

# Hotazel Solar, Northern Cape Province

Social Input for the amendment of the Environmental  
Authorisation

April 2020

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## PROJECT DETAILS

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<b>Title</b>	:	Hotazel Solar, Northern Cape Province: Social Input for the Amendment of the Environmental Authorisation
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**When used as a reference this report should be cited as:** Savannah Environmental (2020), Social Input for the amendment of the Hotazel Solar Environmental Authorisation, Northern Cape Province.

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## SPECIALIST DECLARATION OF INTEREST

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I,     Lisa Opperman    , declare that –

- » I act as the independent specialist in this application.
- » I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant.
- » I declare that there are no circumstances that may compromise my objectivity in performing such work.
- » I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity.
- » I will comply with the Act, Regulations and all other applicable legislation.
- » I have no, and will not engage in, conflicting interests in the undertaking of the activity.
- » I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing – any decision to be taken with respect to the application by the competent authority; and – the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority.
- » All the particulars furnished by me in this form are true and correct.
- » I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of section 24F of the Act.

Lisa Opperman

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Name

April 2020

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Date



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Signature

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## PURPOSE OF THE REPORT

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ABO Wind Hotazel PV (Pty) Ltd proposes the development of Hotazel Solar, a commercial PV energy facility and associated infrastructure on a site near Hotazel, in the Northern Cape Province. The proposed project comprises a commercial photovoltaic (PV) solar energy facility and associated infrastructure and is intended to form part of the Department of Energy's (DoE's) Renewable Energy Independent Power Producer Procurement (REIPPP) Programme.

The Hotazel Solar project received Environmental Authorisation (EA) from the National Department of Environmental Affairs (DEA) in accordance with the National Environmental Management Act (No. 107 of 1998) (NEMA), and the 2014 Environmental Impact Assessment (EIA) Regulations (GNR 326) after the completion of an EIA process. The Environmental Authorisation was obtained on 30 May 2019 under the reference number 14/12/16/3/3/2/1086.

A Social Impact Assessment (SIA) Report was prepared by Sarah Watson of Savannah Environmental (Pty) Ltd in November 2018<sup>1</sup>, on behalf of Cape EAPrac, in order to assess the positive and negative social impacts associated with the project.

ABO Wind Hotazel PV (Pty) Ltd, is now proposing an amendment to the Environmental Authorisation, mainly relating to a shift of the solar panel area within the Remaining Extent of the Farm York A 279<sup>2</sup>, which results in a change of the PV panel area and the total project footprint. Other changes to the layout and infrastructure, within the assessed area, are related to the shift of the solar panel area which includes the internal access road network, consideration of two alternative laydown areas and an additional grid connection alternative. It must be noted that the inputs provided as part of this report assumes that no new areas or properties will be affected by the layout amendments, other than those previously assessed (**Figure 1.1**), and that no new listed activities in terms of the EIA Regulations, 2014, are triggered.

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<sup>1</sup> Savannah Environmental (2018) Social Impact Assessment (SIA) Report for Hotazel Solar, Northern Cape Province.

<sup>2</sup> The entire extent of the Remaining Extent of the Farm York A 279 was assessed as part of the Social Impact Assessment (SIA).

# 1. OVERVIEW OF THE PROJECT AS INDICATED AND CONSIDERED IN THE SIA

## 1.1. Project Description

Hotazel Solar is proposed on the Remaining Extent of the Farm York A 279, in Ward 04 of the Joe Morolong Local Municipality (LM), of John Taolo Gaetsewe District Municipality (DM), Northern Cape Province. The project is located approximately 3km south-east of the town of Hotazel.

Hotazel Solar constitutes a commercial solar energy generation facility, and will utilise photovoltaic (PV) solar technology with fixed, single, or double axis tracking mounting structures. **Table 1.1** provides an overview of the technical details of the project. The project will have a net generation capacity of 100MW, and will include the following associated infrastructure:

- » On-site switching-station / substation.
- » Auxiliary buildings (gate-house and security, control centre, office, warehouse, canteen and visitors centre, staff lockers etc.).
- » Inverter-stations, transformers, and internal electrical reticulation (underground cabling).
- » Access and internal road network.
- » Laydown area.
- » Overhead 132kV electrical power line / grid connection connecting to the existing Eskom Hotazel substation.
- » Rainwater tanks.
- » Perimeter fencing and security infrastructure.

**Table 1.1: Overview of Technical Details for the facility as authorised.**

Component	Description / Dimensions
PV panel area	250ha with a total project footprint of approximately 275ha
Preferred site access	Access to the site will be at one of the existing access points from the R31
Export capacity	100MW
Proposed technology	PV with fixed, single, or double axis tracking technology
Height of Installed Panels from Ground level	PV Structures not more than 4m
Width and length of internal roads	Width: 4 – 5 m Length: 17km

## 1.2. Potential Social Impacts as determined through the EIA Process

The SIA that was undertaken as part of the EIA process for the solar energy facility identified impacts during both the construction and operation phases. Both positive and negative impact were identified for these development phases.

The following positive impacts are expected to occur during the construction phase:

- » Creation of direct and indirect employment and skills development opportunities; and
- » Economic multiplier effects.

The following negative impacts are expected to occur during the construction phase:

- » In-migration of people (non-local workforce and jobseekers);
- » Safety and security impacts;
- » Impacts on daily living and movement patterns;
- » Nuisance impacts (including noise and dust); and
- » Visual and sense of place impacts.

The following positive impacts are expected to occur during the operation phase:

- » Direct and indirect employment and skills development opportunities;
- » Development of non-polluting, renewable energy infrastructure; and
- » Contribution to Local Economic Development (LED) and social upliftment.

The following negative impacts are expected to occur during the operation phase:

- » Visual and sense of place impacts;
- » Impacts associated with the loss of agricultural land; and
- » Damage to property as a result of maintenance activities and unauthorised access and thoroughfare as a result of the power line servitude.

Impacts during the decommissioning phase were also identified and linked to loss of jobs and associated income. Other impacts associated with decommissioning are considered to be similar to the impacts identified during the construction phase. However, it is anticipated that the facility will be refurbished and upgraded to prolong its life and will mitigate these to some extent.

Positive and negative cumulative impacts were also assessed as part of the SIA.

The positive cumulative impacts include:

- » Cumulative impact from employment, skills and business opportunities and skills development.

The negative cumulative impacts include:

- » Cumulative impacts associated with large-scale in-migration of people.

*Key conclusions and recommendations of the Social Impact Assessment:*

The SIA concluded that there are some vulnerable communities within the project area that may be affected by the development. The majority of the social impacts are associated with the construction phase of a solar PV development. Many of the social impacts are unavoidable and will take place to some extent, but can be managed through careful planning and the implementation of appropriate mitigation measures. It was concluded that there are no perceived negative impacts that are significant enough to be classified as "fatal flaws". Hotazel Solar is unlikely to result in permanent damaging social impacts. From a social perspective it was identified that the project could be developed subject to the implementation of recommended mitigation measures as identified in the SIA.

General conclusions made in the SIA include:

- » The potential negative social impacts associated with the construction phase are typical of construction related projects and not just focussed on the construction of solar PV projects (these relate to an influx of non-local workforce and jobseekers, intrusion and disturbance impacts (i.e. noise and dust, wear and tear on roads) and safety and security risks), and could be reduced with the implementation of the



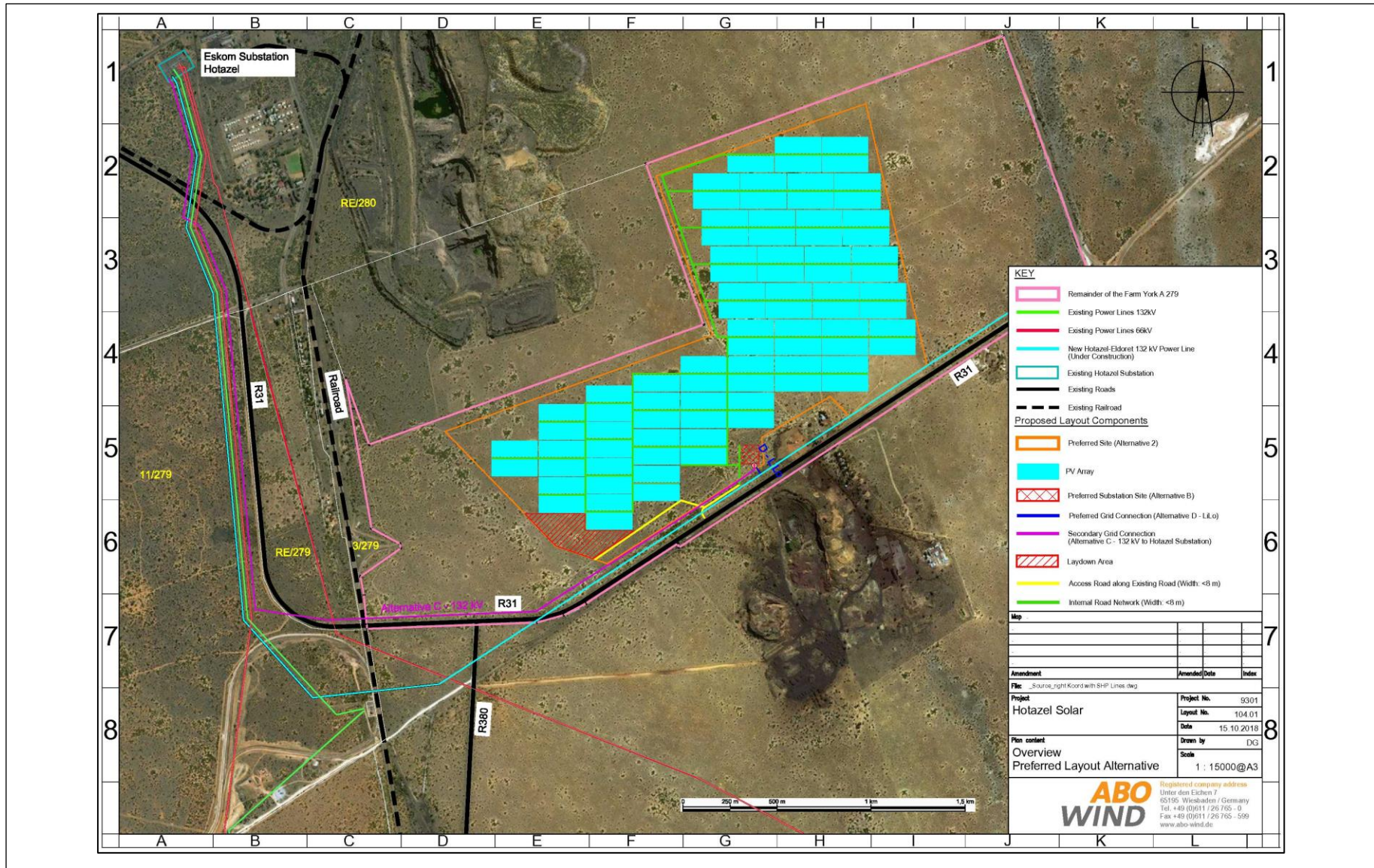
mitigation measures proposed. The significance of such impacts on the local communities can therefore be mitigated.

- » The development will introduce employment opportunities during the construction phase (temporary employment) and a limited number of permanent employment opportunities during the operation phase.
- » The proposed project could assist the local economy in creating entrepreneurial growth and opportunities, especially if local business is involved in the provision of general material, goods and services during the construction and operational phases. This positive impact is likely to be compounded by the cumulative impact associated with the development of several other solar facilities within the surrounding area, and as a result of the project's location within an area characterised by high levels of solar irradiation.
- » The proposed development also represents an investment in infrastructure for the generation of non-polluting, renewable energy, which, when compared to energy generated as a result of burning polluting fossil fuels, represents a positive social benefit for society as a whole.
- » When considering Hotazel Solar, it is also important to consider the cumulative social impacts that may arise with other proposed solar PV projects in the area.
- » It should be noted that the perceived benefits associated with the project, which include renewable energy generation and local economic and social development, outweigh the perceived negative impacts associated with the project.

Key recommendations as provided in the SIA were identified for the enhancement of positive impacts and the management and mitigation of negative impacts. These include:

- » The appointment of a Community Liaison Officer to assist with the management of social impacts and to deal with community issues, if feasible.
- » It is imperative that local labour be sourced, wherever possible, to ensure that benefits accrue to the local communities. Efforts should be made to involve local businesses during the construction activities where possible. Local procurement of labour and services / products would greatly benefit the community during the construction and operational phases of the project.
- » Local procurement of services and equipment is required where possible in order to enhance the multiplier effect.
- » Involve the community in the process as far as possible (encourage co-operative decision-making and partnerships with local entrepreneurs).
- » Employ mitigation measures to minimise the dust and noise pollution and damage to existing roads.
- » Safety and security risks should be taken into account during the planning / construction phase of the proposed project. Access control, security and management should be implemented to limit the risk of crime increasing in the area.

The layout map of the project, as assessed in the SIA and on which the EA is based is included in **Figure 1.1**.



**Figure 1.1:** Layout map as assessed as part of the SIA undertaken for Hotazel Solar.

## 2. DETAILS OF THE AMENDMENTS

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The requested amendment will result in a change in the layout, with the main change being a shift of the solar field towards the south-western corner of the affected property. The size of the project footprint will be slightly reduced from 275ha (as authorised) to 270ha. For this amendment, other changes to the layout and infrastructure, within the assessed area, are related to the shift of the solar panel area which includes the internal access road network, consideration of two alternative laydown areas and an additional grid connection alternative<sup>3</sup>.

The generation capacity of the facility will remain at 100MW.

The amended layout illustrating the shift of the solar field is included as **Figure 2.1**.

The infrastructure which forms part of the amended layout, within the area assessed as part of the SIA includes:

- » On-site substation / collector switching station;
- » Auxiliary buildings (gate-house and security, control centre, office, warehouse, canteen & visitors centre, staff lockers etc.);
- » Inverter-stations, transformers and internal electrical reticulation (underground cabling);
- » Access and internal road network;
- » There are two options for the location of the proposed laydown area:
  - Option 1: Is located south-west of the proposed substation, between the R31 and the proposed PV Panels.
  - Option 2: Is located north-east of the proposed substation, between the R31 and the proposed PV Panels.
- » There are three options proposed to connect Hotazel Solar to the Eskom Hotazel Substation:
  - Option 1: (Preferred, as previously authorised): Via a loop in loop out (LILLO) into the Hotazel-Eldoret 132kV line.
  - Option 2: Overhead 132kV power line from the Hotazel Solar on-site substation/ collector switching station to the Eskom Hotazel substation.
  - Option 3: Overhead 132kV power line from the Hotazel Solar on-site substation/ collector switching station to the Hotazel 2 collector switching station.
- » Rainwater tanks; and
- » Perimeter fencing and security infrastructure.

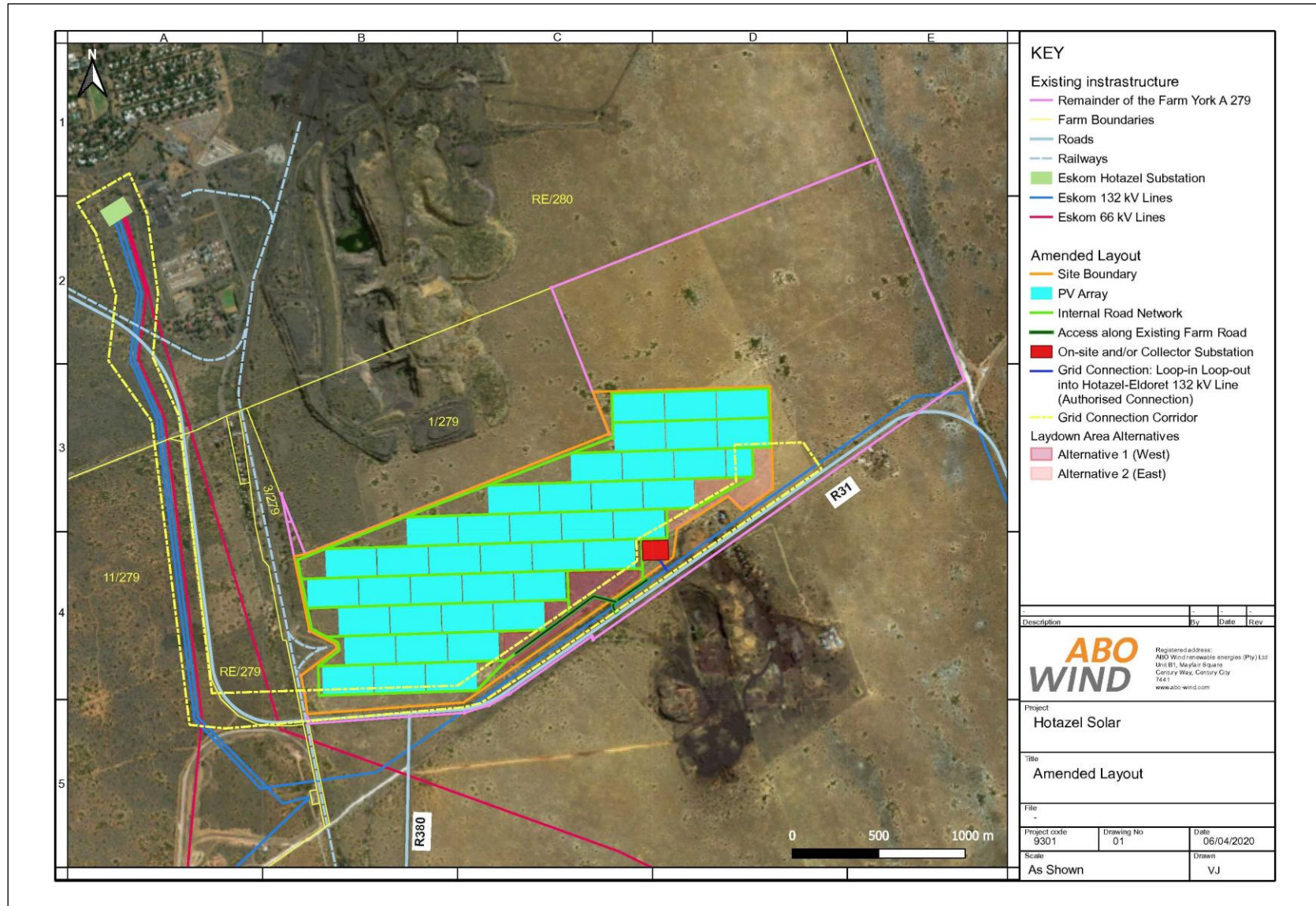
The technical details of the facility, considering the amendments is provided in **Table 2.1** below.

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<sup>3</sup> The inputs provided as part of this report assumes that no new areas or properties will be affected by the layout amendments, other than those previously assessed (Figure 1.1).

**Table 2.1: Overview of the technical details as per the amendments**

Component	Description / Dimensions
Location of the site	Approximately 3km south-east of Hotazel
PV Panel area	Maximum of 245ha with a total project footprint of approximately 270ha
Site access	Option 1: Existing access point from the R31, roughly in the centre of the development footprint. Option 2: Existing access point from the R31, approximately 200m south-west of the of the farm house.
Export capacity	100MW
Grid Connection: On-site substation/ collector switching station	It is estimated that the maximum size of the on-site substation/ collector switching station will not exceed 2ha. The on-site substation/ collector switching station will collect the power from the solar energy facility and transform it from low voltage level (up to 33kV) to 132 kV level. The collector switching station component would be used if Eskom requires another solar energy facility (i.e. Hotazel 2) to connect to the national grid via the same grid connection point.
Grid Connection: OHL and Cabling	Option 1 (Preferred, as authorised): $\pm 100\text{m}$ overhead 132kV power line which will connect via a Loop in Loop out connection into the existing Hotazel/Eldoret 132kV line. The power line will have a maximum height of 32m and maximum servitude width of 52m. Option 2: $\pm 5.8\text{km}$ overhead 132kV power line from the on-site substation/ collector switching station to the Eskom Hotazel substation. To assess the route, the line is buffered by 150 m (i.e. a 300 m corridor) in order to allow for micro-siting. The power line will have a maximum height of 32m and a servitude width of between 31m and 36m. Option 3: $\pm 1\text{km}$ overhead 132kV power line from the Hotazel Solar on-site substation/ collector switching station to the Hotazel 2 collector switching station (which is being proposed in a separate EIA process). The power line will have a maximum height of 32m and a servitude width of between 31m and 36m.
Proposed technology	PV with fixed, single or double axis tracking technology.
Height of installed panels from ground level	PV Structures not more than 4m
Width and length of internal roads	Main access road - width: 8m, length: $\pm 1\text{km}$ Internal access roads – width: 5m, length: $\pm 20\text{km}$



**Figure 2.1:** Proposed amended Hotazel Solar layout map, as considered within this report.

### **3. POTENTIAL FOR CHANGE IN THE SIGNIFICANCE OF SOCIAL IMPACTS AS A RESULT OF THE PROPOSED AMENDMENTS**

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In terms of Regulation 32(1)(a)(i) of the EIA Regulations, the following section provides an assessment of the social impacts related to the proposed amendment of the Hotazel Solar layout. Understanding the nature of the proposed amendment and the fact that the amended project footprint is still within the property, which was fully assessed as part of the SIA, it is concluded that the proposed amendments will not introduce any new social impacts, nor significantly alter the social impacts as previously assessed in the SIA.

As required in terms of Regulation 32(1)(a)(iii) of the EIA Regulations, consideration was given to the requirement for additional measures to ensure avoidance, management and mitigation of impacts associated with the proposed change. Considering that there will be no change in impacts, no additional mitigation measures are required for the amendment of the layout from a social perspective. The recommendations and mitigation measures provided in the SIA are considered to be sufficient for the enhancement of the positive impacts and the management and mitigation of the negative impacts to acceptable levels associated with the amended layout. Therefore, all enhancement and mitigation measures, as proposed in the SIA are still required to be implemented for the amended Hotazel Solar development.

### **4. ADVANTAGES AND DISADVANTAGES OF THE PROPOSED AMENDMENTS**

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In terms of Regulation 32(1)(a)(ii) of the EIA Regulations, this section provides details of the advantages and disadvantages of the proposed amendment from a social perspective.

No specific advantages or disadvantages have been identified from a social perspective with the implementation of the proposed amendment as part of the Hotazel Solar project.

### **5. CONCLUSION**

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Based on the nature of the proposed amendment of the Hotazel Solar layout, and the fact that the amended project footprint falls within the property which was fully assessed as part of the SIA (November 2018), it can be concluded that the amendment will not lead to any additional impacts other than those identified and assessed within the SIA. No change in the significance of the impacts is expected to occur and there is no need for any additional recommendations or mitigation measures other than those already specified in the SIA.

The proposed amendment is considered to be acceptable from a social perspective and can be approved, subject to the implementation of the mitigation and enhancement measures as specified in the SIA (November 2018).