layout based on the latest optimised technological solution for the facility.
3. The changed the length of the powerline is a correction of a typing error in the EA of 2020 that was only noticed during this amendment process (It appears the lengths were confused between the Veld PV North and Veld PV South applications). The correct length of 25km was applied for and assessed during the Basic Assessment of 2020.
4. The coordinates of the start point of Transmission line have been changed to align with the new position of the proposed substation as a result of the updated layout referred to in point 2 above.
5. The applicant has a new address.

## 3.3 Amendments to the EA

The applicant wishes to separate the powerline and Eskom portion of the on-site substation from the authorised EA, this will result in having two separate EAs for the Veld PV North PV Solar Energy Facility and Veld North Grid connection.

**Table 2** indicates the current EA descriptions and how they should be amended for the **Veld PV North facility**.

All information relating to the powerline and Eskom portion of the on-site substation is to be removed (this is indicated by the ~~strikethrough~~). Any new information is indicated with underlined text.

**Table 3** indicates the current EA descriptions and how they should be amended for the **Veld North Grid connection infrastructure**.

All information relating to the **Veld North PV facility and IPP portion** of the on-site substation is to be removed (this is indicated by the ~~strikethrough~~). Any new information is indicated with underlined text.

**Table 2: Proposed scope changes for the Veld North PV Facility with reference to the relevant section of the Environmental Authorisation**

<b>Page 3 to 5 the EA – Table of listed activities</b>		
<b>Listed Activities</b>	<b>Authorised Description</b>	<b>Proposed Description</b>
<p><b><u>GN R.983 Listing Notice 1: Activity 11</u></b></p> <p>The development of facilities or infrastructure for the transmission and distribution of electricity-</p> <p>li) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 Kilovolts”</p>	<p>The proposed grid connection will consist of a 132 kilovolt (kV) overhead powerline, approximately 27km in length and an on-site substation. The bulk of the power line will run in length within a rural and agricultural areas.</p>	<p><del>The proposed grid connection will consist of a 132 kilovolt (kV) overhead powerline, approximately 27km in length and an on-site substation. The bulk of the power line will run in length within a rural and agricultural areas.</del></p> <p><u>The Veld North PV facility will have an IPP portion of the on-site substation. This on-site substation will be located within rural and agricultural areas.</u></p> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore this wording needs to be replaced.</i></p>
<p><b><u>GN R.985 Listing Notice 3: Activity 12</u></b></p> <p>“The clearance of an area of 300 square metres (m<sup>2</sup>) or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>g. Northern Cape: (ii) Within critical biodiversity areas identified in bioregional plans”</p>	<p>The clearance of more than 300 m<sup>2</sup> of indigenous vegetation will be required for the project. The total area to be transformed is approximately 204 ha. The project is located within areas designated as Critical Biodiversity Areas.</p>	<p>The clearance of more than 300 m<sup>2</sup> of indigenous vegetation will be required for the project. The total area to be transformed is approximately <u>140</u> ha. The project is located within areas designated as Critical Biodiversity Areas.</p> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. This activity is relevant to the Veld North PV Facility and should indicate the transformed area of the PV facility and IPP portion of the on-site substation only.</i></p>
<p><b><u>GN. R 985- Listing Notice 3: Activity 14</u></b></p> <p>“The development of-</p>	<p>Associated infrastructure (eg fencing, substation, transmission lines, buildings, roads etc) will be located within or within proximity to a watercourse. The project is located within a National Protected Area</p>	<p>Associated infrastructure (e.g. fencing, <u>IPP portion of the substation, transmission lines</u>, buildings, roads etc) will be located within or within proximity to a watercourse. The project is located within a National Protected Area Expansion Strategy Focus area as well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.</p>

<p>(xii) infrastructure or structures with a physical footprint of 10 square metres or more; Where such developments occurs-</p> <p>(a) within a watercourse;</p> <p>(c) if no development setback has been adopted, within 32 metres of a watercourse, measures from the edge of a watercourse;</p> <p>g. Northern Cape</p> <p>ii. Outside urban areas:</p> <p>(bb) National Protected Area Expansion strategy Focus areas;</p> <p>(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans”</p>	<p>Expansion Strategy Focus area as well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.</p>	<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore this wording is not relevant to the Veld PV North Facility.</i></p>
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**Pages 7 the EA – SG Codes**

Farm	SG Codes	Farm	SG Codes
Remainder of Farm 53 Haramoep	C05300000000005300000	Remainder of Farm 53 Haramoep	C05300000000005300000
Portion 2 of Farm 54 Koeris	C05300000000005400002	Portion 2 of Farm 54 Koeris	C05300000000005400002
Portion 0 of Farm 55 Katkop	C05300000000005500000	Portion 0 of Farm 55 Katkop	C05300000000005500000
Portion 0 of Farm 54 Koeris	C05300000000005400000	Portion 0 of Farm 54 Koeris	C05300000000005400000



Portion 6 of Farm 62 Zuurwater	C05300000000006200006	Portion 6 of Farm 62 Zuurwater	C05300000000006200006
Portion 2 of Farm 62 Zuurwater	C05300000000006200002	Portion 2 of Farm 62 Zuurwater	C05300000000006200002
Portion 3 of Farm 62 Zuurwater	C05300000000006200003	Portion 3 of Farm 62 Zuurwater	C05300000000006200003
Portion 1 of Farm 56 Aggeneys	C05300000000005600001	Portion 1 of Farm 56 Aggeneys	C05300000000005600001
		Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. The Veld North PV facility is only located on RE/53 Haramoep.</i>	

**Pages 7 the EA – PV North Transmission line coordinates**

	Latitude (s)	Longitude (e)		Latitude (s)	Longitude (e)
01 start of the powerline	29°08'23.62"S	18°37'58.05"E	01 start of the powerline	29°08'23.62"S	18°37'58.05"E
02	29°08'21.74"S	18°37'59.81"E	02	29°08'21.74"S	18°37'59.81"E
03 Midpoint of the powerline	29°14'37.62"S	18°42'57.33"E	03 Midpoint of the powerline	29°14'37.62"S	18°42'57.33"E
04	29°17'13.08"S	18°46'38.85"E	04	29°17'13.08"S	18°46'38.85"E
05	29°17'54.88"S	18°47'48.24"E	05	29°17'54.88"S	18°47'48.24"E
06	29°17'54.93"S	18°47'50.47"E	06	29°17'54.93"S	18°47'50.47"E
07	29°17'53.88"S	18°47'58.92"E	07	29°17'53.88"S	18°47'58.92"E
08 Endpoint of the power line	29°17'49.71"S	18°48'07.19"E	08 Endpoint of the power line	29°17'49.71"S	18°48'07.19"E
		Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this is not relevant to the Veld North PV Facility.</i>			

**Pages 7 and 8 the EA- project components**

<p><u>The project will have the following components:</u></p> <ul style="list-style-type: none"> <li>A PV photovoltaic component, comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy;</li> </ul>	<ul style="list-style-type: none"> <li>A PV photovoltaic component, comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy;</li> <li>Inverters, to convert the direct current (DC) generated by the PV modules into alternating current (AC), with transformers in each block to step up the 400V to 33Kv;</li> </ul>
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<ul style="list-style-type: none"> <li>Inverters, to convert the direct current (DC) generated by the PV modules into alternating current (AC), with transformers in each block to step up the 400V to 33kV</li> <li>On site substation including transformers to step up the 33kV power generated by the inverters to 132kV to connect to the new 132kV overhead transmission line or to 220 kV to connect via LILO to the existing transmission line;</li> <li>Internal cabling laid underground when feasible to connect the PV modules to the on-site substation and inverters;</li> <li>Internal access roads for servicing and maintenance of the site;</li> <li>Stormwater infrastructure;</li> <li>Temporary construction areas for use during construction;</li> <li>Buildings, including an operations and maintenance building, a connection building, control building, guard cabin;</li> <li>Weather stations within and along the fenced perimeter of the site;</li> <li>Perimeter fencing; and</li> <li>Grid connection for Veld PV North will consist of a 132 kV overhead power line, approximately 27km in length that would feed into the national electricity grid at the Aggeneys substation.</li> <li>Installation of a Battery Energy Storage System (BESS), approximately 2.5ha in extent within the authorised development footprint</li> </ul>	<ul style="list-style-type: none"> <li><del>On site substation including transformers to step up the 33kV power generated by the inverters to 132kV to connect to the new 132kV overhead transmission line or to 220 kV to connect via LILO to the existing transmission line;</del></li> <li><del>On site IPP substation including transformers to step up the 33kV power generated by the inverters to 132kV or to 220 kV;</del></li> <li>Internal cabling laid underground when feasible to connect the PV modules to the on-site substation and inverters;</li> <li>Internal access roads for servicing and maintenance of the site;</li> <li>Stormwater infrastructure;</li> <li>Temporary construction areas for use during construction;</li> <li>Buildings, including an operations and maintenance building, a connection building, control building, guard cabin;</li> <li>Weather stations within and along the fenced perimeter of the site;</li> <li>Perimeter fencing; and</li> <li><del>Grid connection for Veld PV North will consist of a 132 kV overhead power line, approximately 27km in length that would feed into the national electricity grid at the Aggeneys substation.</del></li> <li>Installation of a Battery Energy Storage System (BESS), approximately 2.5ha in extent within the authorised development footprint.</li> </ul> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore this is not relevant to the Veld North PV Facility</i></p>
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**Pages 8 and 9 the EA- component details**

Infrastructure	Dimensions/Details	Infrastructure	Dimensions/Details
Location of site	Approximately 100km north-east of Springbok and 75 km north-west of Pofadder in the Northern Cape	Location of site	Approximately 100km north-east of Springbok and 75 km north-west of Pofadder in the Northern Cape
Development footprint	204ha	Development footprint	140ha
Size of farm	Approximately 9830.33ha	Size of farm	Approximately 9830.33ha
Capacity of the facility	75 MW	Capacity of the facility	75 MW

Type of technology	A solar energy facility comprising of numerous rows of PV modules (fixed or single axis)	Type of technology	A solar energy facility comprising of numerous rows of PV modules (fixed or single axis)
Structure height	<ul style="list-style-type: none"> <li>Solar PV Panels: approximately 5m height;</li> <li>Collector (on-site) substation approximately 5m height;</li> <li>On-site 220kV transmission line approximately 32m above ground level;</li> <li>New 132kV or 132kV powerline</li> </ul>	Structure height	<ul style="list-style-type: none"> <li>Solar PV Panels: approximately 5m height;</li> <li>On site IPP substation approximately 5m height (safety equipment like lightning rods will be approximately 22m);</li> <li>Collector (on-site) substation approximately 5m height;</li> <li>On-site 220kV transmission line approximately 32m above ground level;</li> <li>New 132kV or 132kV powerline</li> </ul>
Type of grid connection (substation to which project will connect)	<ul style="list-style-type: none"> <li>Either the proposed LILO grid connection with a 33kV/220kV substation on site, or</li> <li>A grid connection at the Aggeneys substation, with a 33kV/132kV substation on site, and a 132kV transmission line along the 220kV line from the sit to the Aggeneys substation</li> <li>Eskom will decide which option will be implemented at the time of construction.</li> </ul>	Type of grid connection (substation to which project will connect)	<ul style="list-style-type: none"> <li>Either the proposed LILO grid connection with a 33kV/220kV substation on site, or</li> <li>A grid connection at the Aggeneys substation, with a 33kV/132kV substation on site, and a 132kV transmission line along the 220kV line from the sit to the Aggeneys substation</li> <li>Eskom will decide which option will be implemented at the time of construction.</li> </ul>
Powerlines	<ul style="list-style-type: none"> <li>Existing 220kV Aggeneys/Harib Eskom transmission line; and</li> <li>On-site 220kV transmission line approximately 32m above ground level</li> </ul>	Powerlines	<ul style="list-style-type: none"> <li>Existing 220kV Aggeneys/Harib Eskom transmission line; and</li> <li>On-site 220kV transmission line approximately 32m above ground level</li> </ul>
Other infrastructure	<ul style="list-style-type: none"> <li>A PV component comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy.</li> <li>On-site substation including amongst others.</li> </ul>	Other infrastructure	<ul style="list-style-type: none"> <li>A PV component comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy.</li> </ul>

Laydown of materials and equipment	<ul style="list-style-type: none"> <li>• Inverters to convert the direct current generated by the OV modules into alternating current.</li> <li>• Transformers to step up the 33kV power generated by the inverters to 132kV to connect to the new 132kV overhead transmission line of the optional 220kV LILO</li> <li>• Internal cabling laid underground when feasible to connect the PV modules to the on-site substation and inverters</li> <li>• Internal access roads for servicing and maintenance of the site</li> <li>• Stormwater infrastructure</li> <li>• Temporary construction areas for use during construction</li> <li>• Buildings, including an operations and maintenance building, a connection building, control building, guard cabin</li> <li>• Weather stations within and along the fenced perimeter of the site; and</li> <li>• Perimeter fencing.</li> </ul>		<ul style="list-style-type: none"> <li>• <u>On-site IPP substation including transformers to step up the 33kV power generated by the inverters to 132kV or to 220 kV</u></li> <li>• <del>On-site substation including amongst others.</del></li> </ul>
SG Codes	PV development on: C0530000000005300000	Laydown of materials and equipment	<ul style="list-style-type: none"> <li>• Inverters to convert the direct current generated by the PV modules into alternating current;</li> <li>• Transformers to step up the 33kV power generated by the inverters to 132kV <del>to connect to the new 132kV overhead transmission line of the optional 2</del> or 220kV; <del>LILO</del></li> <li>• Internal cabling laid underground when feasible to connect the PV modules to the on-site <u>IPP</u> substation and inverters;</li> <li>• Internal access roads for servicing and maintenance of the site;</li> <li>• Stormwater infrastructure;</li> <li>• Temporary construction areas for use during construction;</li> <li>• Buildings, including an operations and maintenance building, a connection building, control building, guard cabin;</li> <li>• Weather stations within and along the fenced perimeter of the site; and</li> <li>• Perimeter fencing.</li> </ul>
Preferred site access	Southern access via the farm access off the N 14 before Aggeneys	SG Codes	PV development on: C0530000000005300000
Width and length of roads	Roads - width: up to 8m, length: up to 15km	Preferred site access	Southern access via the farm access off the N 14 before Aggeneys
		Width and length of roads	Roads - width: up to 8m, length: up to 15km



	Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore this wording is not relevant to the Veld PV North Facility</i>
<b>Page 11 of the EA- Management of activity</b>	
12. A final site layout plan submitted as part of the BAR dated 25 February 2020 is hereby approved.	A final site layout plan submitted as part of the <del>BAR dated 25 February 2020</del> Amendment report dated (TBC) August 2021 is hereby approved.
	Motivation/Reason: <i>The applicant wishes to update the site layout based on the latest technological solution .</i>
14. The Environmental Management Programme (EMPr) submitted as part of the BAR dated 25 February 2020 is hereby approved. The approved EMPr must be implemented, adhered to and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development.	The Environmental Management Programme (EMPr) submitted as part of the <del>BAR dated 25 February 2020</del> Amendment Report dated (TBC) August 2021 is hereby approved. The approved EMPr must be implemented, adhered to and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development.
	Motivation/Reason: <i>The EMPr has been updated by removing all information relevant to the Eskom portion of the on-site substation and powerline.</i>
<b>Pages 15 to 16 of the EA- Specific conditions</b>	
34. The powerline must be fitted with Bird Flight Diverters (BDF's)	<del>34. The powerline must be fitted with Bird Flight Diverters (BDF's)</del>
	Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this is not relevant to the Veld North PV Facility</i>
46. During operation, any electrocution and collision events that occur should be recorded, including the species affected and the date. If repeated collisions occur within the same area, then further mitigation and avoidance measures may need to be implemented.	<del>46. During operation, any electrocution and collision events that occur should be recorded, including the species affected and the date. If repeated collisions occur within the same area, then further mitigation and avoidance measures may need to be implemented.</del>
	Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this is not relevant to the Veld PV North Facility</i>
<b>Pages 16 of the EA- General</b>	

49. The recommendations of the EAP in the BAR dated 25 February 2020 and the specialist studies attached must be adhered to. In the event of any conflicting mitigation measures and conditions of the Environmental Authorisation, the specific condition of this Environmental Authorisation will take preference.

49. The recommendations of the EAP in the BAR dated 25 February 2020, Amendment Report dated (TBC) August 2021 and the specialist studies attached must be adhered to. In the event of any conflicting mitigation measures and conditions of the Environmental Authorisation, the specific condition of this Environmental Authorisation will take preference.

**Table 3: Proposed scope changes for the Veld PV North substation and powerline with reference to the relevant section of the Environmental Authorisation**

<b>Pages 3 to 5 the EA – Table of listed activities</b>		
<b>Listed Activities</b>	<b>Authorised Description</b>	<b>Proposed Description</b>
<p><b><u>GN R.983 Listing Notice 1: Activity 11</u></b></p> <p>The development of facilities or infrastructure for the transmission and distribution of electricity-</p> <p>li) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 Kilovolts”</p>	<p>The proposed grid connection will consist of a 132 kilovolt (kV) overhead powerline, approximately 27km in length and an on-site substation. The bulk of the power line will run in length within a rural and agricultural areas.</p>	<p>The proposed grid connection will consist of a 132 kilovolt (kV) overhead powerline, approximately <del>27</del> 25km in length and <u>the Eskom portion of the</u> on-site substation. The bulk of the power line will run in length within a rural and agricultural areas.</p> <p>Motivation/Reason: <i>The incorrect length was indicated in the EA. The applicant wishes to separate the onsite Eskom substation from the authorised EA.</i></p>
<p><b><u>GN R.983 Listing Notice 1: Activity 28</u></b></p> <p>“ Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 1 April 1998 and where such development:</p> <p>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 ha”</p>	<p>The proposed development of a Solar PV facility will be an industrial use of lad that is currently used for agriculture as extensive livestock grazing. The total area to be developed is approximately 204ha.</p>	<p><del>The proposed development of a Solar PV facility will be an industrial use of lad that is currently used for agriculture as extensive livestock grazing. The total area to be developed is approximately 204ha.</del></p> <p>The proposed development of a 25km powerline, access road will be constructed, and an on-site Eskom substation-PV facility will be an industrial use of land that is currently used for agriculture as extensive livestock grazing. <del>The total area to be developed is approximately 204ha.</del></p> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA.</i></p>
<p><b><u>GN R.984 Listing Notice 2: Activity 1</u></b></p> <p>“The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more, excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs</p>	<p>The proposed project would have a maximum generation capacity of 75MW.</p>	<p><del>The proposed project would have a maximum generation capacity of 75MW.</del></p> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. This is not relevant to the substation and powerline, therefore this activity is not triggered and should be removed from the EA.</i></p>

<p>(a) within an urban area (b) on existing infrastructure”</p>		
<p><b><u>GN R.984 Listing Notice 3: Activity 4</u></b>  “The development of a road wider than 4 metres with reserve less than 13,5 metres.  g. Northern Cape  (ii) Outside urban areas:  (bb) National Protected Area Expansion Strategy Focus areas;  (cc) Sensitive areas as identified in an environmental management framework contemplated in chapter 5 of the Act and as adopted by the competent authority;  (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or bioregional plans”</p>	<p>The construction of a road wider than 4 m with a reserve less than 13.5 m (no reserve) will be required outside the urban area and within an area containing indigenous vegetation, as the existing road will need extension in some, places. The project is located within a National Protected Area Expansion Strategy Focus Areas well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.</p>	<p><del>The construction of a road wider than 4 m with a reserve less than 13.5 m (no reserve) will be required outside the urban area and within an area containing indigenous vegetation, as the existing road will need extension in some, places. The project is located within a National Protected Area Expansion Strategy Focus Areas well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.</del></p> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. This is not relevant to the substation and powerline, therefore this activity is not triggered and should be removed from the EA.</i></p>
<p><b><u>GN R.985 Listing Notice 3: Activity 12</u></b>  “The clearance of an area of 300 square metres (m2) or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.  g. Northern Cape:  (ii) Within critical biodiversity areas identified in bioregional plans”</p>	<p>The clearance of more than 300 m<sup>2</sup> of indigenous vegetation will be required for the project. The total area to be transformed is approximately 204 ha. The project is located within areas designated as Critical Biodiversity Areas.</p>	<p>The clearance of more than 300 m<sup>2</sup> of indigenous vegetation will be required for the <del>project grid</del> connection. A 25km powerline, access road, and an on-site Eskom substation will be constructed. <del>The total area to be transformed is approximately 204 ha.</del> The project is located within areas designated as Critical Biodiversity Areas.</p> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore the description should indicate the proposed powerline and substation only.</i></p>



<p><b><u>GN. R 985- Listing Notice 3: Activity 14</u></b></p> <p>“The development of-</p> <p>(xii) infrastructure or structures with a physical footprint of 10 square metres or more;</p> <p>Where such developments occurs-</p> <p>(a) within a watercourse;</p> <p>(c) if no development setback has been adopted, within 32 metres of a watercourse, measures from the edge of a watercourse;</p> <p>g. Northern Cape</p> <p>ii. Outside urban areas:</p> <p>(bb) National Protected Area Expansion strategy Focus areas;</p> <p>(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans”</p>	<p>Associated infrastructure (eg fencing, substation, transmission lines, buildings, roads etc) will be located within or within proximity to a watercourse. The project is located within a National Protected Area Expansion Strategy Focus area as well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.</p>	<p>Associated infrastructure (eg fencing, <del>substation, transmission lines,</del> buildings, roads etc). <u>The Eskom on-site substation and transmission line</u> will be located within or within proximity to a watercourse. <del>The project</del> <u>Eskom on-site substation and transmission line</u> is located within a National Protected Area Expansion Strategy Focus area as well as areas designated as Critical Biodiversity Areas. <del>The project</del> <u>grid connection infrastructure</u> is also located within an Important Bird Area.</p> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore activity is applicable to the proposed substation.</i></p>
<p><b><u>GN. R 985- Listing Notice 3: Activity 18</u></b></p> <p>“The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.</p>	<p>Access roads of approximately 6 to 8m in width would be required to develop the proposed project, the combination of which would exceed 1 kilometre. Existing roads will be used as far as practically possible and feasible but would require widening by more than 4 m and new roads greater than 1 kilometre in length are likely</p>	<p><del>Access roads of approximately 6 to 8m in width would be required to develop the proposed project, the combination of which would exceed 1 kilometre. Existing roads will be used as far as practically possible and feasible but would require widening by more than 4 m and new roads greater than 1 kilometre in length are likely to be required in some areas. The project is located within a National Protected Area Expansion Strategy Focus area as well as areas designated as Critical Biodiversity Areas. The project is located within an Important Bird Area.</del></p>

<p>g. Northern Cape</p> <p>ii. Outside urban areas:</p> <p>(bb) National Protected Areas Expansion Strategy focus areas;</p> <p>(cc) Sensitive areas as identified in an environmental management framework as contemplated in Chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or bioregional plans”</p>	<p>to be required in some areas. The project is located within a National Protected Area Expansion Strategy Focus area as well as areas designated as Critical Biodiversity Areas. The project is located within an Important Bird Area.</p>	<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. This is not relevant to the substation and powerline. Therefore this activity is not triggered and should be removed from the EA.</i></p>
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**Pages 6 of the EA – Veld PV North Site Co-ordinates**

	Latitude (S)	Longitude (E)		Latitude (S)	Longitude (E)
<b>South West:</b>	29°08' 19 .54 "S	18°36'02.96"E	<b>South West:</b>	29°08' 19 .54 "S	18°36'02.96"E
<b>North West</b>	29°08'01.05"S	18°36'14.03"E	<b>North West</b>	29°08'01.05"S	18°36'14.03"E
	29°07'58.63"S	18°36'41.07"E		29°07'58.63"S	18°36'41.07"E
	29°08'11.33"S	18°36'29.85"E		29°08'11.33"S	18°36'29.85"E
	29°08'14 .32"S	18°36'40.27"E		29°08'14 .32"S	18°36'40.27"E
<b>North East</b>	29°07'44.56"S	18°37'28.43"E	<b>North East</b>	29°07'44.56"S	18°37'28.43"E
	29°08'08.69"S	18°37'46.88"E		29°08'08.69"S	18°37'46.88"E
	29°08'19.02"S	18°37'49.01"E		29°08'19.02"S	18°37'49.01"E
	29°08'16.48"S	18°37'51.22"E		29°08'16.48"S	18°37'51.22"E
<b>South East</b>	29°08'27.10"S	18°37'59.70"E	<b>South East</b>	29°08'27.10"S	18°37'59.70"E
	29°08'26.51 "S	18°37'50.06"E		29°08'26.51 "S	18°37'50.06"E
	29°08'21.67"S	18°37'47.70"E		29°08'21.67"S	18°37'47.70"E
	29°08'26.17"S	18°37'45.53"E		29°08'26.17"S	18°37'45.53"E
	29°08'10.75"S	18°37'06.61"E		29°08'10.75"S	18°37'06.61"E

Motivation/Reason: *The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. The Veld North PV facility co-ordinates is not relevant to this EA.*

**Page 7 of the EA – Transmission line coordinates**

	Latitude (S)	Longitude (E)		Latitude (S)	Longitude (E)
01 Start of the powerline	29° 08' 23.62 "S	18° 37' 58.05"E	<u>01 Start of the powerline</u>	<del>29° 8' 23.62"S</del>	<del>18° 37' 58.05"E</del>
				<u>29° 8' 20.77"S</u>	<u>18° 37' 43.32"E</u>
Motivation/Reason: <i>The applicant wishes to adjust the start of the powerline to align with the Eskom on-site substation position.</i>					

**Page 7 of the EA**

-For the development of the Veld PV North Solar Energy Facility and associated infrastructure on the Remainder of the farm 53 Haramoep, near Aggeneys within the Khai-Ma Local Municipality in the Norther Cape Province, hereafter to referred to as “the property”	-For the development of <u>the grid infrastructure for the</u> Veld PV North Solar Energy Facility <u>and associated infrastructure on the Remainder of the farm 53 Haramoep, near Aggeneys within the Khai-Ma Local Municipality in the Norther Cape Province, hereafter to referred to as “the property”</u>
	Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this wording should be removed from the EA.</i>

**Pages 7 and 8 of the EA- Project components**

<p><u>The project will have the following components:</u></p> <ul style="list-style-type: none"> <li>• A PV photovoltaic component, comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy;</li> <li>• Inverters, to convert the direct current (DC) generated by the PV modules into alternating current (AC), with transformers in each block to step up the 400V to 33Kv</li> <li>• On site substation including transformers to step up the 33kV power generated by the inverters to 132kV to connect to the new 132kV overhead transmission line or to 220 kV to connect via LILO to the existing transmission line;</li> <li>• Internal cabling laid underground when feasible to connect the PV modules to the on-site substation and inverters;</li> <li>• Internal access roads for servicing and maintenance of the site;</li> <li>• Stormwater infrastructure;</li> <li>• Temporary construction areas for use during construction;</li> </ul>	<ul style="list-style-type: none"> <li>• <del>A PV photovoltaic component, comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy;</del></li> <li>• <del>Inverters, to convert the direct current (DC) generated by the PV modules into alternating current (AC), with transformers in each block to step up the 400V to 33Kv</del></li> <li>• On-site <u>Eskom</u> substation including transformers to step up the 33kV power generated by the inverters to 132kV to connect to the new 132kV overhead transmission line or to 220 kV to connect via LILO to the existing transmission line;</li> <li>• <del>Internal cabling laid underground when feasible to connect the PV modules to the on-site substation and inverters;</del></li> <li>• Internal access roads for servicing and maintenance of the <u>grid infrastructure</u>;</li> <li>• Stormwater infrastructure;</li> <li>• Temporary construction areas for use during construction;</li> <li>• Buildings, including an operations and maintenance building, a connection building, control building, guard cabin;</li> </ul>
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<ul style="list-style-type: none"> <li>Buildings, including an operations and maintenance building, a connection building, control building, guard cabin;</li> <li>Weather stations within and along the fenced perimeter of the site;</li> <li>Perimeter fencing; and</li> <li>Grid connection for Veld PV North will consist of a 132 kV overhead power line, approximately 27km in length that would feed into the national electricity grid at the Aggeneys substation.</li> <li>Installation of a Battery Energy Storage System (BESS), approximately 2.5ha in extent within the authorised development footprint</li> </ul>	<ul style="list-style-type: none"> <li><del>Weather stations within and along the fenced perimeter of the site;</del></li> <li>Perimeter fencing; and</li> <li>Grid connection for Veld PV North will consist of a 132 kV overhead power line, approximately 27 <u>25</u>km in length that would feed into the national electricity grid at the Aggeneys substation.</li> <li><del>Installation of a Battery Energy Storage System (BESS), approximately 2.5ha in extent within the authorised development footprint</del></li> </ul>
<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this wording should be removed from the EA.</i></p>	

**Pages 8 and 9 of the EA- Component details**

Infrastructure	Dimensions/Details	Infrastructure	Dimensions/Details
Location of site	Approximately 100km north-east of Springbok and 75 km north-west of Pofadder in the Northern Cape	Location of site	Approximately 100km north-east of Springbok and 75 km north-west of Pofadder in the Northern Cape
Development footprint	204ha	Development footprint	204ha
Size of farm	Approximately 9830.33ha	Size of farm	<del>Approximately 9830.33ha</del>
Capacity of the facility	75 MW	Capacity of the facility	75 MW
Type of technology	A solar energy facility comprising of numerous rows of PV modules (fixed or single axis)	Type of technology	<del>A solar energy facility comprising of numerous rows of PV modules (fixed or single axis)</del>
Structure height	<ul style="list-style-type: none"> <li>Solar PV Panels: approximately 5m height;</li> <li>Collector (on-site) substation approximately 5m height;</li> <li>On-site 220kV transmission line approximately 32m above ground level;</li> <li>New 132kV or 132kV powerline</li> </ul>	Structure height	<ul style="list-style-type: none"> <li><del>Solar PV Panels: approximately 5m height;</del></li> <li><u>Eskom on-site Collector (on-site) substation approximately 5m height (safety equipment like lightning rods will be approximately 22m);</u></li> <li>On-site 220kV transmission line approximately 32m above ground level;</li> <li>New 132kV or 132kV powerline</li> </ul>
Type of grid connection (substation to which project will connect)	<ul style="list-style-type: none"> <li>Either the proposed LILO grid connection with a 33kV/220kV substation on site, or</li> <li>A grid connection at the Aggeneys substation, with a 33kV/132kV substation on site, and a</li> </ul>	Type of grid connection (substation to which project will connect)	<ul style="list-style-type: none"> <li>Either the proposed LILO grid connection with a 33kV/220kV substation on site, or</li> </ul>



	<p>132kV transmission line along the 220kV line from the sit to the Aggeneys substation</p> <ul style="list-style-type: none"> <li>• Eskom will decide which option will be implemented at the time of construction.</li> </ul>		<ul style="list-style-type: none"> <li>• A grid connection at the Aggeneys substation, with a 33kV/132kV substation on site, and a 132kV transmission line along the 220kV line from the sit to the Aggeneys substation</li> <li>• Eskom will decide which option will be implemented at the time of construction.</li> </ul>
Powerlines	<ul style="list-style-type: none"> <li>• Existing 220kV Aggeneys/Harib Eskom transmission line; and</li> <li>• On-site 220kV transmission line approximately 32m above ground level</li> </ul>	Powerlines	<ul style="list-style-type: none"> <li>• Existing 220kV Aggeneys/Harib Eskom transmission line; and</li> <li>• On-site 220kV transmission line approximately 32m above ground level</li> </ul>
Other infrastructure	<ul style="list-style-type: none"> <li>• A PV component comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy.</li> <li>• On-site substation including amongst others.</li> </ul>	Other infrastructure	<ul style="list-style-type: none"> <li>• <del>A PV component comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy.</del></li> <li>• On-site <u>Eskom</u> substation including amongst others-</li> </ul>
Laydown of materials and equipment	<ul style="list-style-type: none"> <li>• Inverters to convert the direct current generated by the OV modules into alternating current.</li> <li>• Transformers to step up the 33kV power generated by the inverters to 132kV to connect to the new 132kV overhead transmission line of the optional 220kV LILO</li> <li>• Internal cabling laid underground when feasible to connect the PV modules to the on-site substation and inverters</li> <li>• Internal access roads for servicing and maintenance of the site</li> <li>• Stormwater infrastructure</li> <li>• Temporary construction areas for use during construction</li> </ul>	Laydown of materials and equipment	<ul style="list-style-type: none"> <li>• <del>Inverters to convert the direct current generated by the OV modules into alternating current.</del></li> <li>• Transformers to step up the 33kV power generated by the inverters to 132kV to connect to the new 132kV overhead transmission line of the optional 220kV LILO</li> <li>• <del>Internal cabling laid underground when feasible to connect the PV modules to the on-site substation and inverters</del></li> <li>• Internal access roads for servicing and maintenance of the site</li> <li>• Stormwater infrastructure</li> </ul>

	<ul style="list-style-type: none"> <li>Buildings, including an operations and maintenance building, a connection building, control building, guard cabin</li> <li>Weather stations within and along the fenced perimeter of the site; and</li> <li>Perimeter fencing.</li> </ul>		<ul style="list-style-type: none"> <li>Temporary construction areas for use during construction</li> <li>Buildings, including an operations and maintenance building, a connection building, control building, guard cabin</li> <li><del>Weather stations within and along the fenced perimeter of the site; and</del></li> <li>Perimeter fencing.</li> </ul>
SG Codes	PV development on: C05300000000005300000	<del>SG Codes</del>	<del>PV development on: C05300000000005300000</del>
Preferred site access	Southern access via the farm access off the N 14 before Aggeneys	Preferred site access	Southern access via the farm access off the N 14 before Aggeneys <u>and along the existing 220kV powerline access route</u>
Width and length of roads	Roads - width: up to 8m, length: up to 15km	Width and length of roads	<del>Roads - width: up to 8m, length: up to 15km</del> <u>Service road of up to 2.5m in width will be associated with the 25km powerline</u>
		<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this wording should be removed from the EA.</i></p>	
<p><b>Page 10 of the EA- Scope of Authorisation</b></p>			
<p>The development of the Veld PV North Solar Energy Facility and associated infrastructure on the Remainder of the farm 53 Haramoep near Aggeneys within Kh-i-Ma Local Municipality in the Northern Cape Province is hereby approved as per the geographic coordinates indicated above.</p>		<p>The development of the <u>grid infrastructure for the Veld PV North Solar Energy Facility</u> <del>and associated infrastructure on the Remainder of the farm 53 Haramoep</del> near Aggeneys within Kh-i-Ma Local Municipality in the Northern Cape Province is hereby approved as per the geographic coordinates indicated above.</p>	
		<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this wording should be removed from the EA.</i></p>	

<b>Page 11 of the EA- Management of activity</b>	
12. A final site layout plan submitted as part of the BAR dated 25 February 2020 is hereby approved.	<p>A final <u>site grid connection</u> layout plan submitted as part of the <del>BAR dated 25 February 2020</del> <u>Amendment Report dated (TBC) August 2021</u> is hereby approved.</p> <p>Motivation/Reason: <i>The layout plan approved is in relation to the Veld North PV Facility and therefore the Grid specific layout plan should be approved.</i></p>
14. The Environmental Management Programme (EMPr) submitted as part of the BAR dated 25 February 2020 is hereby approved. The approved EMPr must be implemented, adhered to and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development.	<p>14. The Environmental Management Programme (EMPr) submitted as part of the <del>BAR dated 25 February 2020</del> <u>Amendment Report dated (TBC) August 2021</u> is hereby approved. The approved EMPr must be implemented, adhered to and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development</p> <p>Motivation/Reason: <i>The Generic EMPr was updated by removing all information relevant to the Veld North PV Facility and therefore the latest EMPr should be approved.</i></p>
<b>Page 16 of the EA- General</b>	
49. The recommendations of the EAP in the BAR dated 25 February 2020 and the specialist studies attached must be adhered to. In the event of any conflicting mitigation measures and conditions of the Environmental Authorisation, the specific condition of this Environmental Authorisation will take preference.	<p>49. The recommendations of the EAP in the BAR dated 25 February 2020, <u>Amendment Report dated (TBC) August 2021</u> and the specialist studies attached must be adhered to. In the event of any conflicting mitigation measures and conditions of the Environmental Authorisation, the specific condition of this Environmental Authorisation will take preference.</p> <p>Motivation/Reason: <i>Recommendations by the EAP and specialist of the 2020 and 2021 processes should be adhered to</i></p>

## 4 Assessment of impacts related to the proposed changes

This section documents the impacts during construction and operation, as originally assessed for the authorised activities and as assessed for the proposed amendments. Any additional mitigation measures to be included in the EMPr have been identified. The original summary tables, and new proposed changes due to the amendment are provided for comparative purposes.

### 4.1 Specialist Input

A number of impacts were identified and assessed in the Final EIR. These impacts have been revisited by specialists for the construction, operational and decommissioning phases and where relevant they have provided their opinion on the changes to these original impacts should the amendments be approved.

The proposed amendment will make the footprint of the authorised layout smaller, a smaller footprint would not impact on the findings of the Palaeontology study and therefore this study was not revisited.

These specialists' respective reports or statements are attached in Appendices D1-D6

**Table 4: Appointed specialist for the proposed Veld North Amendment**

Specialist Study	Company (2021)	Appendix
Agriculture	Johann Lanz Private	D1
Freshwater	Toni Belcher and Dana Grobler from Blue Science	D2
Avifauna	Chris van Rooyen	D3
Heritage	Jason Orton from ASHA	D4
Stormwater	Martin Kleynhans	D5
Visual	Steve Stead from VRM	D6
Botany	Dave McDonald from Bergwind	D7

### 4.2 Summary of original impacts

A summary of the original impacts assessed in the Final BAR are provided in **Error! Reference source not found.**

**Table 5: Summary of potential impacts as authorised**

Aspect	Impact	Without mitigation	With mitigation
<b>Construction</b>			
Agriculture	Loss of agricultural land use (PV)	Low (-)	Low (-)
	Soil degradation (PV)	Very Low (-)	Very Low (-)
	Loss of agricultural land use (Grid connection, substation and access routes)	Low (-)	Low (-)
	Soil degradation (Grid connection, substation and access routes)	Very Low (-)	Very Low (-)
Aquatic ecology	Clearance of natural vegetation adjacent to the ephemeral streams and drainage lines (PV)	Moderate (-)	Low (-)
	Potential disturbance of aquatic habitat during construction phase (Grid connection, substation and access routes)	Very Low (-)	Very Low (-)

Aspect	Impact	Without mitigation	With mitigation
Avifauna	Displacement due to disturbance and habitat transformation (PV)	Moderate (-)	Moderate (-)
	Displacement due to disturbance and habitat transformation (Grid connection, substation and access routes)	Low (-)	Very Low (-)
	Mortality due to electrocution (Grid connection, substation and access routes)	Low (-)	Very Low (-)
	Collisions of priority species with the earthwire of the proposed grid connection	High (-)	Low (-)
Botany	Removal of Bushmanland Arid Grassland vegetation and minimal Bushmanland Sandy Grassland (PV)	Low (-)	Low (-)
	Removal of Bushmanland Arid Grassland vegetation and minimal Bushmanland Sandy Grassland electrocution (Grid connection, substation and access routes)	Low (-)	Low (-)
Heritage archaeology and palaeontology	Destruction or damage to archaeological materials and unmarked graves (PV, grid connection, substation and access routes)	Low (-)	Very Low (+)
	Destruction or damage to palaeontological materials (PV, grid connection, substation and access routes)	Very Low (-)	Very Low (+)
	Impacts to the cultural and natural landscape (PV, grid connection, substation and access routes)	Moderate (-)	Low (-)
Hydrology	Erosion (PV, grid connection, substation and access routes)	Low (-)	Low (-)
	Increased runoff (access routes)	Moderate (-)	Moderate (-)
	Localized erosion (grid)	Moderate (-)	Moderate (-)
Socio-economic	Impact on production and gross domestic product	High (+)	High (+)
	Impact on employment and skills development	Moderate (-)	Moderate (-)
	Impact on household income	Moderate (+)	Moderate (+)
	Impact on government revenue (Rates and taxes)	Moderate (+)	Moderate (+)
	Impact on in-migration	Moderate (-)	Moderate (-)
	Impact on basic services, social and economic infrastructure	Low (-)	Low (-)
Visual landscape	Lights at night (PV)	Moderate (-)	Very Low (-)
	Windblown dust (PV)	Low (-)	Very Low (-)
	Landscape Degradation (PV)	Moderate (-)	Moderate (-)
	Visual intrusion (PV)	Low (-)	Low (-)
	Landscape Degradation (road)	Low (-)	Low (-)
	Visual intrusion (road)	Moderate (-)	Low (-)
	Visual intrusion and landscape degradation (powerline)	Low (-)	Low (-)
<b>Operation</b>			
Agriculture	Loss of agricultural land use (PV)	Low (-)	Low (-)
	Soil degradation (PV)	Very Low (-)	Very Low (-)
	Loss of agricultural land use (Grid connection, substation and access routes)	Low (-)	Low (-)
	Soil degradation (Grid connection, substation and access routes)	Very Low (-)	Very Low (-)
	Increased financial security for farming operations	Low (+)	Low (+)
Aquatic ecology	Maintenance (PV)	Moderate (-)	Very Low (-)



Aspect	Impact	Without mitigation	With mitigation
	Potential disturbance of aquatic habitat during operational phase (Grid connection, substation and access routes)	Very Low (-)	Very Low (-)
Avifauna (Birds)	Displacement due to disturbance and habitat transformation (PV)	Moderate (-)	Moderate (-)
	Collisions with solar panels	Very Low (-)	Very Low (-)
	Entrapment in parameter fences	Low (-)	Very Low (-)
	Collisions of priority species with the earthwire of the proposed grid connection	High (-)	Low (-)
Heritage archaeology and palaeontology	Impacts to the cultural and natural landscape (PV, grid connection, substation and access routes)	Moderate (-)	Low (-)
Socio-economic	Impact on production and gross domestic product	Moderate (+)	Moderate (+)
	Impact on employment and skills development	Low (+)	Low (+)
	Impact on household income	Low (+)	Low (+)
	Impact on government revenue (Rates and taxes)	Low (+)	Low (+)
	Impact of Investment in Local Communities and Economic Development Projects as Part of the Social Economic Development and Enterprise Development Plan	Moderate (+)	Moderate (+)
	Impact on supply of electricity	Moderate (+)	Moderate (+)
Visual	Lights at night (PV)	Moderate (-)	Low (-)
	Windblown dust (PV)	Low (-)	Neutral
	Landscape Degradation (PV)	High (-)	High (-)
	Visual intrusion (PV)	Moderate (-)	Moderate (-)
	Landscape Degradation (road)	Low (-)	Very Low (+)
	Visual intrusion (road)	Moderate (-)	Low (+)
	Visual intrusion and landscape degradation (powerline)	Very Low (-)	Very Low (-)
<b>Decommissioning</b>			
Agriculture	Loss of agricultural land use (PV)	Low (-)	Low (-)
	Soil degradation (PV)	Very Low (-)	Very Low (-)
	Loss of agricultural land use (Grid connection, substation and access routes)	Low (-)	Low (-)
	Soil degradation (Grid connection, substation and access routes)	Very Low (-)	Very low (-)
Aquatic ecology	Maintenance	Moderate (-)	Very Low (-)
Visual	Potential visual intrusion of construction activities on rural landscape and scenic resources	Moderate (-)	Moderate (-)

### 4.3 Assessment of proposed Changes

The following sections provide a comparison between the original impacts that were assessed (where relevant) and the revised assessments based on the proposed changes. Additions and amendments to mitigation measures and conditions of the EA are also provided. Specialists addressed the following to satisfy the requirements of a Part 2 Amendment in terms of Regulation 32(1)(a) of the 2014 NEMA EIA Regulations (GN R 982, as amended) as follows:

- An assessment of all impacts (including cumulative impacts) related to the proposed changes;
- A description of advantages and disadvantages associated with the proposed changes; and

- Identification of additional measures to avoid, manage and mitigate impacts associated with the proposed changes for inclusion in the EMPr.

Where applicable, the EMPr has been updated (see Appendix E) to include the additional mitigation measures identified by the specialists, refer to Appendix E. All additional mitigation measures have been recorded per specialist field in the sub-sections that follow.

Note that all assessments were undertaken in terms of the original EIA assessment methodology to ensure comparable results.

### 4.3.1 Agriculture

Mr Johann Lanz undertook a desktop review to identify and assess any potential impacts of the proposed amendments on agricultural resources and agricultural production and to provide any changes or additions to the mitigation measures for agricultural impacts and consequent changes to the EMPr. Please refer to Appendix D for a copy of the amendment letter.

#### 4.3.1.1 Veld PV North, Substation and Powerline

The significance of all agricultural impacts on this site is low because of the very low agricultural potential of the site. There are no agricultural impacts related to this proposed amendment. It will not change the nature or significance of any of the impacts assessed in the original study. There are no agricultural advantages or disadvantages related to it. The amendment does not require any changes or additions to the mitigation measures for agricultural impacts that were recommended for the authorised development, and there are therefore no required changes to the EMPr. The agricultural impact of the amended project will therefore be identical to the impact for the authorised development, that was assessed in the original specialist assessment report

#### 4.3.1.2 Impact Statement

From an agricultural impact point of view, it is recommended that the amendment be authorised.

### 4.3.2 Aquatic

Ms Toni Belcher undertook a desktop study to assess the proposed amendments. Please refer to Appendix D for a copy of the revised assessment letter.

#### 4.3.2.1 Veld North PV Facility

The proposed revised PV layout, due to the fact that it is located within the footprint of the original proposed development area assessed and approved, is not likely to result in any increase in impact (incremental or cumulative) of risk to the adjacent aquatic ecosystems to that already assessed for the original approved Veld PV North Solar Energy Facility (deemed to be Low). The closest aquatic features are ephemeral streams more than 100 m to the north-west of the site

#### 4.3.2.2 Substation and Power line

The final layout for the transmission line and substation is also not likely to result in any increase in impact (incremental or cumulative) of risk to the adjacent aquatic ecosystems to that already assessed (deemed to be Very Low to Negligible). The closest aquatic features are more than 60 m from the proposed pylon positions.

### 4.3.2.3 Recommended mitigation measures:

- Construction should preferably take place during the low rainfall period to minimize the risk of contaminated runoff from the site.
- Invasive alien plants should be removed from the disturbed areas adjacent to the site.
- All materials on the construction site should be safely stored and contained.
- Disposal of waste from the site should also be effectively managed.
- Construction workers should be given ablution facilities at the construction sites that are located at least 100m away from the aquatic feature and regularly serviced.
- During operation, adequate stormwater management measures should be in place on site to prevent any stormwater runoff intensity or water quality impacts to the adjacent ephemeral streams

### 4.3.2.4 Specialist Statement

From an aquatic ecosystem perspective there is no reason why the revised PV layout and final powerline and substation positions should not be approved in terms of NEMA.

### 4.3.3 Avifauna

Dr Chris van Rooyen undertook a site walk through to investigate the proposed amendments. Please refer to Appendix D for a copy of the revised assessment report.

#### 4.3.3.1 Veld PV North Facility

The site walk through concluded that:

- No new avifaunal sensitivities were recorded during the walk-down inspections in June 2021 that had not already been identified during the original pre-construction monitoring that was implemented between January 2017 and June 2019.
- No nests of Red Data priority species were recorded during the walk-down.
- The walk-down exercise confirmed the findings of the avifaunal impact assessment report compiled in June 2019, specifically with regard to the avifaunal sensitivity zones.
- No changes are required to the proposed lay-out.

No recommendations pertaining to avifauna are required in addition to the recommendations contained in the original avifaunal impact assessment report compiled in June 2019, which were specifically incorporated into the Environmental Authorisation which was granted on 8 June 2020

#### 4.3.3.2 Impact Statement

From an avifaunal impact perspective, there is no objection to the proposed development of the Veld PV North Solar Energy Facility, provided the proposed mitigation measures pertaining to avifauna as detailed in the avifaunal specialist report in June 2019 (Van Rooyen *et al.* 2019), which were specifically incorporated into the Environmental Authorisation which was granted on 8 June 2020, are strictly implemented

#### 4.3.3.3 Substation and Powerline

- The walk-down exercise confirmed the findings of the avifaunal impact assessment report compiled in June 2019.

- A nest of a Martial Eagle *Polemaetus bellicosus* was recorded at the site during the walk-down, on tower 34 of the Aggeneys – Haramoep 1 220kV transmission line (-29.226565° 18.701797°). The species is classified as Endangered in South Africa (Taylor *et al.* 2015) and Globally (IUCN 2021). The nest was not active when the walk-through was conducted (June 2021) (see Figure 3).
- No changes are required to the proposed or alternative alignment, both are acceptable from an avifaunal perspective.

#### 4.3.3.4 Recommendations

The following recommendations are proposed in addition to the recommendations contained in the original avifaunal impact assessment report compiled in June 2019, which were specifically incorporated into the Environmental Authorisation which was granted on 8 June 2020:

- Prior to construction commencing on the 132kV grid connection, the avifaunal specialist should conduct an inspection to see if the Martial Eagle nest on tower 34 of the Aggeneys – Haramoep 1 220kV transmission line is active. If the nest is not active, the construction activities can proceed without delay. If the nest is occupied by a pair of Martial Eagles, the avifaunal specialist must consult with the contractor to find ways of minimising the potential disturbance to the breeding pair of eagles during the construction period. This could include measures such as delaying some of the construction activities until after the breeding season.
- The whole line should be mitigated with Bird Flight Diverters on the earthwire as per the current Eskom standard when the construction phase commences. See also in this regard Condition 34 of the Environmental Authorisation dated 8 June 2020.

#### 4.3.3.5 Impact Statement

From an avifaunal impact perspective, there is no objection to the proposed development of the Veld PV North Solar Energy Facility grid connection, provided the proposed mitigation measures pertaining to avifauna as detailed in this report and the avifaunal specialist report in June 2019 (Van Rooyen *et al.* 2019), which were specifically incorporated into the Environmental Authorisation which was granted on 8 June 2020, are strictly implemented.

#### 4.3.4 Botanical

Dr Dave MacDonald undertook a site walk through on 10 and 11 June 2021 to investigate the proposed amendments. Please refer to Appendix D for a copy of the revised assessment report.

##### 4.3.4.1 Veld PV North Facility, substation and powerline

The landscape where the construction would be carried out is not fragile. Apart from the fact that the area experiences very low average annual precipitation, it is still feasible to allow the disturbed areas to re-vegetate naturally. Introduction of any plant species not already found on the sites is discouraged. This is particularly so in the case of rehabilitation using grasses. If grasses are used, the sheep on the site would preferentially graze these plants and would cause further disturbance which would not be desirable. By definition indirect impacts occur away from the 'action source' i.e., away from the 'development site'. The impact assessed here is specifically how the pylon construction would have an indirect impact on vegetation and flora away from the development site. Such an impact is unlikely so indirect impacts would be of very low significance. The receiving environment in which the proposed prospecting would take place is extensively represented in the Northern Cape Province. The power line is a linear feature with a very low footprint. It would therefore have negligible short- to long-term cumulative impact.

Although the Aggeneys District has a complex geology that is reflected in the vegetation types, only two vegetation types are found along the proposed power line route, namely Bushmanland Arid Grassland and Bushmanland Sandy Grassland. These vegetation types are extensively found in the north-central part of the Northern Cape Province (Bushmanland). Neither of the above vegetation types is threatened, according to the National List of Threatened Ecosystems (Government Gazette, 2011).

#### **4.3.4.2 Recommendations**

- The anticipated direct impacts of the power line construction would be Low Negative prior to mitigation and Very Low Negative after mitigation. The mitigation measures would be to clean the construction sites and then to allow the vegetation to recolonize the disturbed sites naturally.
- Alien invasive woody mesquite was recorded on the site. It must be ensured that the seeds of this species are not transported and dispersed during construction.
- No rare or threatened plant species were found during the survey. The level of probability of such species occurring is not known but it is likely to be very low. It would only be possible to be more specific about this conclusion if the area were to be surveyed after good rains over a few rainy seasons and with no sheep allowed to graze.

#### **4.3.4.3 Impact Statement**

The vegetation in the proposed power line route is typical Bushmanland Arid Grassland and Bushmanland Sandy Grassland. In addition, the azonal 'washes' are also typical of this landscape feature in the arid regions of the Northern Cape Province and Southern Namibia. The vegetation types are not a threatened vegetation type and no 'red flag' species were found i.e., the vegetation is not deemed to be sensitive over the greater part of the areas investigated. The proposed power line construction is thus supported from a botanical perspective, with minimal mitigation necessary since the vegetation is not sensitive and the disturbance footprint would be small.

- The Critical Biodiversity Map for the Northern Cape province as it pertains to the Aggeneys indicates that the power lines would cross CBA1, CBA2 and ESAs. The finding of this study does not support the CBA classification for the area through which the power lines would pass. The entire area should be classified as an Ecological Support Area.
- The 'No Go' alternative would result in a Low Negative impact, depending on the stocking rate of sheep.

#### **4.3.5 Heritage**

Dr Jayson Orton undertook a site visit on the 05<sup>th</sup> June 2021, the field work was aimed at locating any archaeological heritage resources. Please refer to Appendix D for a copy of the amendment letter.

##### **4.3.5.1 Veld PV North Facility, substation and powerline**

Neither the 2016 survey nor that reported here have located any significant heritage resources within the PV North footprints. Likewise, no significant finds have been made along the powerline route. Therefore, with respect to the approval of the final layouts as illustrated, there are no heritage objections and the projects may proceed to construction with no further heritage input required. In the event that minor changes to the layouts are required by other specialists then there can be no objection to such changes because it is clear that archaeological materials are very rare in this area and that artefact concentrations or sites will not be found.



### 4.3.5.2 Recommendations

It is always required that the EMPr include the condition that should any heritage resources of any kind be located during construction (e.g. fossils, pottery buried in a sand dune or an unmarked human burial) then construction should be halted in the immediate area, the finds should be protected in place and an archaeologist or palaeontologist (as appropriate) should be called to assess the finds and take whatever further actions may be required. Note that such further actions would need to occur under a permit issued by the South African Heritage Resources Agency (SAHRA). Permits are issued in the name of the heritage practitioner and not that of the developer.

### 4.3.5.3 Impact Statement

With respect to the amendment applications, there are no heritage objections since these are administrative changes that will not physically affect any heritage resources.

### 4.3.6 Stormwater

Mr Martin Kleynhans provided an amendment letter after reviewing the proposed amendments. Please refer to Appendix D for the full letter.

#### 4.3.6.1 Veld PV North Solar Energy Facility

The proposed amended areas and layout for Veld PV North will result in reduced impact magnitudes on runoff, water quality and flood risk from the developments due to the reduction in the areas of Veld PV North. The impacts on the areas occupied by the developments will remain the same. The impact ratings therefore remain unchanged, and the mitigation measures recommended in the reports by Aurecon (2019) remain unchanged for the amended development areas.

#### 4.3.6.2 Substation and powerline

The hydrological assessments of the powerlines from the proposed developments to Aggeneys substation were detailed in two reports by Aurecon (2019). The impacts and their ratings of the proposed powerlines listed in Aurecon (2019) remain unchanged and hence the mitigation measures remain unchanged and should be implemented where applicable.

### 4.3.7 Visual

Stephan Stead from Visual Resource Management Africa reviewed the proposed amendments and provided a Visual statement. Please refer to Appendix D for the full statement.

#### 4.3.7.1 Veld PV North Facility

Due to the remoteness of the locality and some topographic screening, no sensitive receptors were identified for the site. As such, the Visual Exposure and Sensitivity of the landscape to the proposed project is defined as **Low**. Based on the VRM methodology, the Scenic Quality of the area is defined as **Medium to High**.

There is a good policy fit for Veld PV North as the project is located within the proclaimed REDZ 8 area. Thus, the findings of this visual statement are that ***the PV development amendments will not result in the loss of significant visual and scenic resources, and as such should be allowed to proceed.***

### 4.3.7.2 Substation and powerline

The power line routing was originally assessed in the first VIA undertaken for the PV project. Due to the routing alignment adjacent to the existing Eskom power line, the visual impact would be reduced due to the higher visual absorption capacity created by the Eskom power line. ***However, as the area does have higher levels of scenic quality, it is recommended (if there is no conflict with the Avifauna specialist findings) that in order to reduce visual intrusion, that the Veld North and Veld South cables are carried together to reduce the number of pylons.***

Figures 5 - 12 portray the proposed new layout of Veld PV North, grid connection, access routes and associated infrastructure and indicates the environmental sensitivities as well as areas that should be avoided, including buffers.

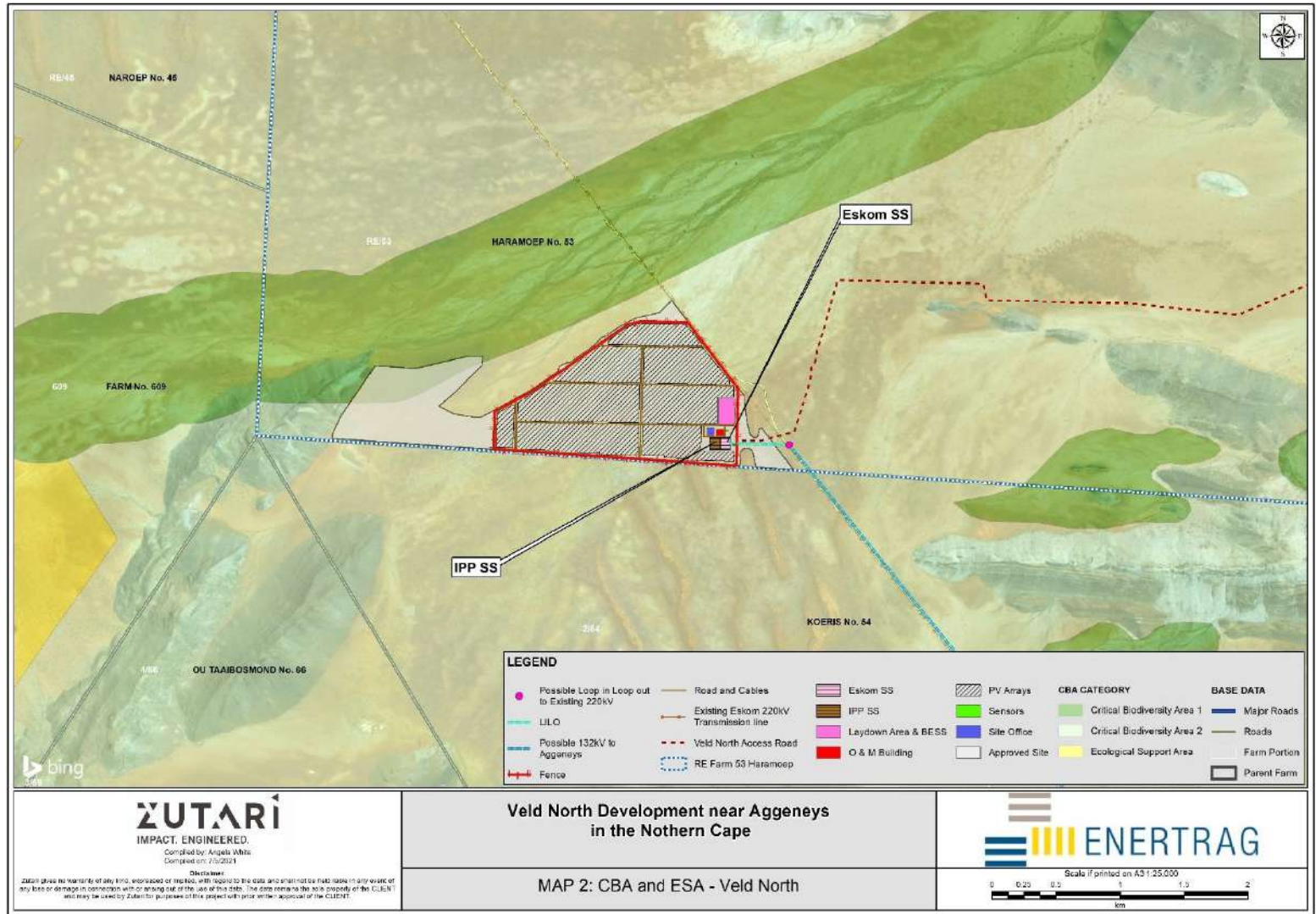


Figure 5: Map indicating Veld PV North, grid connection access routes and associated infrastructure in relation to Critical Biodiversity Areas (CBA's) and Ecological Support Areas (ESA)

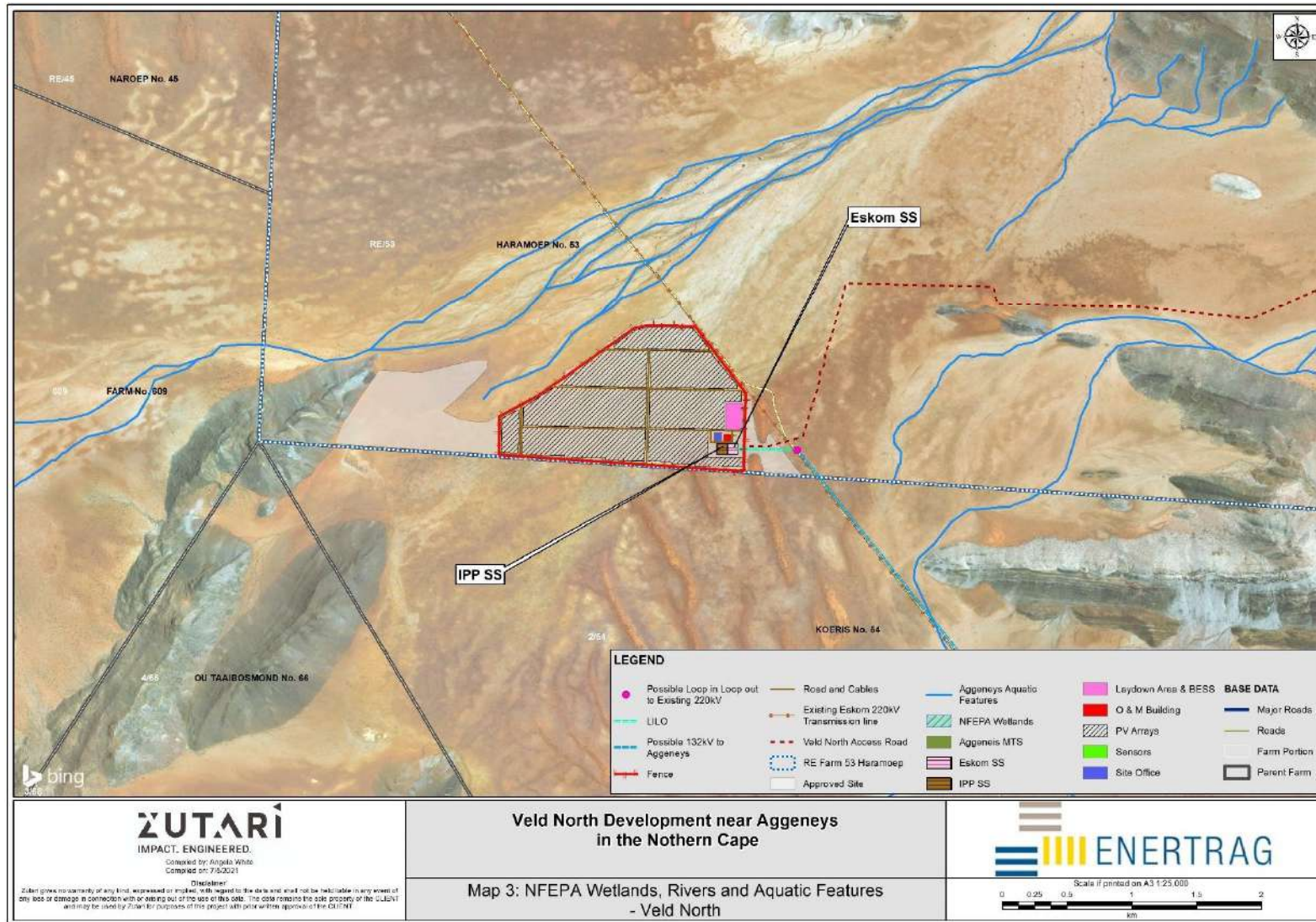
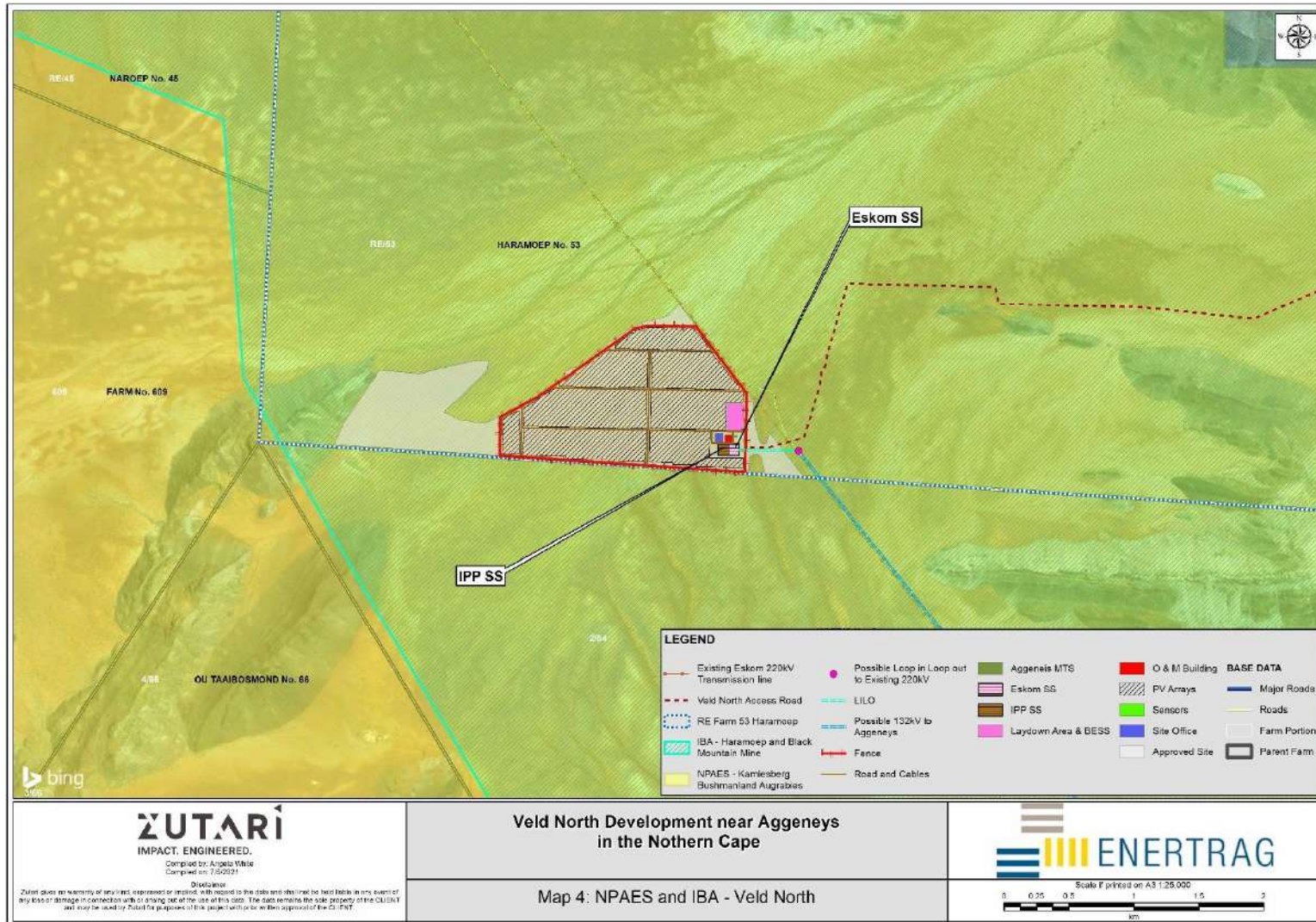


Figure 6: Map indicating Veld PV North, grid connection access routes and associated infrastructure in relation to National Freshwater Priority Areas (NFEPA)





**Figure 7: Map indicating Veld PV North, grid connection access routes and associated infrastructure in relation to National Freshwater Priority Areas (NFPAs) and Important Bird Areas (IBA)**



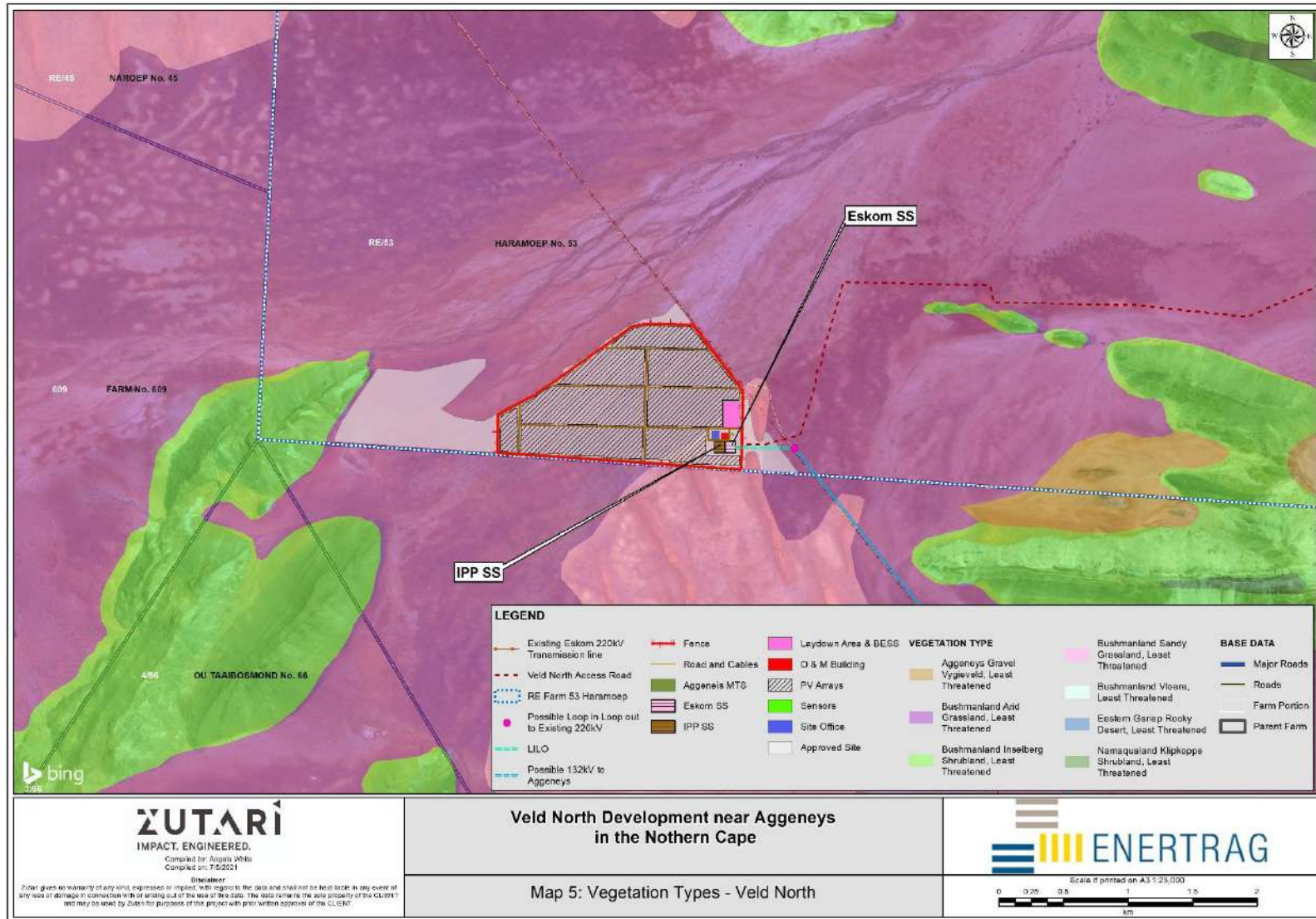


Figure 8: Map indicating Veld PV North, grid connection access routes and associated infrastructure in relation to vegetation types

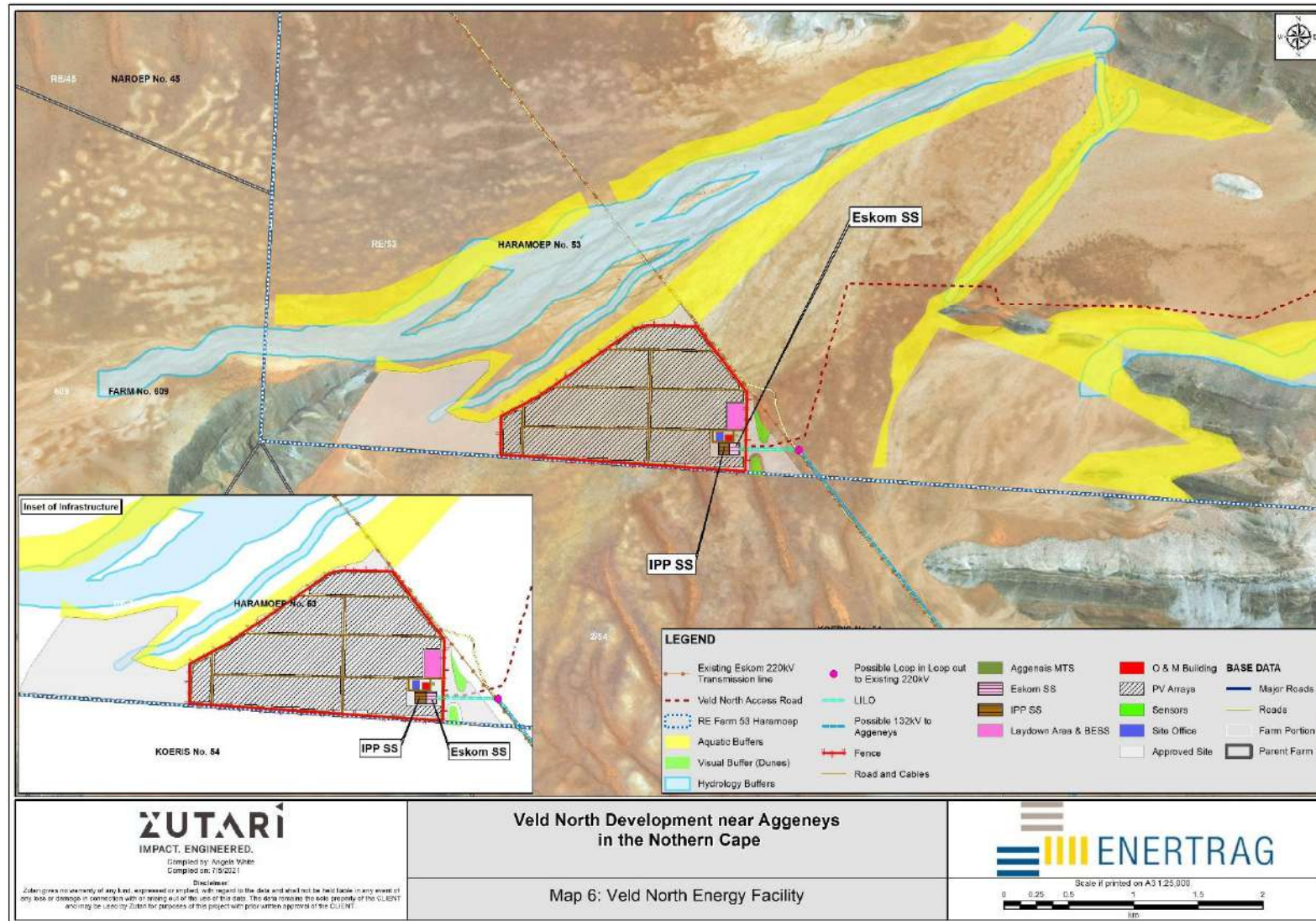


Figure 9: Map indicating all the specialist buffers and sensitivities relating to Veld PV North and associated infrastructure



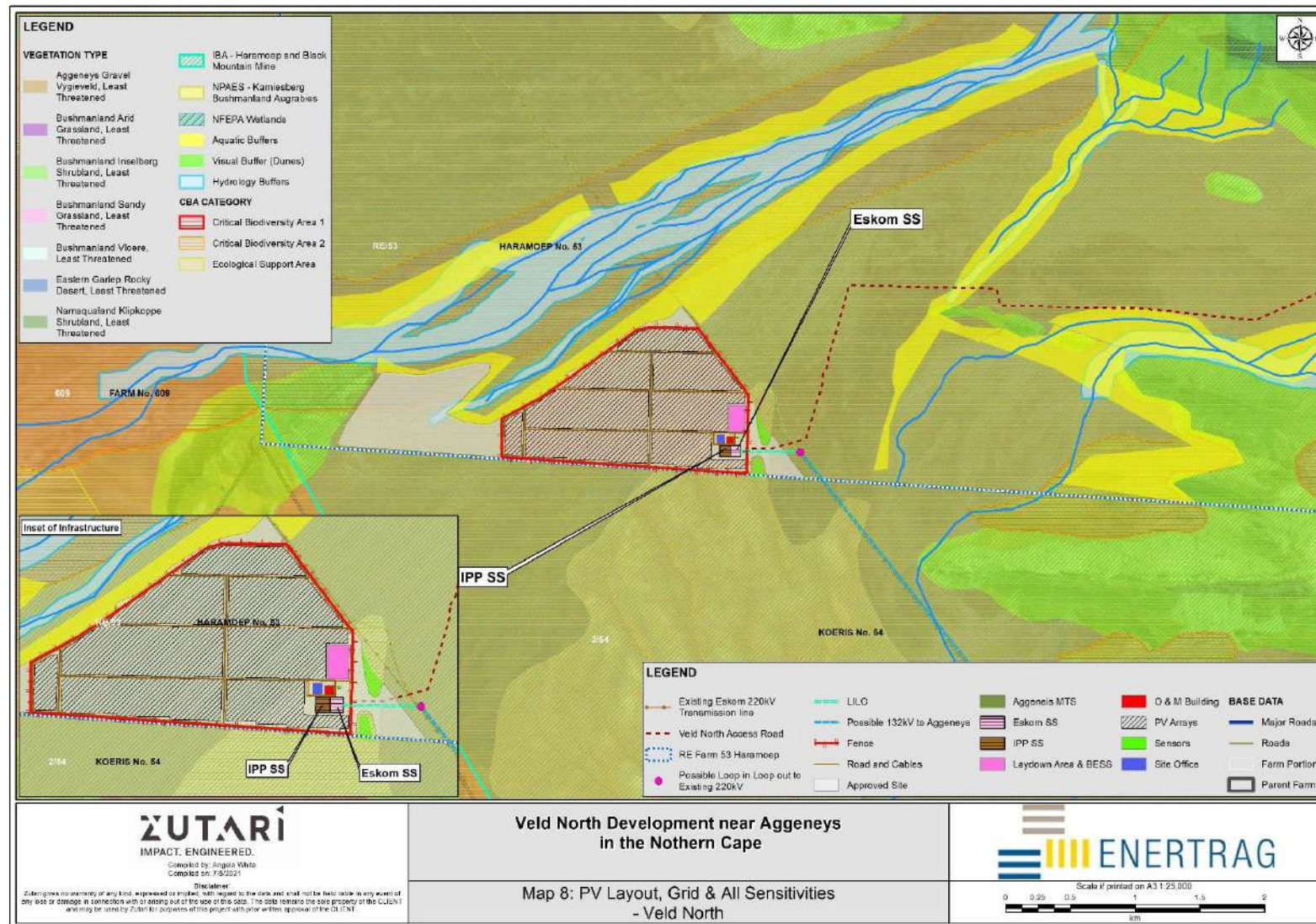


Figure 10: Map indicating all the sensitivities relating to Veld PV North, grid connection access routes and associated infrastructure



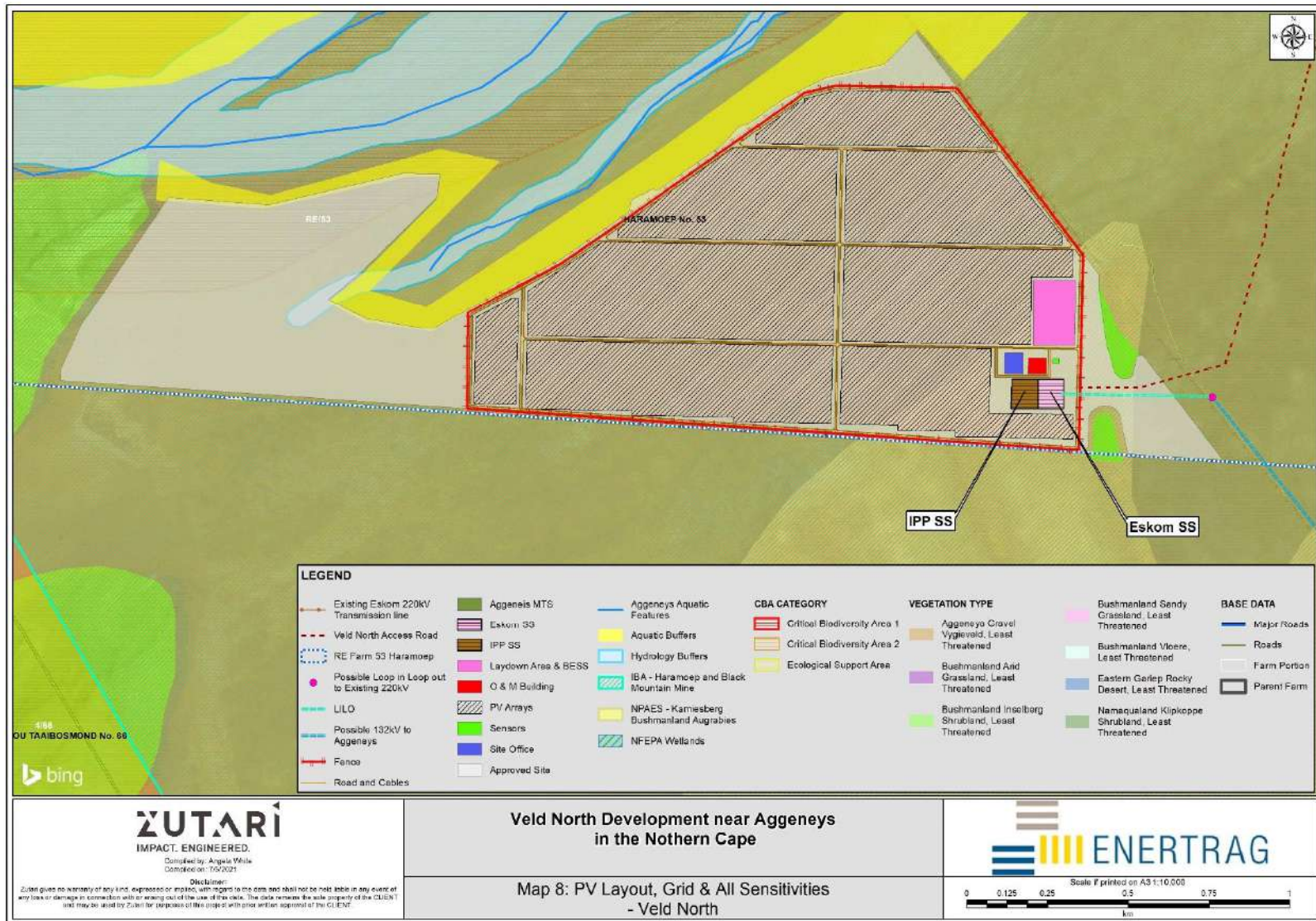


Figure 11: Zoomed in map indicating all the sensitivities relating to the new updated layout of PV North.



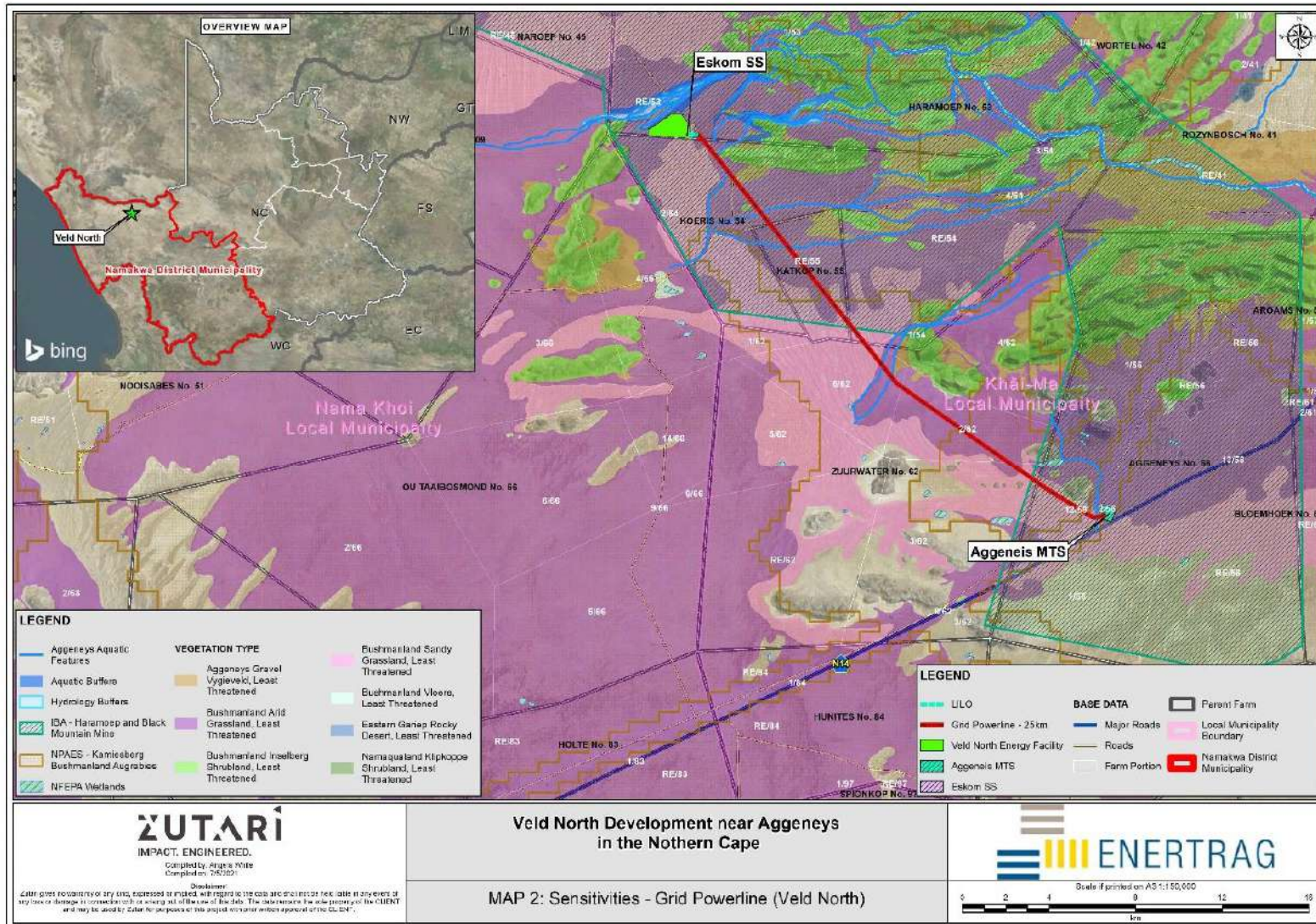


Figure 12: Map indicating all the sensitivities relating to Veld North grid powerline route



## 5 Conclusions

### 5.1 Summary of the proposed amended project descriptions and proposed conditions:

#### 5.1.1 PV Facility

**Table 6: Summary of the proposed Amended PV Facility:**

<p><b>Project description:</b> The development of the Veld PV North Solar Energy Facility on the Remainder of the farm 53 Haramoep near Aggeneys within the Khai-Ma Local Municipality in the Northern Cape Province</p> <p><b>Applicant:</b> Veld PV (North) Pty Ltd</p> <p><b>Locality:</b> Within Ward 3 of the Khai-Ma Local Municipality in the Namakwa District Municipality in the Northern Cape.</p> <p><b>Properties to be affected: Remainder of Farm 53 Haramoep (C0530000000005300000)</b></p>	
<p><b>1. Table of listed activities</b></p>	
Listed Activities	Proposed Description
<p><b><u>GN R.983 Listing Notice 1: Activity 11</u></b></p> <p>The development of facilities or infrastructure for the transmission and distribution of electricity-</p> <p>li) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 Kilovolts”</p>	<p>The Veld North PV facility will have an IPP portion of the on-site substation. This on-site substation will be located within rural and agricultural areas.</p>
	<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore this wording needs to be replaced.</i></p>
<p><b><u>GN R.985 Listing Notice 3: Activity 12</u></b></p>	<p>The clearance of more than 300 m<sup>2</sup> of indigenous vegetation will be required for the project. The total area to be transformed is approximately 140 ha. The project is located within areas designated as Critical Biodiversity Areas.</p>

<p>“The clearance of an area of 300 square metres (m<sup>2</sup>) or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>g. Northern Cape: (ii) Within critical biodiversity areas identified in bioregional plans”</p>	<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. This activity is relevant to the Veld North PV Facility and should indicate the transformed area of the PV facility and IPP portion of the on-site substation only.</i></p>
<p><b><u>GN. R 985- Listing Notice 3: Activity 14</u></b></p> <p>“The development of-</p> <p>(xii) infrastructure or structures with a physical footprint of 10 square metres or more;</p> <p>Where such developments occurs-</p> <p>(a) within a watercourse;</p> <p>(c) if no development setback has been adopted, within 32 metres of a watercourse, measures from the edge of a watercourse;</p> <p>g. Northern Cape</p> <p>ii. Outside urban areas:</p> <p>(bb) National Protected Area Expansion strategy Focus areas;</p> <p>(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans”</p>	<p>Associated infrastructure (e.g. fencing, IPP portion of the substation, buildings, roads etc) will be located within or within proximity to a watercourse. The project is located within a National Protected Area Expansion Strategy Focus area as well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.</p> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore this wording is not relevant to the Veld PV North Facility.</i></p>
<p><b>2. SG Codes</b></p>	

	<table border="1"> <tr> <td data-bbox="741 188 1234 244"><b>Farm</b></td> <td data-bbox="1238 188 1715 244"><b>SG Codes</b></td> </tr> <tr> <td data-bbox="741 247 1234 300">Remainder of Farm 53 Haramoep</td> <td data-bbox="1238 247 1715 300">C05300000000005300000</td> </tr> </table>	<b>Farm</b>	<b>SG Codes</b>	Remainder of Farm 53 Haramoep	C05300000000005300000	
<b>Farm</b>	<b>SG Codes</b>					
Remainder of Farm 53 Haramoep	C05300000000005300000					
<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. The Veld North PV facility is only located on RE/53 Haramoep.</i></p>						
<p><b>3. Project components</b></p>						
	<ul style="list-style-type: none"> <li>• A PV photovoltaic component, comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy;</li> <li>• Inverters, to convert the direct current (DC) generated by the PV modules into alternating current (AC), with transformers in each block to step up the 400V to 33kV;</li> <li>• On site IPP substation including transformers to step up the 33kV power generated by the inverters to 132kV or to 220 kV;</li> <li>• Internal cabling laid underground when feasible to connect the PV modules to the <del>on-site</del> substation and inverters;</li> <li>• Internal access roads for servicing and maintenance of the site;</li> <li>• Stormwater infrastructure;</li> <li>• Temporary construction areas for use during construction;</li> <li>• Buildings, including an operations and maintenance building, a connection building, control building, guard cabin;</li> <li>• Weather stations within and along the fenced perimeter of the site;</li> <li>• Perimeter fencing; and</li> <li>• Installation of a Battery Energy Storage System (BESS), approximately 2.5ha in extent within the authorised development footprint.</li> </ul>					
<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore this is not relevant to the Veld North PV Facility</i></p>						
<p><b>4. Component details</b></p>						
	<table border="1"> <thead> <tr> <th data-bbox="741 1230 1084 1286">Infrastructure</th> <th data-bbox="1088 1230 2112 1286">Dimensions/Details</th> </tr> </thead> <tbody> <tr> <td data-bbox="741 1289 1084 1374">Location of site</td> <td data-bbox="1088 1289 2112 1374">Approximately 100km north-east of Springbok and 75 km north-west of Pofadder in the Northern Cape</td> </tr> </tbody> </table>		Infrastructure	Dimensions/Details	Location of site	Approximately 100km north-east of Springbok and 75 km north-west of Pofadder in the Northern Cape
Infrastructure	Dimensions/Details					
Location of site	Approximately 100km north-east of Springbok and 75 km north-west of Pofadder in the Northern Cape					

	Development footprint	140ha
	Size of farm	Approximately 9830.33ha
	Capacity of the facility	75 MW
	Type of technology	A solar energy facility comprising of numerous rows of PV modules (fixed or single axis)
	Structure height	<ul style="list-style-type: none"> <li>• Solar PV Panels: approximately 5m height;</li> <li>• On site IPP substation approximately 5m height (safety equipment like lightning rods will be approximately 22m);</li> </ul>
	Other infrastructure	<ul style="list-style-type: none"> <li>• A PV component comprising of numerous arrays of PV solar panels mounted on steel tracking mounts and footings with associated support infrastructure to generate up to 75MW of renewable energy.</li> <li>• On-site IPP substation including transformers to step up the 33kV power generated by the inverters to 132kV or to 220 kV</li> </ul>
	Laydown of materials and equipment	<ul style="list-style-type: none"> <li>• Inverters to convert the direct current generated by the PV modules into alternating current;</li> <li>• Transformers to step up the 33kV power generated by the inverters to 132kV or 220kV;</li> <li>• Internal cabling laid underground when feasible to connect the PV modules to the on-site IPP substation and inverters;</li> <li>• Internal access roads for servicing and maintenance of the site;</li> <li>• Stormwater infrastructure;</li> <li>• Temporary construction areas for use during construction;</li> <li>• Buildings, including an operations and maintenance building, a connection building, control building, guard cabin;</li> <li>• Weather stations within and along the fenced perimeter of the site; and</li> <li>• Perimeter fencing.</li> </ul>
	SG Codes	PV development on:

	C05300000000005300000
Preferred site access	Southern access via the farm access off the N 14 before Aggeneys
Width and length of roads	Roads - width: up to 8m, length: up to 15km
Local Municipality	Khai-Ma Local Municipality
District Municipality	Namakwa District Municipality
Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore this wording is not relevant to the Veld PV North Facility</i>	
<b>5. Management of activity (Conditions)</b>	
	12. A final site layout plan submitted as part of the Amendment report dated 31 August 2021 is hereby approved.
Motivation/Reason: <i>The applicant wishes to update the site layout based on the latest technological solution .</i>	
	14. The Environmental Management Programme (EMPr) submitted as part of the Amendment Report dated 31 August 2021 is hereby approved. The approved EMPr must be implemented, adhered to and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development.
Motivation/Reason: <i>The EMPr has been updated by removing all information relevant to the Eskom portion of the on-site substation and powerline.</i>	
<b>6. Specific conditions</b>	
34. The powerline must be fitted with Bird Flight Diverters (BDF's)	<del>34. The powerline must be fitted with Bird Flight Diverters (BDF's)</del>
Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this is not relevant to the Veld North PV Facility</i>	

<p>46. During operation, any electrocution and collision events that occur should be recorded, including the species affected and the date. If repeated collisions occur within the same area, then further mitigation and avoidance measures may need to be implemented.</p>	<p><del>46. During operation, any electrocution and collision events that occur should be recorded, including the species affected and the date. If repeated collisions occur within the same area, then further mitigation and avoidance measures may need to be implemented.</del></p> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this is not relevant to the Veld PV North Facility</i></p>
<p><b>7. General</b></p>	
<p>49. The recommendations of the EAP in the BAR dated 25 February 2020 and the specialist studies attached must be adhered to. In the event of any conflicting mitigation measures and conditions of the Environmental Authorisation, the specific condition of this Environmental Authorisation will take preference.</p>	<p>49. The recommendations of the EAP in the BAR dated 25 February 2020, Amendment Report dated 31 August 2021 and the specialist studies attached must be adhered to. In the event of any conflicting mitigation measures and conditions of the Environmental Authorisation, the specific condition of this Environmental Authorisation will take preference.</p>

**Table 7: Listed Activities for the PV Facility**

2014 NEMA EIA Regulations		
No	Description of Listed Activities	Triggered
<p>GN R.983 Item 11</p>	<p>The development of facilities or infrastructure for the transmission and distribution of electricity-</p> <p>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts.</p>	<p>The Veld North PV facility will have an IPP portion of the on-site substation. This on-site substation will be located within rural and agricultural areas.</p>
<p>GN R.983 Item 12</p>	<p>The development of-</p> <p>ii. Infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs-</p> <p>(a) Within a watercourse;</p> <p>(b) if no development setback exists within 32m of a watercourse, measured from the edge of a watercourse"</p>	<p>A few drainage lines are scattered across the proposed property and one or more roads and/ or other infrastructure will cross these lines and be within 32m thereof.</p>



2014 NEMA EIA Regulations		
No	Description of Listed Activities	Triggered
GN R.983 Item 19	The infilling or depositing of any material of more than 10m <sup>3</sup> , or the dredging, excavation, removal or moving of soil, sand, shell grit, pebbles or rock of more than 10m <sup>3</sup> from a watercourse.	The infilling or depositing of any material of more than 10m <sup>3</sup> into a watercourse will likely be triggered with the construction of internal service roads or cables across drainage lines as well as the widening of the existing access road which crosses numerous small drainage lines.
GN R.983 Item 28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 1 April 1998 and where such development:  (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 ha	The proposed development of a Solar PV facility will be on land used for agriculture as extensive livestock grazing. The total area to be developed is approximately 140ha
GN R.984 Item 1	The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more, excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs (a) within an urban area (b) on existing infrastructure	The proposed project would have a maximum generation capacity of 75MW.
GN R.985 Item 4	The development of a road wider than 4meters with reserve less than 13,5 metres. g. Northern Cape ii. Outside urban areas: (bb) National Protected Area Expansion Strategy Focus areas; (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or bioregional plans.	The construction of a road wider than 4m with a reserve less than 13.5m (no reserve) will be required outside the urban area and within an area containing indigenous vegetation as the existing road will need extension in some places. The project is located within a National Protected Area Expansion Strategy Focus Areas well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.

2014 NEMA EIA Regulations		
No	Description of Listed Activities	Triggered
GN R.985 Item 12	The clearance of an area of 300 square metres (m <sup>2</sup> ) or more of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. g. Northern Cape: (ii) Within critical biodiversity areas identified in bioregional plans	The clearance of more than 300 m <sup>2</sup> of indigenous vegetation will be required for the project. The total area to be transformed is approximately 140 ha. The project is located within areas designated as Critical Biodiversity Areas.
GN R.985 Item 14	The development of – (xii) infrastructure or structures with a physical footprint of 10 square metres or more; Where such development occurs- (a) within a watercourse; © if no development setback has been adopted within 32 metres of a watercourse, measured from the edge of a watercourse; g. Northern Cape ii. Outside urban areas: (bb) National Protected Area Expansion Strategy Focus areas; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ff) critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority.	Associated infrastructure (e.g. fencing, IPP portion of the substation, buildings, roads etc) will be located within or within proximity to a watercourse. The project is located within a National Protected Area Expansion Strategy Focus area as well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.
GN R.985 Item 18	The widening of a road by more than 4 metres or the lengthening of a road by more than 1 kilometre. g. Northern Cape ii. Outside Urban areas: (bb) National Protected Area Expansion Strategy Focus Areas; (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.	Access roads of approximately 6 to 8 m in width would be required to develop the proposed project the combination of which would exceed 1 kilometre. Existing roads will be used as far as practically possible and feasible but would require widening by more than 4m and new roads greater than 1 kilometre in length are likely to be required in some areas. The project is located within a National Protected Area Expansion Strategy Focus areas as well as areas designated as Critical Biodiversity Areas. The project is also located within an Important Bird Area.

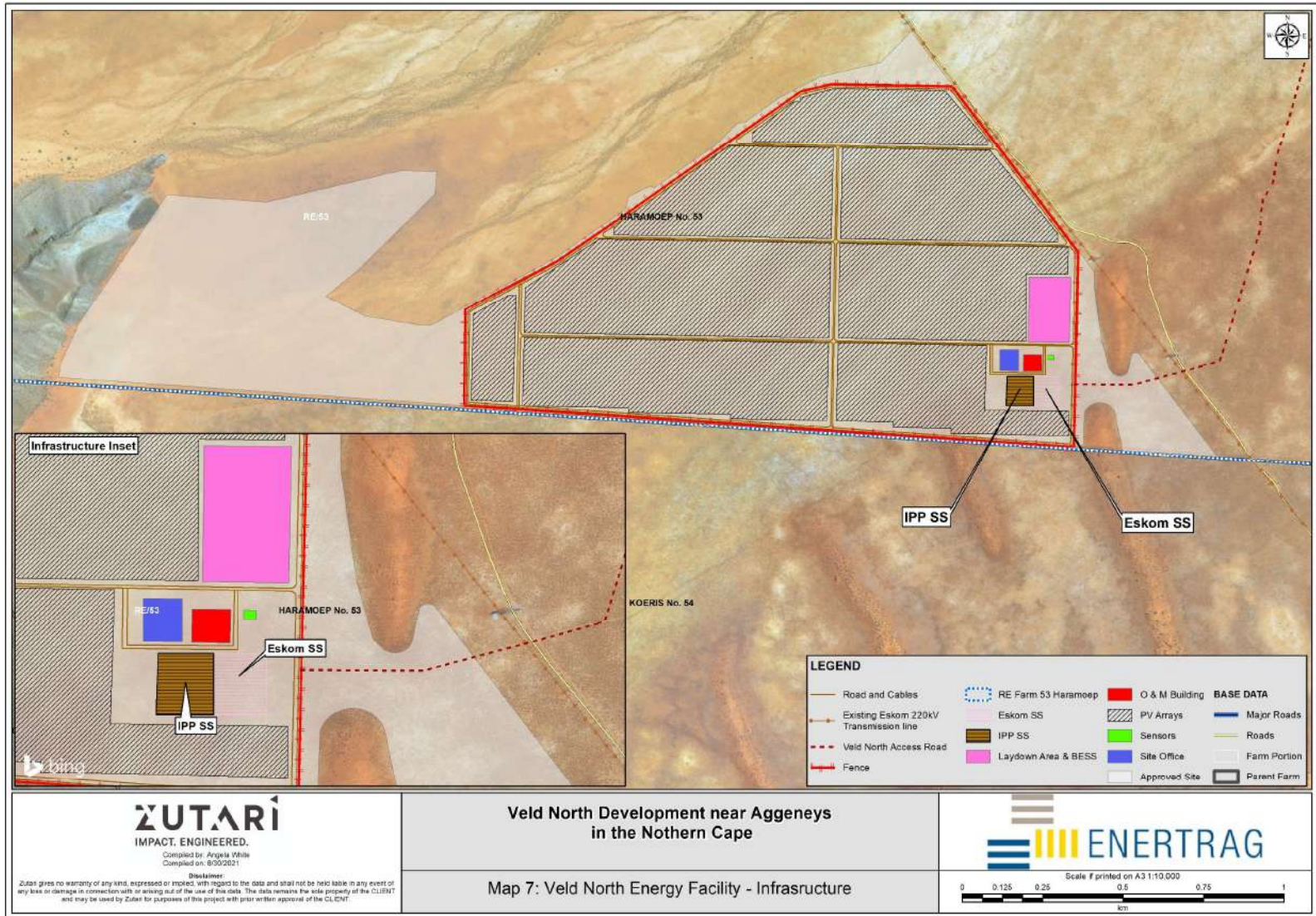


Figure 13: Final layout map PV North

## 5.1.2 Veld PV North substation and powerline:

**Table 8: Veld PV North substation and powerline with reference to the relevant section of the Environmental Authorisation**

<p><b>Project description:</b> The development of the Veld PV North substation and powerline on the Remainder of the farm 53 Haramoep near Aggeneys within the Khai-Ma Local Municipality in the Northern Cape Province</p> <p><b>Applicant:</b> Veld PV (North) Pty Ltd</p> <p><b>Locality:</b> Within Ward 3 of the Khai-Ma Local Municipality in the Namakwa District Municipality in the Northern Cape.</p>		
1. Table of listed activities		
Listed Activities	Authorised Description	Proposed Description
<p><b>GN R.983 Listing Notice 1: Activity 11</b></p> <p>The development of facilities or infrastructure for the transmission and distribution of electricity-</p> <p>li) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 Kilovolts”</p>		<p>The proposed grid connection will consist of a 132 kilovolt (kV) overhead powerline, approximately 25km in length and the Eskom portion of the on-site substation. The bulk of the power line will run in length within a rural and agricultural areas.</p>
		<p>Motivation/Reason: <i>The incorrect length was indicated in the EA. The applicant wishes to separate the onsite Eskom substation from the authorised EA.</i></p>
<p><b>GN R.983 Listing Notice 1: Activity 28</b></p> <p>“ Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 1 April 1998 and where such development:</p> <p>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 ha”</p>		<p>The proposed development of a 25km powerline, access road will be constructed, and an on-site Eskom substation will be an industrial use of land that is currently used for agriculture as extensive livestock grazing.</p>
		<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA.</i></p>
<p><b>GN R.985 Listing Notice 3: Activity 12</b></p> <p>“The clearance of an area of 300 square metres (m2) or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>g. Northern Cape:</p> <p>(ii) Within critical biodiversity areas identified in bioregional plans”</p>		<p>The clearance of more than 300 m<sup>2</sup> of indigenous vegetation will be required for the grid connection. A 25km powerline, access road, and an on-site Eskom substation will be constructed. The project is located within areas designated as Critical Biodiversity Areas.</p>
		<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore the description should indicate the proposed powerline and substation only.</i></p>

<p><b>GN. R 985- Listing Notice 3: Activity 14</b></p> <p>“The development of-</p> <p>(xii) infrastructure or structures with a physical footprint of 10 square metres or more;</p> <p>Where such developments occurs-</p> <p>(a) within a watercourse;</p> <p>(c) if no development setback has been adopted, within 32 metres of a watercourse, measures from the edge of a watercourse;</p> <p>g. Northern Cape</p> <p>ii. Outside urban areas:</p> <p>(bb) National Protected Area Expansion strategy Focus areas;</p> <p>(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans”</p>	<p>Associated infrastructure (eg fencing, buildings, roads etc). The Eskom on-site substation and transmission line will be located within or within proximity to a watercourse. The Eskom on-site substation and transmission line is located within a National Protected Area Expansion Strategy Focus area as well as areas designated as Critical Biodiversity Areas. The grid connection infrastructure is also located within an Important Bird Area.</p>		
<p><b>2. Transmission line coordinates and description</b></p>	<p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore activity is applicable to the proposed substation.</i></p>		
		<p><b>Latitude (S)</b></p>	<p><b>Longitude (E)</b></p>
	<p>Start of the powerline</p>	<p>29° 8' 20.48" S</p>	<p>18° 37' 43.41" E</p>
	<p>Midpoint of the powerline</p>	<p>29° 13' 48.42" S</p>	<p>18° 42' 19.19" E</p>
	<p>Endpoint of the power line</p>	<p>29° 17' 49.37" S</p>	<p>18° 48' 7.365" E</p>
<p><b>3. Project components</b></p>	<p>Motivation/Reason: <i>The applicant wishes to adjust the start of the powerline to align with the Eskom on-site substation position.</i></p> <p>For the development of the grid infrastructure for the Veld PV North Solar Energy Facility near Aggeneys within the Khai-Ma Local Municipality in the Northern Cape Province</p> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this wording should be removed from the EA.</i></p>		



	<ul style="list-style-type: none"> <li>• On-site <u>Eskom</u> substation including transformers to step up the 33kV power generated by the inverters to 132kV to connect to the new 132kV overhead transmission line or to 220 kV to connect via LILO to the existing transmission line;</li> <li>• Internal access roads for servicing and maintenance of the <u>grid infrastructure</u>;</li> <li>• Stormwater infrastructure;</li> <li>• Temporary construction areas for use during construction;</li> <li>• Buildings, including an operations and maintenance building, a connection building, control building, guard cabin;</li> <li>• Perimeter fencing; and</li> <li>• Grid connection for Veld PV North will consist of a 132 kV overhead power line, approximately <del>27</del> 25km in length that would feed into the national electricity grid at the Aggeneys substation.</li> <li>• Installation of a Battery Energy Storage System (BESS), approximately 2.5ha in extent within the authorised development footprint</li> </ul> <p>Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this wording should be removed from the EA.</i></p>
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#### 4. Component details

	Infrastructure	Dimensions/Details
	Location of site	Approximately 100km north-east of Springbok and 75 km north-west of Pofadder in the Northern Cape
	Structure height	<ul style="list-style-type: none"> <li>• Eskom on-site substation approximately 5m height (safety equipment like lightning rods will be approximately 22m);</li> <li>• On-site 220kV transmission line approximately 32m above ground level;</li> <li>• New 132kV or 132kV powerline</li> </ul>
	Type of grid connection (substation to which project will connect)	<ul style="list-style-type: none"> <li>• Either the proposed LILO grid connection with a 33kV/220kV substation on site, or</li> <li>• A grid connection at the Aggeneys substation, with a 33kV/132kV substation on site, and a</li> </ul>

		<p>132kV transmission line along the 220kV line from the sit to the Aggeneys substation</p> <ul style="list-style-type: none"> <li>• Eskom will decide which option will be implemented at the time of construction.</li> </ul>
	Powerlines	<ul style="list-style-type: none"> <li>• Existing 220kV Aggeneys/Harib Eskom transmission line; and</li> <li>• On-site 220kV transmission line approximately 32m above ground level</li> </ul>
	Other infrastructure	<ul style="list-style-type: none"> <li>• On-site Eskom substation including amongst others-</li> </ul>
	Laydown of materials and equipment	<ul style="list-style-type: none"> <li>• Transformers to step up the 33kV power generated by the inverters to 132kV to connect to the new 132kV overhead transmission line of the optional 220kV LILO</li> <li>• Internal access roads for servicing and maintenance of the site</li> <li>• Stormwater infrastructure</li> <li>• Temporary construction areas for use during construction</li> <li>• Buildings, including an operations and maintenance building, a connection building, control building, guard cabin</li> <li>• Perimeter fencing.</li> </ul>
	Preferred site access	Southern access via the farm access off the N 14 before Aggeneys and along the existing 220kV powerline access route
	Width and length of roads	Service road of up to 2.5m in width will be associated with the 25km powerline

	Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this wording should be removed from the EA.</i>
<b>5. Scope of Authorisation</b>	
	The development of the grid infrastructure for the Veld PV North Solar Energy Facility near Aggeney's within Khi-Ma Local Municipality in the Northern Cape Province is hereby approved as per the geographic coordinates indicated above.
	Motivation/Reason: <i>The applicant wishes to separate the powerline and onsite Eskom substation from the authorised EA. Therefore, this wording should be removed from the EA.</i>
<b>6. Management of activity</b>	
	12. A final grid connection layout plan submitted as part of the Amendment Report dated 31 August 2021 is hereby approved.
	Motivation/Reason: <i>The layout plan approved is in relation to the Veld North PV Facility and therefore the Grid specific layout plan should be approved.</i>
	14. The Environmental Management Programme (EMPr) submitted as part of the Amendment Report dated 31 August 2021 is hereby approved. The approved EMPr must be implemented, adhered to and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development
	Motivation/Reason: <i>The Generic EMPr was updated by removing all information relevant to the Veld North PV Facility and therefore the latest EMPr should be approved.</i>
<b>7. General</b>	
	49. The recommendations of the EAP in the BAR dated 25 February 2020, Amendment Report dated 31 August 2021 and the specialist studies attached must be adhered to. In the event of any conflicting mitigation measures and conditions of the Environmental

	Authorisation, the specific condition of this Environmental Authorisation will take preference.
	Motivation/Reason: <i>Recommendations by the EAP and specialist of the 2020 and 2021 processes should be adhered to</i>

**Table 9: Listed Activities for the Veld PV South substation and powerline**

2014 NEMA EIA Regulations		
No	Description of Listed Activities	Triggered
GN R.983 Item 11	The development of facilities or infrastructure for the transmission and distribution of electricity-  (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts.	The proposed grid connection will consist of a 132 kilovolt (kV) overhead powerline, approximately 25km in length and the Eskom portion of the on-site substation. The bulk of the power line will run in length within a rural and agricultural areas.
GN R.983 Item 12	The development of- ii. Infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs- (a) Within a watercourse; (b) if no development setback exists within 32m of a watercourse, measured from the edge of a watercourse”	A few drainage lines are scattered across the proposed property and one or more roads and/ or other infrastructure will cross these lines and be within 32m thereof.
GN R.983 Item 19	The infilling or depositing of any material of more than 10m <sup>3</sup> , or the dredging, excavation, removal or moving of soil, sand, shell grit, pebbles or rock of more than 10m <sup>3</sup> from a watercourse.	The infilling or depositing of any material of more than 10m <sup>3</sup> into a watercourse will likely be triggered with the construction of internal service roads or cables across drainage lines as well as the widening of the existing access road which crosses numerous small drainage lines.
GN R.983 Item 28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 1 April 1998 and where such development:	The proposed development of a 25km powerline, access road will be constructed, and an on-site Eskom substation will be an industrial use of land that is currently used for agriculture as extensive livestock grazing.

2014 NEMA EIA Regulations		
No	Description of Listed Activities	Triggered
	(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 ha	
GN R.985 Item 12	The clearance of an area of 300 square metres (m <sup>2</sup> ) or more of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. g. Northern Cape: (ii) Within critical biodiversity areas identified in bioregional plans	The clearance of more than 300 m <sup>2</sup> of indigenous vegetation will be required for the grid connection. A 25km powerline, access road, and an on-site Eskom substation will be constructed. The project is located within areas designated as Critical Biodiversity Areas.
GN R.985 Item 14	The development of – (xii) infrastructure or structures with a physical footprint of 10 square metres or more; Where such development occurs- (a) within a watercourse; © if no development setback has been adopted within 32 metres of a watercourse, measured from the edge of a watercourse; g. Northern Cape ii. Outside urban areas: (bb) National Protected Area Expansion Strategy Focus areas; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ff) critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority.	Associated infrastructure (eg fencing, buildings, roads etc). The Eskom on-site substation and transmission line will be located within or within proximity to a watercourse. The Eskom on-site substation and transmission line is located within a National Protected Area Expansion Strategy Focus area as well as areas designated as Critical Biodiversity Areas. The grid connection infrastructure is also located within an Important Bird Area.



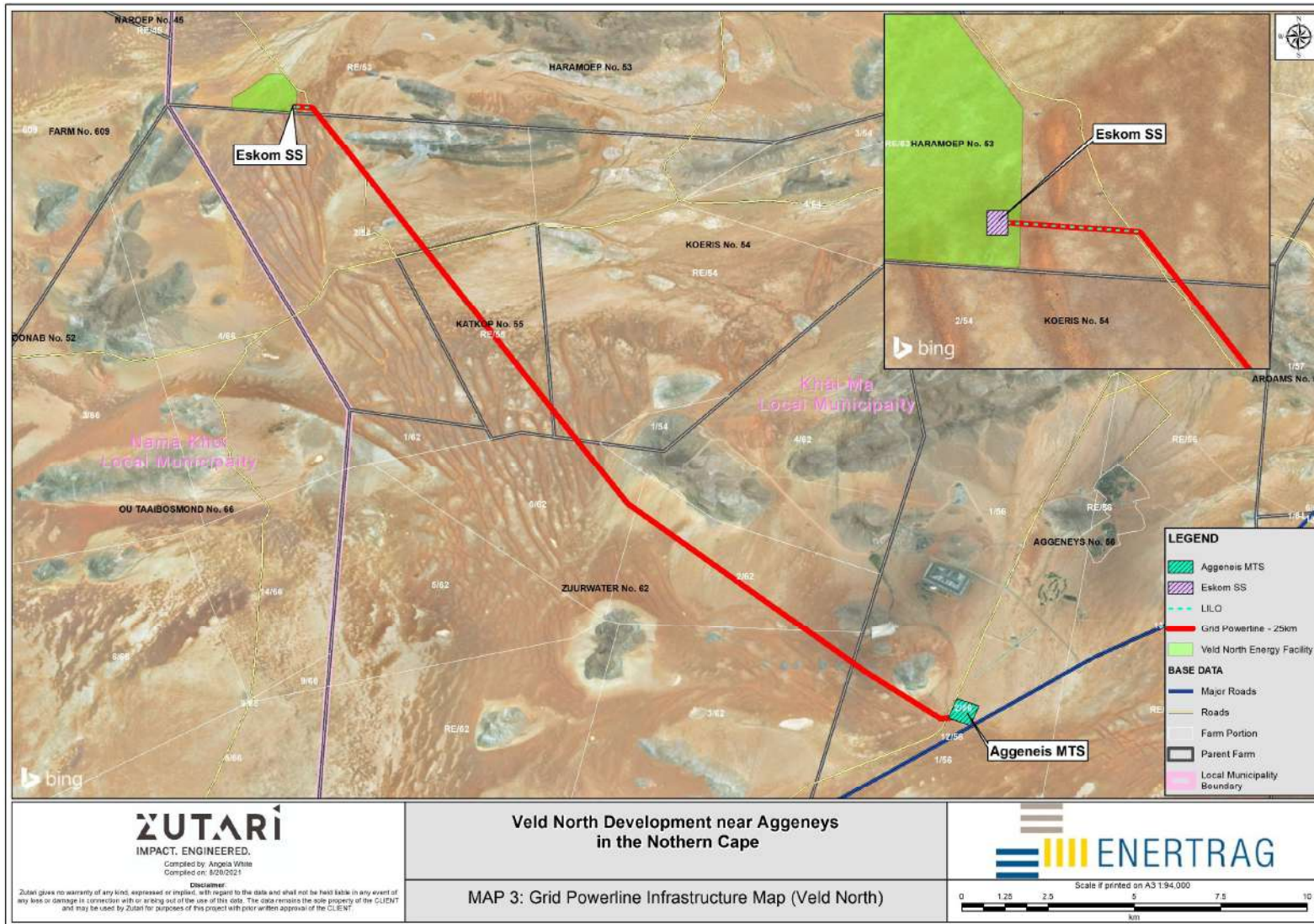


Figure 14: Final layout map PV North Grid Transmission line

## 5.2 Concluding statement

The amendments as detailed in Section 3 are in respect of to the separation of the powerline and Eskom portion of the on-site substation from the authorised EA and new layout to be authorised. The new proposed layout provides a smaller PV footprint compared to the authorised layout, it also avoids all the no-go areas identified in the BAR 2020.

As a whole, the environmental impacts due to the amendments are not considered to differ from the project as originally assessed and authorised. The potential impacts listed in section **Error! Reference source not found.** remain unchanged. No new sensitivities or fatal flaws has been identified by the specialist, additional mitigation measures have been recommended by the Aquatic and Avifauna specialist and these have been incorporated into the EMPr.

The EAP finds no impediment to the application, provided that:

All mitigation measures contained in the EMPr are implemented.

Environmental monitoring and supervision should be undertaken to evaluate the success of the mitigation measures and make adaptations where required.

As standard practice, the EAP recommends that compliance with the provisions of the EMPr (For Veld PV North and the generic powerline and substation EMPrs) be included as a condition of authorisation.

On this basis, after considering the limited effects of the proposed changes, the EAP is of the opinion that the proposed project based on the amended layout is acceptable and should be authorised.

## 5.3 Way forward

This Amendment Report was subject to a 30-day public participation process (PPP) to comply with Regulation 32 of the EIA Regulations (GN R 982). This commenting period was between 10 July 2021 and 10 August 2021. The aim of the PPP is to inform the potential and registered I&APs (including organs of state, that have any jurisdiction in respect of any aspect of the relevant activity and the competent authority) of the proposed amendment and associated changes in impacts and allow for them to comment on the application. The I&APs are included in Appendix C.

The PPP included the following:

- An advert placed in a local newspaper (Die Plattelander on 9 July 2021)
- Placement of site notices, notifying the public of the comment period and right to register as I&APs
- Written notices in the form of English and Afrikaans letters were emailed to I&APs and hardcopies of these were also posted to Authorities and Landowners on the database
- The documentation was made available in electronic format on Google Drive
- Copies of the Amendment Report was available at the Aggeneys OK Foods store (the local library was closed due to COVID protocols)
- Proof of notifications, including delivery of Report at Aggeneys OK Foods, advert, emails, posted hardcopies, as well as follow up emails to elicit comment, are included in this Final Amendment Report under Appendix C.

In diversity there is beauty  
and there is strength.

MAYA ANGELOU

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