



FINAL ENVIRONMENTAL ASSESSMENT FOR EA AMENDMENT

for

HOTAZEL SOLAR

on

Remaining Extent (Portion 0) of Farm York A 279 and Grid connection on Remaining Extent of Farm 280, Portion 3 of Farm York A 279 and Portion 11 of Farm York A 279

In terms of the

National Environmental Management Act (Act No. 107 of 1998, as amended) & 2014 Environmental Impact Regulations

Prepared for Applicant: ABO Wind Hotazel PV (Pty) Ltd.

Date: 31 August 2020

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Report Reference: JMR543b/05

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NAME	TITLE	SIGNATURE
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Final Environmental Assessment for EA Amendment submitted	31 August 2020

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PURPOSE OF THIS REPORT:

DEA Decision making

APPLICANT:

ABO Wind Hotazel PV (Pty) Ltd

CAPE EAPRAC REFERENCE NO:

JMR543b/05

DEPARTMENT REFERENCE:

14/12/16/3/3/2/1086/AM2

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National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended & Environmental Impact Regulations 2014

Hotazel Solar

Remaining Extent (Portion 0) of Farm York A 279 and Grid connection on Remaining Extent of Farm 280, Portion 3 of Farm York A 279 and Portion 11 of Farm York A 279.

Submitted for:

Departmental Review

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REPORT DETAILS

Title:	Final Environmental Assessment for EA Amendment for Hotazel Solar
Purpose of this report:	The purpose of this Environmental Assessment report is to provide the decision-making authority with sufficient information regarding the potential impacts associated with the proposed amendment of the Environmental Authorisation (EA) for Hotazel Solar.
Prepared for:	ABO Wind Hotazel PV (Pty) Ltd
Published by:	Cape Environmental Assessment Practitioners (Pty) Ltd. (Cape EAPrac)
Authors:	Mr Dale Holder
Reviewed by:	Ms Melissa Mackay
Cape EAPrac Ref:	JMR543b/02
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TECHNICAL CHECKLIST

The following technical checklist is included as a quick reference roadmap for the proposed project.

Company Details		
Company profile	Name and details of Applicant	ABO Wind Hotazel PV (Pty) Ltd is a renewable energy developer, proposing the development of the Hotazel Solar energy facility.
Site Details		
Size of the site	Description and Size in hectares of the affected property.	Remaining Extent (Portion 0) of Farm York A 279. Total Property Size: 636.7946ha Additional Properties for Grid Connection (Option 2): Remaining Extent of Farm 280, Portion 3 of Farm York A 279 and Portion 11 of Farm York A 279.
Development Footprint	This includes the total footprint of PV panels, auxiliary buildings, onsite substation, inverter stations and internal roads.	The total footprint of Hotazel Solar will not exceed 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 SW of the of the farm house.
Technology Details		
Capacity of the facility	Export Capacity of facility (in MW)	100MW _{AC}
Solar Technology selection	Type of technology	PV (bifacial or monofacial) with fixed, single or double axis tracking technology.
	Capacity and dimensions of the PV field	100 MW _{AC} yield. PV panel footprint of approximately 245ha.
	Structure height	PV Structures not more than 4m
	Surface area to be covered (including associated infrastructure such as roads)	Less than 270ha
	Structure orientation	Fixed-tilt in north-facing orientation, or mounted on horizontal axis tracking from east to west

	Laydown area dimensions	Approximately 2-5ha of laydown area will be required (the laydown areas will not exceed 5ha.)
Grid Connection Details		
Grid Connection	Number of overhead power lines required	1 x 132kV overhead line (OHL)
	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 (SEF) 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 SEF (i.e. Hotazel 2) to connect to the national grid via the same grid connection point.
	Power line route options	<p>Option 1: (Preferred, as previously authorised): ±100m overhead 132kV powerline which will connect via a Loop in Loop out connection into the existing Hotazel/Eldoret 132kV line. The powerline will have a maximum height of 32m and maximum servitude width of 52m.</p> <p>Option 2: ±5.8km overhead 132kV powerline 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 powerline will have a maximum height of 32m and a servitude width of between 31m and 36m.</p> <p>Option 3: ±1km overhead 132kV powerline 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 powerline will have a maximum height of 32m and a servitude width of between 31m and 36m.</p>
	Voltage of overhead power lines	132kV.
	Height of the Power Line	±32 m
	Servitude Width	Maximum of 31m – 52m.
Auxiliary Infrastructure		
Other infrastructure	Additional Infrastructure	<p>Auxiliary buildings of approximately 1 ha. The functions of these buildings include (but are not limited to) a gate house, ablutions, workshops, storage and warehousing area, site offices, and control centre.</p> <p>Perimeter fencing not exceeding 5m in height.</p>
	Details of access roads	The main access road will not exceed 8m in width and the internal road will not exceed 5m in width.
	Extent of areas required for laydown of materials and equipment	Approximately 2-5ha of laydown areas will be required (laydown areas will not exceed 5ha).

LOCATION OF PREFERRED ALTERNATIVE

Two Layout Alternatives were originally assessed in the Final EIR for Hotazel Solar. Layout Alternative 2 and Grid Connection Alternative C were authorised. This amendment application proposes a repositioning of the authorised alternative to align with the co-ordinates below¹

	Latitude	Longitude
Amended Layout position		
North-West Corner	27°13'25.60"S	22°58'5.04"E
North-East Corner	27°12'56.52"S	22°59'45.98"E
South-West Corner	27°13'55.23"S	22°58'6.79"E
South-East Corner	27°13'15.80"S	22°59'45.94"E
On-site Substation / Collector Switching Station	27°13'26.63"S	22°59'20.87"E
Preferred powerline alternative		
Start	27°13'26.63"S	22°59'20.87"E
Middle	27°13'28.55"S	22°59'21.75"E
End	27°13'30.31"S	22°59'23.05"E

DEFF COMMENT ON DRAFT ASSESSMENT REPORT FOR EA AMENDMENT

The competent authority provided comment on the Draft Assessment Report for EA Amendment on 11 August 2020 (received via email on 18 August 2020). A full copy of the Departments comment and the formal response thereto is included in Annexure R.

For ease of reference, excerpts of the Department's comments are provided below, along with the corresponding response to each.

(a) Contents of the Draft Environmental Authorisation Amendment Report

- (i) The details of the proposed amendments are not described in the report itself; only in the application form. Please confirm that the application form / specifics of the proposed amendment formed part of the documentation that was submitted to interested and affected parties (I&APs) for the 30 day comment period.

It is understood that this comment relates to a concern that registered and potential Interested and Affected Parties (I&AP's) would not have fully understood the scope of the amendment based on the content of the amendment assessment report.

Please note that the application form did not form part of the documentation that was subjected to the stakeholder engagement process, as it contains information that may be protected by law (applicants contact details, company registration details, banking institutions etc).

Despite the application form not forming part of the information provided for stakeholder engagement, we believe that the documentation that was made available to I&AP's was sufficient to provide them with an understanding of what the amendments entailed. In this instance, all the amendments included in the application, were for the sole purpose of the repositioning of the PV footprint.

1. In the I&AP notification letter

¹ These co-ordinates need to be read in conjunction with the layout plans attached in Annexure 1, as the proposed layout is not rectangular.

The notification letter provided to potential and registered I&AP's provided the following description of the proposed amendments on page 2 of the letter:

"The applicant has applied to amend the environmental authorisation for Hotazel Solar (Authorised on 30 May 2019). The purpose of the amendment is to reposition the authorised footprint within the property as shown in the figure below. Kindly note that the black hatched polygon depicts the authorised position of the PV Facility (i.e. as authorised in the EA of 30 May 2019) and the orange polygon depicts the proposed new position of the PV Footprint (i.e. the footprint as proposed by this current application for amendment)"

2. Within the Amendment Assessment report.

Page 7 (pdf page) of the amendment assessment report provided the following description regarding the position of the proposed amended footprint:

"Two Layout Alternatives were originally assessed in the Final EIR for Hotazel Solar. Layout Alternative 2 and Grid Connection Alternative C were authorised. This amendment application proposes a repositioning of the authorised alternative to align with the co-ordinates below:"

Section 1.1 on page 1 (numbered page) of the amendment assessment report provided the following summary of the recommendation of the assessment report:

*"Cape EAPrac is of the opinion that the information contained in this Impact Report, and the documentation attached hereto, is sufficient to allow the competent authority to apply their minds to the potential negative and/or positive impacts associated with the **proposed amendment of the development footprint**, in respect of the activities authorised."*

Section 4.1 on page 3 of the amendment assessment report included the following statement relating to the ecological sensitivity of the site:

*"The approved and the proposed amended PV footprint areas in relation to the ecological sensitivity of the site, are illustrated in the figure below. **The shift of the PV field to the west** of the site will result in....."*

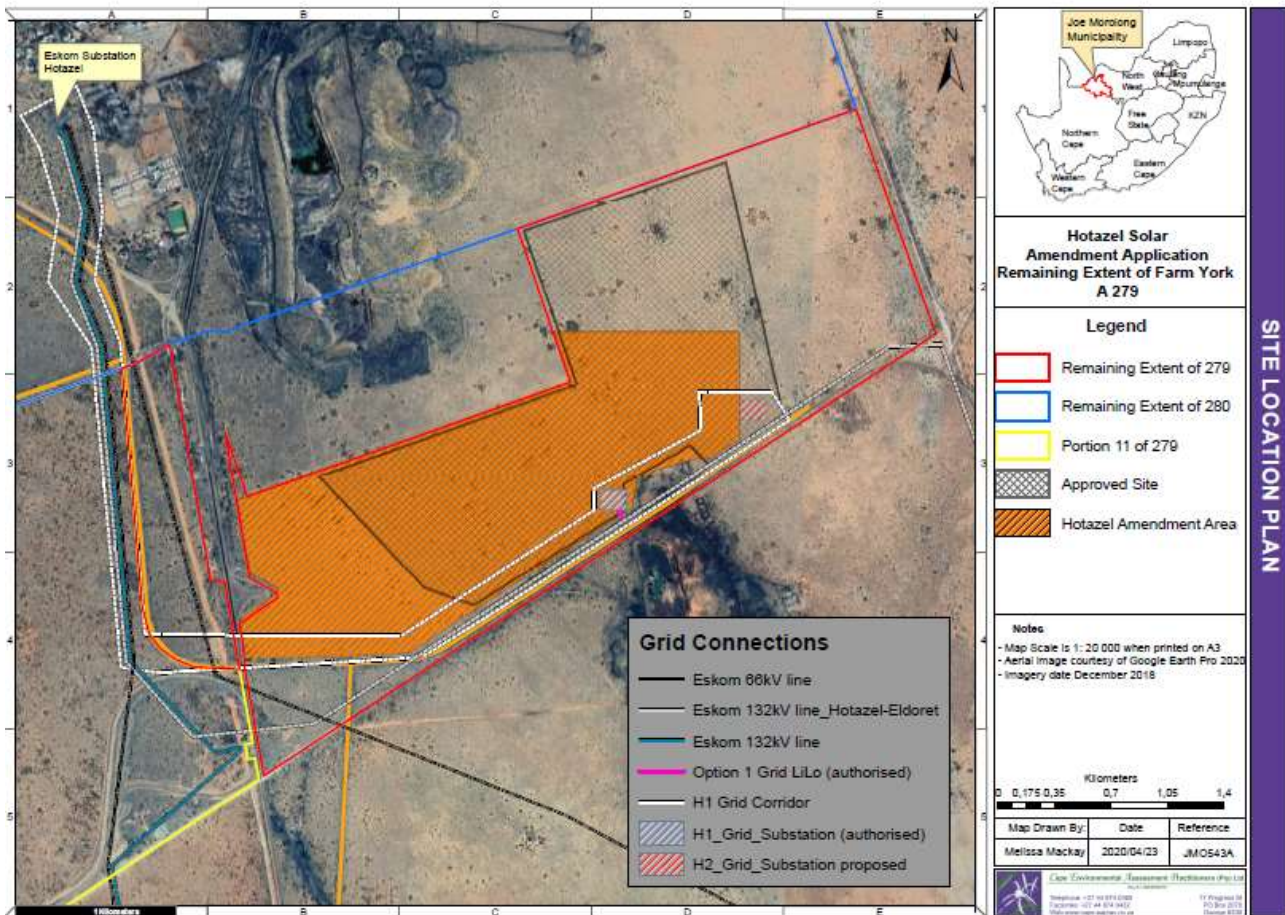
Figure 1 on page 4 of the amendment assessment report included a map that shows the authorised footprint as well as the amended footprint in relation to the ecological sensitivity of the site.

Bullet point 1 under section 5.1 on page 5 of the amendment assessment report included the following:

"The PV footprint would be shifted west within the site....."

3. Spatially demonstrated in various maps appended to the report:

The maps and plans that were appended in annexure A, B and D reflected the extent of the amendment, particularly the site location plan in Annexure B, which showed the authorised footprint in relation to the amended footprint in a single plan as per the excerpt below.



The comparison between the authorised and proposed amended footprint is also shown in Figure 1 of the Updated ecology impact assessment.

4. Within the attached specialist statements.

The scope of the amendment is also described in the appended specialist reports as follows:

- Bullet points (x4) on page 1 and 2 of the Ecology Impact Statement (Annexure E);
- Bullet points (x4) on page 1 and 2 of the Avifaunal Impact Statement (Annexure F);
- Section 8 on page 20 of the Agricultural Impact Statement (Annexure G);
- Section 2.1 on page 8 of the Archaeology Impact Statement (Annexure H);
- Section 2 on page 5,6 and 7 of the Social impact statement (Annexure K); and
- Figure 1 and Figure 2 on page 7 and 8 of the Visual Impact Statement (Annexure L).

Considering the information under points 1-4 above, it is Cape EAPrac's reasoned opinion that the scope of the proposed amendment (i.e. the repositioning of the authorised footprint to the West of the property) was clear to any registered or potential I&AP's.

(ii) Please provide a detailed description of the proposed amendments and the motivation for each in the report. The application form includes a proposed amendment to the power line coordinates, but it is not clear in what way the power line is amended from the approved alignment and what the new length is. The site location plan also illustrates two substations (e.g. H1 Grid on-site substation (authorised) and H2 Grid on-site substation (proposed), however this change is not indicated in the application form, nor in any of the other maps. Please confirm in the report whether the location of the authorised substation remains the same. Please explain the possible change from an on-site substation to a collector switching station, and what this entails. Please explain the need for amending the secondary internal roads from 15km to 20km. Further confirm that these proposed changes do not, on their own, constitute a listed or specified activity.

The individual points contained in comment (a)(ii) along with the responses thereto are captured in the table below.

Comment	Response
<p>Please provide a detailed description of the proposed amendments and motivation for each in the report.</p>	<p>ABO Wind Hotazel PV (Pty) Ltd is applying to amend the Environmental Authorisation (EA) for Hotazel Solar. The proposed amendments include a shift of the authorised project footprint (< 1km) towards the western boundary of the Remaining Extent (Portion 0) of the Farm York A279. This will allow for a potential second solar development (which will be applied for in a separate EIA process) on the eastern side of the Remaining Extent (Portion 0) of Farm York A279.</p> <p>Section 1.1 on Page 1 of the Final Amendment Assessment Report has been updated to include a summary of the descriptions and motivations contained in the remainder of the report and its appendices.</p>
<p>The application includes a proposed amendment of the powerline coordinates, but it is not clear in what way the powerline is amended from the approved alignment and what the new length is.</p>	<p>The LILO within the previously assessed position remains the preferred option. The original EIA included an assessment of a powerline corridor, within which the exact routing of the powerline will be determined following specialist walk-throughs and micro-siting. At this point, the LILO option is anticipated to be approximately 100m, however the exact length within the assessed corridor will be determined following walk-throughs, micro-siting and detailed design.</p> <p>The amended coordinates were to move the start point of the powerline to the center of the substation location. The conceptual routing, illustrated in the location plan (green line in the figure below), remains unchanged.</p> <div data-bbox="507 1563 1331 1944" data-label="Image"> </div>
<p>The site location plan also illustrates two substations (e.g. H1 Grid on-site</p>	<p>H1 Grid on-site substation (authorised) shows the authorised location of the Hotazel Solar on-site substation.</p>

<p>substation (authorised) and H2 Grid on-site substation (proposed)), however this change is not indicated in the application form, nor in any of the other maps.</p>	<p>H2 Grid on-site substation (proposed) shows the potential location of an on-site substation for a potential second solar development (which will be applied for in a separate EIA process which will follow this amendment process) on the eastern side of the Remaining Extent (Portion 0) of Farm York A279.</p> <p>Therefore, H1 is the only substation for Hotazel Solar. Its location is already authorised and remains unchanged by the proposed amendment.</p>
<p>Please confirm in the report whether the location of the authorised substation remains the same.</p>	<p>The location of the authorised substation remains the same, as shown in the site location plan in Annexure B.</p> <p>The summary in section 1.1 on pg 1 of the Final Amendment Assessment Report has been updated to reflect this.</p>
<p>Please explain the possible change from an on-site substation to a collector switching station, and what this entails.</p>	<p>This merely constitutes a change in wording in order to align with standardised industry descriptions and does not change the equipment or infrastructure needed. This change will only occur if more than one project within the property is selected Preferred Bidder. This refers to the second solar development proposed on the property (subject to a separate EIA process).</p>
<p>Please explain the need for amending the secondary internal roads from 15km to 20km.</p>	<p>With the proposed change in the layout of the PV array (i.e. shifting west), the shape of the total footprint and the conceptual design does change the positioning (and thus length) of the internal road network within the footprint. Based on the new layout, the internal roads will be up to a maximum of 20km. The exact length within the authorised footprint will be determined at the detailed design phase.</p> <p>While the amendment proposes an increase in the length of internal roads, it should be noted that the total project footprint will be slightly reduced from 275ha (as authorised) to 270ha.</p>
<p>Further confirm that these approved changes do not, on their own, constitute a listed or specific activity.</p>	<p>The original Environmental Impact Assessment considered and assessed the following activities relating to the proposed roads needed for the construction of the facility (i.e. main access road and internal road network) GN R327 Activity 24 and GN R327 Activity 56. Both of these activities were authorised in the EA. Notwithstanding the authorisation of these activities, it must be noted that the internal roads are narrower than the width threshold considered in Activity 24, and only Activity 56 Applies to these. It can therefore be confirmed that the proposed amendments do not, on their own, constitute a listed or specified activity.</p>

(b) Public Participation process:

- (i) Please ensure that all issues raised and comments received during the circulation of the amendment report from registered I&APs and organs of state which have jurisdiction in respect of the proposed activity are adequately addressed in the final amendment report.
 - (ii) A Comments and Response trail report (C&R) must be submitted with the final report. The C&R report must incorporate all comments for this application. The C&R report must be a separate document from the main report. Please ensure that comments made by I&APs are comprehensively captured (copy verbatim if required) and responded to clearly and fully. Please note that a response such as "noted" is not regarded as an adequate response to I&AP's comments.
 - (iii) Proof of correspondence with the various stakeholders must be included in the final amendment. Should you be unable to obtain comments, proof should be submitted to the Department of the attempts that were made to obtain comments. The Public Participation Process must be conducted in terms of Regulation 39, 40, 41, 42, 43 & 44 of the EIA Regulations, 2014 as amended.
- (i) Annexure R, has been added to the final amendment assessment report. Annexure R2 contains the comments and responses report, while Annexure R5 contains the actual copies of the comments and responses.
 - (ii) Annexure R in the final amendment assessment report contains all the information relating to public participation and stakeholder engagement. Annexure R2 contains a standalone comments and responses report, which includes comments received from all organs of state, including that from the competent authority.
 - (iii) Proof of correspondence with all stakeholders is included in Annexure R4. Public participation was conducted in compliance with the approved Public Participation Plan as attached in Annexure R6. The Departments approval of this plan is attached in Annexure R7.

Please ensure that any new mitigation measures are in line with the applicable and most recent guidelines.

You are further reminded to comply with Regulation 32(1)(a) of the NEMA EIA Regulations, 2014, as amended, which states that: *"The applicant must within 90 days of receipt by the competent authority of the application made in terms of regulation 31, submit to the competent authority -*

(a) a report, reflecting—

- (i) an assessment of all impacts related to the proposed change;*
- (ii) advantages and disadvantages associated with the proposed change; and*
- (iii) measures to ensure avoidance, management and mitigation of impacts associated with such proposed change; and*
- (iv) any changes to the EMPR;*

which report-

(aa) had been subjected to a public participation process, which had been agreed to by the competent authority, and which was appropriate to bring the proposed change to the attention of potential and registered interested and affected parties, including organs of state, which have jurisdiction in respect of any aspect of the relevant activity, and the competent authority, and

(bb) reflects the incorporation of comments received, including any comments of the competent authority."

Section 1.1 on Page 1 of the Final Amendment Assessment Report has been updated to include a summary of the advantages and disadvantages of the proposed amendments as contained in the remainder of the report and its appendices.

Should there be significant changes or new information that has been added to the motivation report which changes or information was not contained in the reports or plans consulted on during the initial public participation process, you are required to comply with Regulation 32(1)(b) of the NEMA EIA Regulations, 2014, as amended, which states: *"the applicant must, within 90 days of receipt of the application by the competent authority, submit to the competent authority – (b) a notification in writing that the report will be submitted within 140 days of receipt of the application by the competent authority, as significant changes have been made or significant new information has been added to the report, which changes or information was not contained in the report consulted on during the initial public participation process contemplated in subregulation (1)(a) and that the revised report will be subjected to another public participation process of at least 30 days"*.

The final amendment assessment does not contain any new information or plans that did not form part of the initial public participation process. Section 1.1 of the report has been updated to include a summary of various aspects associated with descriptions and reasons for the amendment as well as a comparative summary of the advantages and disadvantages of the proposed amendment. This section has been summarised from information already contained in the Draft Assessment Report and its appendices and does not contain any new information.

ORDER OF REPORT

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FINAL ENVIRONMENTAL ASSESMENT REPORT

1 INTRODUCTION

Cape EAPrac has been appointed by ABO Wind Hotazel PV (Pty) Ltd, hereafter referred to as the Applicant, as the independent Environmental Assessment Practitioner (EAP), to facilitate an application for amendment of the Environmental Authorisation (EA) for Hotazel Solar in terms of the National Environmental Management Act (NEMA, Act 107 of 1998).

The Applicant has an option to lease a section of the Remaining Extent (Portion 0) of the Farm York A 279 from the landowner, the late JP Jansen (represented by the executor of the estate, Mr PAC Jansen) for the purposes of developing the proposed solar energy facility (SEF). A copy of the landowner consent for the proposed amendment is attached in Annexure Q.

The grid connection across the Remaining Extent of Farm 280, Portion 3 of Farm York A 279 and Portion 11 of Farm York A 279² is considered to constitute a linear activity and as such, landowner consent is not required in terms of these regulations. The applicant has secured the necessary land rights with these landowners. These landowners have also been automatically registered as I&APs and will be given an opportunity to provide input into this environmental process.

The net generation (contracted) capacity of Hotazel Solar will remain at 100MW_{AC}. The project will feed into the National Grid via the existing Eskom Hotazel Substation.

1.1 SUMMARY OF AMENDMENTS PROPOSED AS PART OF THIS APPLICATION.

As mentioned in the project summary shown at the beginning of this report, the proposed amendments to the EA are for the purpose of shifting the authorised footprint eastwards within the property.

Table 1: Summary of the key Authorised vs Proposed main components of Hotazel Solar³

	Authorised	Proposed Amendment
Generation Capacity	100MW _{AC}	100MW _{AC}
Powerline connection	LILO into Hotazel / Eldoret 132 kV powerline	LILO into Hotazel / Eldoret 132 kV powerline
Total Project Footprint	275ha	270ha
Associated infrastructure	<p>Auxiliary buildings of approximately 1 ha. The functions of these buildings include (but are not limited to) a gate house, ablutions, workshops, storage and warehousing area, site offices, and control centre.</p> <p>Perimeter fencing not exceeding 5m in height.</p>	<p>Auxiliary buildings of approximately 1 ha. The functions of these buildings include (but are not limited to) a gate house, ablutions, workshops, storage and warehousing area, site offices, and control centre.</p> <p>Perimeter fencing not exceeding 5m in height.</p>

As shown in the summary at the beginning of this report, the amendments propose shifting the footprint of Hotazel Solar to the co-ordinates detailed in the table below:

Table 2: Co-ordinates of the new position of Hotazel Solar as proposed in this amendment process.

	Latitude	Longitude

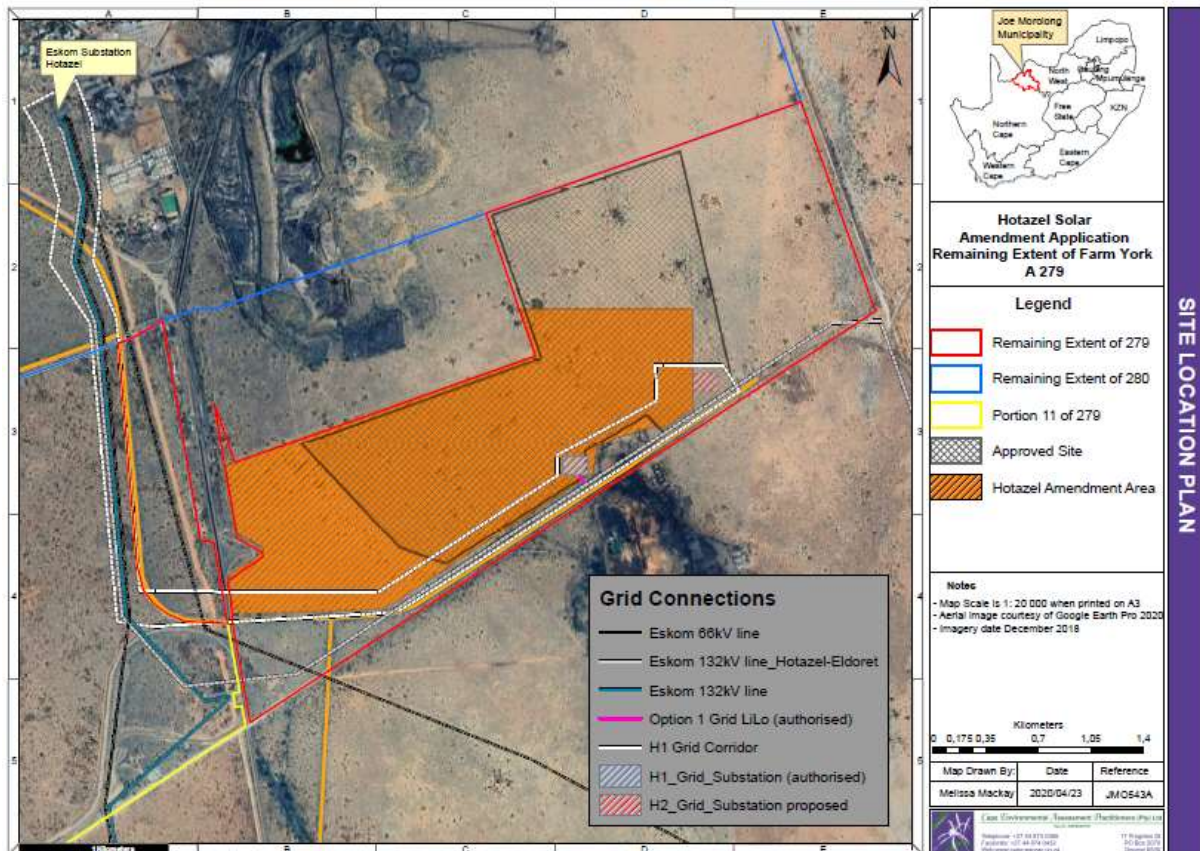
² These additional farm portions are only applicable to grid connection option 2 as described below.

³ Summarised from Social Impact Assessment in Annexure K

Amended Layout position		
North-West Corner	27°13'25.60"S	22°58'5.04"E
North-East Corner	27°12'56.52"S	22°59'45.98"E
South-West Corner	27°13'55.23"S	22°58'6.79"E
South-East Corner	27°13'15.80"S	22°59'45.94"E
On-site Substation / Collector Switching Station	27°13'26.63"S	22°59'20.87"E
Preferred powerline alternative		
Start	27°13'26.63"S	22°59'20.87"E
Middle	27°13'28.55"S	22°59'21.75"E
End	27°13'30.31"S	22°59'23.05"E

The figure below shows the position of the new proposed footprint in relation to the authorised footprint (This figure is also included in Annexure A)

Figure 1: Site Location Plan showing the authorised and proposed new position of Hotazel Solar



1.2 RECOMMENDATION OF THIS ASSESSMENT REPORT

Cape EAPrac is of the opinion that the information contained in this Impact Report, and the documentation attached hereto, is sufficient to allow the competent authority to apply their minds to the potential negative and/or positive impacts associated with the proposed amendment of the development footprint, in respect of the activities authorised.

This assessment process has not identified any fatal flaws with the proposed amendment and as such it is our reasoned view that the amendment can be considered for authorisation. All impacts range from high positive to medium negative. All highly negative impacts have been avoided in both the authorised project as well as this proposed amendment.

It is the recommendation of the EAP that the proposed amendment of Hotazel Solar be considered for approval.

2. LEGISLATIVE AND POLICY FRAMEWORK

The applicable legislation remains the same as what was considered in the Final EIR and is not re-described in this amendment assessment report. The table below lists the applicable legislation and describes whether any additional considerations are applicable to the amendment (i.e. that were not considered in the final EIR).

Table 3: Legislation applicable to Hotazel Solar including any additional considerations applicable to the amendment of the EA.

Legislation	Additional considerations for Hotazel Solar Amendment.
NATIONAL LEGISLATION	
The Constitution of the Republic of South Africa	No additional considerations applicable to Hotazel Solar Amendment.
National Environmental Management Act (NEMA)	This application is being undertaken in terms of this legislation. No additional activities listed in terms of this legislation are applicable to the Hotazel Solar Amendment.
National Environmental Management: Biodiversity (Act 10 of 2004)	Amended footprint position remains on vegetation type classified as least threatened.
Conservation of Agricultural Resources Act – CARA (Act 43 of 1983):	No additional considerations applicable to Hotazel Solar Amendment.
The Subdivision of Agricultural Land, Act 70 Of 1970	No additional considerations applicable to Hotazel Solar Amendment.
National Water Act, No 36 of 1998	No additional considerations applicable to Hotazel Solar Amendment.
National Forests Act (No. 84 of 1998):	No additional considerations applicable to Hotazel Solar Amendment.
National Heritage Resources Act, 25 of 1998	An application to SAHRA has been lodged in respect of the changes to the footprint for Hotazel Solar.
National Energy Act (No. 34 of 2008)	No additional considerations applicable to Hotazel Solar Amendment.
PROVINCIAL LEGISLATION	
Northern Cape Nature Conservation Act, No. 9 of 2009	No additional considerations applicable to Hotazel Solar Amendment.
Nature and Environmental Conservation Ordinance, No 19 of 1974	No additional considerations applicable to Hotazel Solar Amendment.
Astronomy Geographic Advantage Act, 2007 (Act No 21 Of 2007)	No additional considerations applicable to Hotazel Solar Amendment.
Northern Cape Provincial Spatial Development Framework (PSDF) 2012	No additional considerations applicable to Hotazel Solar Amendment.
REGIONAL AND MUNICIPAL LEGISLATION	
John Taolo Gaetsewe District Municipality Spatial Development Framework (Phase 5, Draft SDF), 2017	No additional considerations applicable to Hotazel Solar Amendment.
Joe Morolong Local Municipality Integrated Development Plan (IDP), 2017-2018	No additional considerations applicable to Hotazel Solar Amendment.
GUIDELINES, POLICIES AND AUTHORITATIVE REPORTS	
National Protected Area Expansion Strategy (NPAES) for S.A. 2008 (2010)	No additional considerations applicable to Hotazel Solar Amendment. The project remains outside of any protected area expansion focus areas.

Legislation	Additional considerations for Hotazel Solar Amendment.
Critical Biodiversity Areas	No additional considerations applicable to Hotazel Solar Amendment. The project remains outside of any critical biodiversity areas.
White Paper on the Renewable Energy Policy of the Republic of South Africa (2003)	No additional considerations applicable to Hotazel Solar Amendment.
White Paper on the Energy Policy of the Republic of South Africa (1998)	No additional considerations applicable to Hotazel Solar Amendment.
Integrated Energy Plan (IEP), 2015	No additional considerations applicable to Hotazel Solar Amendment.
Integrated Resource Plan for Electricity (2010-2030)	No additional considerations applicable to Hotazel Solar Amendment.
National Development Plan 2030 (2012)	No additional considerations applicable to Hotazel Solar Amendment.
Strategic Infrastructure Projects (SIPs)	No additional considerations applicable to Hotazel Solar Amendment.
The Convention on the Conservation of Migratory Species of Wild Animals	No additional considerations applicable to Hotazel Solar Amendment.
Guidelines to minimise the impacts on birds of Solar Facilities and Associated Infrastructure in South Africa	No additional considerations applicable to Hotazel Solar Amendment. The monitoring regime remains the same as was assessed.
Environmental Impact Assessment Guideline for Renewable Energy Projects	No additional considerations applicable to Hotazel Solar Amendment.
Sustainability Imperative	No additional considerations applicable to Hotazel Solar Amendment.

3. PLANNING CONTEXT

The planning requirements remain unchanged to that which were considered in the Final EIR for Hotazel Solar. The following key components will likely take place from a planning perspective.

- A **land use change application** for the rezoning of approximately 270ha, from **Agricultural Zone I to Special Zone**, will be lodged at the Joe Morolong Local Municipality, in accordance with the Northern Cape Planning and Development Act (Act 7 of 1998).
- If there are restrictive Title Deed conditions burdening the proposed development, an application for the removal thereof will be lodged at the Government of the Northern Cape Province, Department: Corporate Governance and Traditional Affairs, in accordance with the Removal of Title Deed Restriction Act (Act 84 of 1967).
- Parallel to the rezoning application, a **long term lease application will be lodged at the National Department of Agriculture**, in accordance with the Subdivision of Agricultural Land Act (Act 70 of 1970).
- Relevant planning documents, on all spheres of Government, will be evaluated before any land use change application is launched. These documents include, but are not limited to the following: **NSDP** (National Spatial Development Perspective); **PGDS NC** (Provincial Growth and Development Strategy, Northern Cape Province); **IDP** (Integrated Development Plan); **SDF** (Spatial Development Framework).

4. SITE DESCRIPTION AND ATTRIBUTES

The site description and attributes (including the socio-economic context) remains unchanged from what was considered and reported on in the Final EIR and as such is not reiterated in this report.

4.1 ECOLOGICAL SENSITIVITY OF THE STUDY SITE

The approved and the proposed amended PV footprint areas in relation to the ecological sensitivity of the site, are illustrated in the figure below. The shift of the PV field to the west of the site will result in an increase in areas classified as “Moderately Sensitive” falling within the new development footprint. The newly affected area is largely similar to the areas within the existing footprint, but has a higher density of protected trees, mostly *Vachellia erioloba* and *Vachellia haematoxylon*. The density of *V.haematoxylon* within the proposed new footprint area is approximately 30 trees per hectare, which is higher than the average density of 26 trees per hectare within the current development footprint. As a result, the total number of protected trees within the development footprint is likely to increase by approximately 1000 trees. This is not considered to represent a significant loss to the local population of either *V.erioloba* or *V.haematoxylon* as the density and number of these trees in the local area is very high and probably numbers in the millions. The original assessment found that “Although relatively large numbers of *Acacia haematoxylon* (2000-6000) would potentially be lost as a result of the development, the extent of habitat loss (275 ha) is not seen as being highly significant for this species and is of local relevance only and as such, is not seen as sufficient to warrant an offset or other similar off-site mitigation measure.” The increase in the number of affected trees is approximately 15% and this is not considered to represent a significant increase that would invalidate the original findings of the EIA. As such, the original conclusion of that study as quoted above is considered to be consistent with the amended layout.

Overall, the amended layout would slightly increase the impacts of the development on protected trees. However, the increase is not considered sufficient to increase the original post-mitigation significance from Medium to High. As such, the original Medium negative post-mitigation impact on vegetation and protected tree species would remain unchanged.

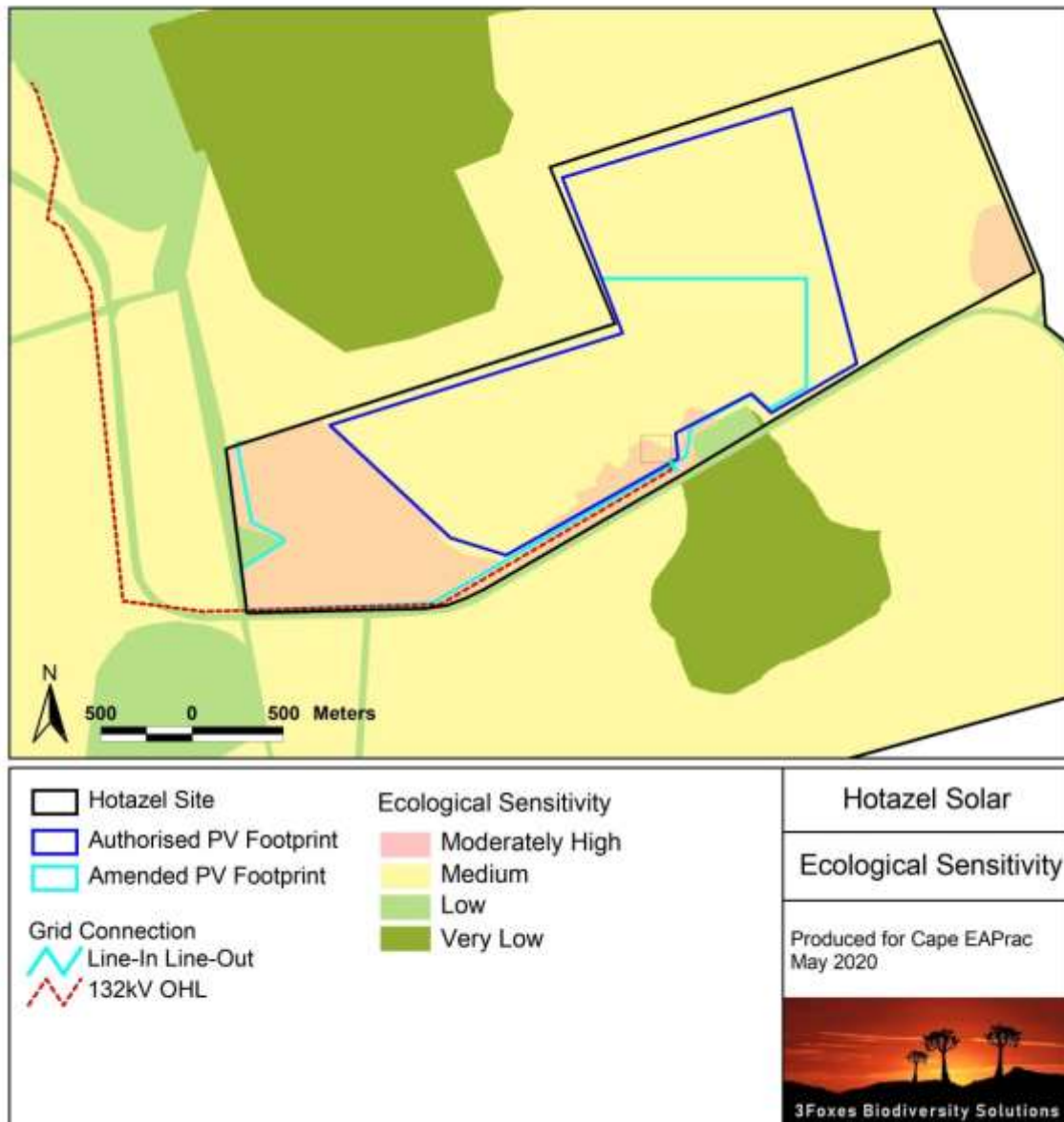


Figure 2: Ecological sensitivity map of the study area, showing the approved and the proposed amended footprint of the PV field.

5. IMPACT ASSESSMENT

This section of the report was completed with input from the following specialists:

- Ecology (Todd, 2020)
- Avifauna (Todd, Herrmann, 2020)
- Agricultural (Lubbe, 2020)
- Archaeology (Webley, 2020)
- Palaeontology (Almond, 2020)
- Visual (Stead, 2020)
- Freshwater (Colloty, 2020)
- Socio Economic (Savannah, 2020)

The sections below provide the conclusory statements from the above specialists as well as an indication of any changes to the impact ratings and mitigations defined by these specialists. This section must be read in conjunction with the specialist reports attached in Annexure E – Annexure L.

5.1 ECOLOGICAL IMPACTS

The ecology specialist confirmed the following regarding the proposed changes to the layout of Hotazel Solar:

- The PV footprint would be shifted west within the site into an area classified as Moderately High Sensitivity. This area is characterised by higher protected tree density than the rest of the site and therefore the amendment would result in an increase in impact on protected trees by approximately 15%. The original post-mitigation impacts on vegetation and protected tree species were assessed as being of Medium Significance. The increase associated with the proposed amendment is not considered sufficient to increase the assessed impact from Medium to High. As such, the Medium significance as originally assessed is considered consistent with the amended layout.
- The Hotazel Solar amendment is therefore supported in terms of terrestrial ecology impacts. The impact of the amended layout on fauna and flora would be similar to the authorised layout and no changes to the assessed impacts are considered warranted.
- No additional mitigation or avoidance measures are recommended as a result of the amendment. The original mitigation and avoidance measures as included in the EIA should still be applied to the current study. The following assessment of impacts are applicable to the proposed amendment.

Table 4: Impacts on vegetation and listed or protected plant species resulting from construction activities

Nature of impact	Impacts on vegetation and listed or protected plant species resulting from construction activities							
	Spatial Extent	Duration	Intensity	Probability	Reversibility	Significance and Status		Confidence level
						Without Mitigation	With Mitigation	
Amended Layout	Local	Long-Term	Medium	Definite	Low	Medium Negative	Medium Negative	High
Mitigation/Management Actions								
<ul style="list-style-type: none"> • Preconstruction walk-through of the facility in order to locate species of conservation concern that can be translocated (such as aloes) as well as comply with the Northern Cape Nature Conservation Act and DENC/DAFF permit conditions. • Vegetation clearing to commence only after walk through has been conducted and necessary permits obtained. • Preconstruction environmental induction for all construction staff on site to ensure that basic environmental principles are adhered to. This includes awareness of no littering, appropriate handling of pollution and chemical spills, avoiding fire hazards, minimizing wildlife interactions, remaining within demarcated construction areas etc. • Environmental Control Officer (ECO) to provide supervision and oversight of vegetation clearing activities within sensitive areas. • Vegetation clearing to be kept to a minimum. No unnecessary vegetation to be cleared. • All construction vehicles should adhere to clearly defined and demarcated roads. No off-road driving to be allowed outside of the construction area. • Temporary lay-down areas should be located within previously transformed areas or areas that have been identified as being of low sensitivity. These areas should be rehabilitated after use. 								

Table 5: Direct faunal impacts due to construction activities

Nature of impact	Direct Faunal Impacts During Construction							
	Spatial Extent	Duration	Intensity	Probability	Reversibility	Significance and Status		Confidence level
						Without Mitigation	With Mitigation	
Amended Layout	Local	Short-Term	Medium	High	High	Medium	Medium-Low Negative	High
Mitigation/Management Actions								
<ul style="list-style-type: none"> All personnel should undergo environmental induction with regards to fauna and, in particular, awareness about not harming or collecting species such as snakes, tortoises and owls, which are often persecuted out of superstition. Any fauna threatened by the construction activities should be removed to safety by the ECO or appropriately qualified environmental officer. All construction vehicles should adhere to a low speed limit to avoid collisions with susceptible species such as snakes and tortoises. All hazardous materials should be stored in the appropriate manner to prevent contamination of the site. Any accidental chemical, fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill. If trenches need to be dug for water pipelines or electrical cabling, these should not be left open for extended periods of time as fauna may fall in and become trapped in them. Trenches which are standing open should have places where there are soil ramps allowing fauna to escape the trench. 								

Table 6: Faunal impacts due to operation

Nature of Impact	Faunal Impacts due to operational activities								
	Alternative	Spatial Extent	Duration	Intensity	Probability	Reversibility	Significance and Status		Confidence level
							Without Mitigation	With Mitigation	
Amended Layout	Local	Long-term	Medium-Low	Moderate	High	Medium-Low Negative	Low-Negative	High	
Mitigation/Management Actions									
<ul style="list-style-type: none"> Any potentially dangerous fauna such as snakes or fauna threatened by the maintenance and operational activities should be removed to a safe location. If the site must be lit at night for security purposes, this should be done with downward-directed low-UV type lights (such as most LEDs), which do not attract insects. All hazardous materials should be stored in the appropriate manner to prevent contamination of the site. Any accidental chemical, fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill. All vehicles accessing the site should adhere to a low speed limit (30km/h max) to avoid collisions with susceptible species such as snakes and tortoises. If the facility is to be fenced, then no electrified strands should be placed within 30cm of the ground as some species such as tortoises are susceptible to electrocution from electric fences because they do not move away when electrocuted but rather adopt defensive behaviour and are killed by repeated shocks. Alternatively, the electrified strands should be placed on the inside of the fence and not the outside as is the case on the majority of already constructed PV plants. 									

Table 7: Impacts on vegetation and listed or protected plant species resulting from power line construction activities

Impact Nature	Impacts on vegetation and listed or protected plant species resulting from power line construction activities							
Nature of impact	Spatial Extent	Duration	Intensity	Probability	Reversibility	Significance and Status		Confidence level
						Without Mitigation	With Mitigation	
Grid Connection	Local	Long-Term	Moderate	High	Low	Medium-Low Negative	Low Negative	High
Mitigation/Management Actions								
<ul style="list-style-type: none"> • Preconstruction walk-through of the power line route in order to locate species of conservation concern that can be translocated as well as comply with the Northern Cape Nature Conservation Act and DENC/DAFF permit conditions. • Construction and vegetation clearing to commence only after walk through has been conducted and necessary permits obtained. • No large woody species should be unnecessarily cleared from the power line servitude. It may be necessary to remove some individuals from the directly beneath the power line due to safety and operational concerns, however, within the servitude the presence of large woody species does not increase the fire risk and there are no valid reasons to remove such trees. If these are too tall and cause safety problems, they can be cut to a lower height rather than removed and as growth rate in arid areas is slow. It would take many years before such trees would need to be trimmed again. Such trees can be trimmed to 1m height if necessary although this would almost certainly result in the mortality of large <i>Acacia erioloba</i> individuals. DAFF has a guideline available for tree clearing and trimming within power line servitudes which should serve as a guide. • Preconstruction environmental induction for all construction staff to ensure that basic environmental principles are adhered to. This includes awareness as to no littering, appropriate handling of pollution and chemical spills, avoiding fire hazards, minimizing wildlife interactions, remaining within demarcated construction areas etc. • Vegetation clearing along the power line corridor should only be conducted where necessary and should not be cleared using herbicides or with a bulldozer. Vegetation can be cleared manually with bush cutters to 0.5m height where necessary. • Temporary lay-down areas should be located within previously transformed areas or areas that have been identified as being of low sensitivity. 								

Table 8: Faunal impacts due to power line construction activities.

Impact Nature	Direct Faunal Impacts During Construction							
Alternative	Spatial Extent	Duration	Intensity	Probability	Reversibility	Significance and Status		Confidence level
						Without Mitigation	With Mitigation	
Grid Connection	Local	Short-Term	Medium-Low	High	High	Medium-Low Negative	Low Negative	High
Mitigation/Management Actions								
<ul style="list-style-type: none"> • All personnel should undergo environmental induction with regards to fauna and in particular awareness about not harming or collecting species such as snakes, tortoises and owls which are often persecuted out of superstition. • Any fauna threatened by the construction activities should be removed to safety by the ECO or appropriately qualified environmental officer. • All construction vehicles should adhere to a low speed limit to avoid collisions with susceptible species such as snakes and tortoises. • All hazardous materials should be stored in the appropriate manner to prevent contamination of the site. Any accidental chemical, fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill. 								

- If holes or trenches need to be dug, these should not be left open for extended periods of time as fauna may fall in and become trapped in them. Holes should only be dug when they are required and should be used and filled shortly thereafter.

5.2 AVIFAUNAL IMPACTS

The Avifaunal specialist has concluded the following with regards to the proposed amendment of the Hotazel Solar Footprint:

- The area into which the amended PV footprint would expand is considered medium avifaunal sensitivity and represents habitat of similar sensitivity to that within the authorised footprint. There is however an increase in the density of woody plant vegetation as one moves towards the western margin of the site. The amended PV footprint would therefore impact a slightly different bird community from the original authorised PV footprint. This shift in affected bird community composition would however not increase the impacts associated with the development to any noticeable degree.
- The Hotazel Solar amendment is therefore supported in terms of avifaunal impacts. The impact of the amended layout on avifauna would be similar to the authorised layout and no changes to the assessed impacts are considered warranted.
- No additional mitigation or avoidance measures are recommended as a result of the amendment. The original mitigation and avoidance measures as included in the EIA should still be applied to the current study.

The following assessment of impacts is therefore applicable to the proposed amendments:

Table 9: Direct avifaunal impacts during construction of Hotazel Solar – habitat loss and disturbance

Direct Avifaunal Impacts During Construction – habitat loss and disturbance								
Alternative	Spatial Extent	Duration	Intensity	Probability	Reversibility	Significance and Status		Confidence level
						Without Mitigation	With Mitigation	
Amended Layout	Local	Short-Term	Medium	High	High	Medium Negative	Medium-Low Negative	High
Mitigation/Management Actions								
<ul style="list-style-type: none"> • The destruction of habitat during construction should also be strictly contained within the development footprint. • The use of lay-down areas within the footprint of the development should be used where feasible, to avoid habitat loss and disturbance to adjoining areas. • All building waste produced during the construction phase should be removed from the development site and be disposed of at a designated waste management facility. Similarly, all liquid wastes should be contained in appropriately sealed vessels/ponds within the footprint of the development, and be disposed of at a designated waste management facility after use. Any liquid and chemical spills should be dealt with accordingly to avoid contamination of the environment. • Preconstruction environmental induction for all construction staff on site to ensure that basic environmental principles are adhered to, and awareness about not harming or hunting ground-dwelling species (e.g. bustards, korhaans, thick-knees and coursers), and owls, which are often persecuted out of superstition. • This induction should also include awareness as to no littering, appropriate handling of pollution and chemical spills, avoiding fire hazards, minimizing wildlife interactions, remaining within demarcated construction areas etc. • All construction vehicles should adhere to a low speed limit to avoid collisions with susceptible species such nocturnal and crepuscular species (e.g. nightjars, thick-knees and owls) which sometimes forage or rest along roads. • Sensitive microhabitats should be avoided, such as nesting sites during the breeding season of large terrestrial birds (generally summer; Hockey <i>et al.</i>, 2005). 								

- Any avifauna threatened by the construction activities should be relocated to safety by the ECO or appropriately qualified environmental officer.
- If holes or trenches need to be dug, these should not be left open for extended periods of time as ground-dwelling avifauna or their flightless young may fall in and become trapped in them. Holes should only be dug when they are required and should be used and filled shortly thereafter.
- No construction activity should occur near to active raptor nests should these be discovered prior to or during the construction phase. If there are active nests near construction areas, these should be reported to ECO and should be monitored until the birds have finished nesting and the fledglings left the nest.

Table 10: Avifaunal impacts due to operation of Hotazel Solar – disturbance and collisions with PV panels

Nature of Impact								
Avifaunal Impacts due to operational activities – disturbance and collisions with PV panels								
Alternative	Spatial Extent	Duration	Intensity	Probability	Reversibility	Significance and Status		Confidence level
						Without Mitigation	With Mitigation	
Amended Footprint	Local	Long-term	Medium-Low	Moderate	High	Medium-Low Negative	Low-Negative	High
Mitigation/Management Actions								
<ul style="list-style-type: none"> • If the site must be lit at night for security purposes, this should be done with downward-directed low-UV type lights (such as most LEDs), which do not attract insects. The use of lighting at night should be kept to a minimum, so as not to unnecessarily attract invertebrates to the solar facility and possibly their avian predators, and to minimise disturbance to birds flying over the facility at night. • All incidents of collision with panels should be recorded as meticulously as possible, including data related to the species involved, the exact location of collisions within the facility, and suspected cause of death. • If birds are nesting on the infrastructure of the facility and cannot be tolerated due to operational risks of fire, electrical shorts, soiling of panels or other concerns, birds should be prevented from accessing nesting sites by using mesh or other manner of excluding them. Birds should not be shot, poisoned or harmed as this is not an effective control method and has negative ecological consequences. Birds that already have eggs or nestlings should be allowed to fledge their young before nests are removed. If there are any persistent problems with avifauna, then an avifaunal specialist should be consulted for advice on further mitigation. • All food waste and litter at the site should be placed in bins with lids and removed from the site on a regular basis. • All vehicles accessing the site should adhere to a low speed limit (30km/h max) to avoid collisions with susceptible species such nocturnal and crepuscular species (e.g. nightjars, thick-knees and owls) which sometimes forage or rest on roads at night. 								

Table 11: Direct avifaunal impacts during construction of the grid connection

Impact Nature								
Direct Avifaunal Impacts During Construction								
Alternative	Spatial Extent	Duration	Intensity	Probability	Reversibility	Significance and Status		Confidence level
						Without Mitigation	With Mitigation	
Preferred LILO connection	Local	Short-Term	Low	Medium	High	Low Negative	Very Low Negative	High
Mitigation/Management Actions								
<ul style="list-style-type: none"> • All personnel should undergo environmental induction with regards to avifauna and in particular awareness about not harming, collecting or hunting ground-dwelling species (e.g. bustards, korhaans, thick-knees and coursers), and owls, which are often persecuted out of superstition. • Any avifauna threatened by the construction activities should be removed to safety by the ECO or appropriately qualified environmental officer. 								

- All vehicles (construction or other) accessing the site should adhere to a low speed limit (30km/h max) to avoid collisions with susceptible species such as nocturnal and crepuscular species (e.g. nightjars, thick-knees and owls) which sometimes forage or rest on roads, especially at night.
- If holes or trenches need to be dug, these should not be left open for extended periods of time as ground-dwelling avifauna or their flightless young may fall in and become trapped in them. Holes should only be dug when they are required and should be used and filled shortly thereafter.
- The design and layout of any proposed power lines must be endorsed by members of the Eskom-EWT Strategic Partnership, taking into account the mitigation guidelines recommended by Birdlife South Africa (Smit, 2012; Jenkins et al., 2017).
- The route that the power line will follow should be the shortest distance possible across an area where collisions are expected to be minimal, or follow existing power lines, and be marked with bird diverters to make the lines as visible as possible to collision-susceptible species. Recommended bird diverters such as brightly coloured 'aviation' balls, thickened wire spirals, or flapping devices that increase the visibility of the lines should be fitted where considered necessary.
- Regular monitoring of power lines should be undertaken to detect bird carcasses, to enable the identification of any areas of high impact to be marked with bird diverters.
- Only power lines structures that are considered safe for birds should be erected to avoid the electrocutions of birds (particularly large raptors) perching or attempting to perch. Where necessary, deterrent devices such as bird guards should be mounted on relevant parts of the pylons to further reduce the possibility of electrocutions.

Table 12: Operational phase power line electrocution and collision risk of large terrestrial birds and raptors.

Operational phase power line electrocution and collision risk of large terrestrial birds and raptors									
Impact Nature	Alternative	Spatial Extent	Duration	Intensity	Probability	Reversibility	Significance and Status		Confidence level
							Without Mitigation	With Mitigation	
	Preferred LILO connection	Local	Long-Term	Low	Low	High	Low Negative	Very Low Negative	High
Mitigation/Management Actions									
<ul style="list-style-type: none"> • Regular monitoring of the power line should be undertaken to detect bird carcasses, to enable the identification of any areas of high impact where additional mitigation such as fitting bird diverters may be required. This should occur at least monthly for the first year after construction. • Any raptors or other birds nesting on the power line structures should not be disturbed while the birds are breeding. If species such as sociable weavers are present, which are making the line unsafe, then these nests should be regularly removed before breeding can commence. Measures should also be put in place to prevent birds persistently nesting in problem areas by using artificial nesting platforms and perches positioned away from live components. 									

5.3 AGRICULTURAL IMPACTS

The agricultural specialist concluded that changing the footprint location, access road and transmission routings does not add any additional possible impacts or change mitigation measures as set out in the approved environmental authorisation for Hotazel Solar. All mitigation measures identified in the original Agricultural Assessment are still valid for the amendment. The following impacts on agricultural resources are thus applicable to the amendment of Hotazel Solar.

Table 13: Impacts of potential soil pollution on long term agricultural potential

Nature of Impact	Soil pollution with contaminants during the construction phase may take place, including spillages of hydrocarbon (fuel oil) and cement. This is possible during the construction of all facets of the facility: laydown area, concrete foundations of the auxiliary buildings, inverter stations subterranean cabling, main access and internal service roads.	
	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Medium Term (2)	Very short (1)

Magnitude	Low (4)	Minor(2)
Probability	Probable (3)	Probable(3)
Significance	Low(21)	Low (12)
Status (Positive or negative)	Negative	Negative
Reversibility	Partly reversible	Fully reversible
Irreplaceable loss of Resources?	Yes	Yes
Can impacts be mitigated?	Yes	Yes
Mitigation:		
Refuelling normally takes place in the laydown area. Proactive measures must be taken which include constructing a designated area where refuelling can take place. This area must have an impervious floor with low wall that will keep the spillage inside. This area should be cleaned with absorbent material on a regular basis. The use of cut-off drains must be incorporated to divert upslope clean storm water around the site into a natural drainage system. On the down slope, polluted water must be collected via a cut-off drain into a leachate collection and recovery system. When spillage accidentally takes place, it should be removed and replaced with unpolluted soil. The clean soil can be sourced from excavations nearby. The polluted soil must be piled at a temporary storage facility with a firm waterproof base and is protected from inflow of storm water. It must have an effective drainage system to a waterproof spillage collection area. Contaminated soil must be disposed of at a hazardous waste storage facility.		
Cumulative impacts:	None, site only	
Residual Risks:	Yes, potential pollution would be difficult to clear entirely.	

Table 14: Impact of loss of agricultural land.

Nature of Impact	The establishment of the PV Solar facility will be done at the expense of agricultural land. The area to be lost for agricultural development would be 270ha in size. This includes the area under PV panels, internal service roads and temporary laydown area.	
	Without mitigation	With mitigation
Extent	Local – Regional (3)	Local (2)
Duration	Long-term (4)	Long-term (4)
Magnitude	Moderate (6)	Low (4)
Probability	Probable (3)	Improbable (2)
Significance	Medium (39)	Low (20)
Status (Positive or negative)	Negative	Negative
Reversibility	Low	Low
Irreplaceable loss of Resources?	No	No
Can impacts be mitigated?	Yes	Yes
Mitigation:		
The general objective is to position the PV facilities on the lowest potential soil and not in places that may have impact on agricultural activities, drainage lines and places with a sensitive nature, such as protected tree species. Where possible, existing road alignments are followed and roads upgraded for use during the lifespan of the facility.		
Cumulative impacts:		
Impact is low due to low agricultural potential of the region		
Residual Risks:		
None, after decommissioning this impact will be reversed when rehabilitation has been completed.		

Table 15: Impact on impairment of land capability

Nature of Impact	The construction of a PV Solar facility will cause impairment of the land capability with the potential risk of erosion	
	Without mitigation	With mitigation
Extent	Local (2)	Local (2)
Duration	Short term (2)	Short term (2)
Magnitude	Low (6)	Low (4)
Probability	Probable (3)	Probable (3)
Significance	Medium(30)	Low (24)
Status (positive or negative)	Negative	Negative
Reversibility	Low	Low

Irreplaceable loss of resources?	Yes	Yes
Can impacts be mitigated?	Yes	Yes
Mitigation:		
Clear trees and bushes selectively, leaving grass undisturbed. Use mechanised machinery when installing posts to eliminate need for foundations. Construct on alternate strips to combat possible erosion.		
Cumulative impacts:		
No cumulative impacts are expected to occur, as all impacts will be site bounded.		
Residual Risks:		
None. Affected areas will be rehabilitated, as the impact will only be applicable during construction phase.		

Table 16: Impact of changes to drainage patterns.

Nature of Impact	The establishment of the PV Solar facility may alter drainage patterns with construction and cause erosion	
	Without mitigation	With mitigation
Extent	Local (2)	Local (1)
Duration	Long term (2)	Long term (2)
Magnitude	Low (2)	Low (2)
Probability	Probable (2)	Probable (2)
Significance	Low(12)	Low (10)
Status (positive or negative)	Negative	Negative
Reversibility	Low	Low
Irreplaceable loss of resources?	Yes	Yes
Can impacts be mitigated?	Yes	Yes
Mitigation:	Establish structures on the contour. Use grass strips to regulate flow speed	
Cumulative impacts:	No, all impacts will be site bounded.	
Residual Risks:	None. Affected areas will be rehabilitated when operation has ceased.	

Table 17: Impacts of potential soil during the operational phase.

Nature of Impact	Soil pollution with contaminants during the operational phase may take place, including spillages of hydrocarbon (fuel oil) and cement. This is possible during the maintenance of the facility	
	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Long Term (4)	Long Term (4)
Magnitude	Low (2)	Minor(2)
Probability	Probable (2)	Probable(2)
Significance	Low (14)	Low (14)
Status (Positive or negative)	Negative	Negative
Reversibility	Partly reversible	Fully reversible
Irreplaceable loss of Resources?	Yes	Yes
Can impacts be mitigated?	Yes	Yes
Mitigation:	Refuelling normally takes place in the workshop of the control building. A designated area for refuelling must be constructed with an impervious floor and low wall that will keep the spillage inside. Any spillage must be cleaned with absorbent material as soon as possible and disposed into clearly marked containers. Where spillage takes place, contaminated soil must be excavated and replaced with unpolluted soil. The contaminated soil should be collected by a licenced waste contractor.	
Cumulative impacts:	None	
Residual Risks:	Yes, Potential soil pollution difficult to completely clear	

Table 18: Impacts of potential soil pollution during decommissioning.

Nature of Impact	Soil pollution with contaminants during the decommissioning phase may take place, including spillages of hydrocarbon (fuel oil) and cement. This is possible during the decommissioning of all facets of the facility: laydown area, demolished concrete foundations of the auxiliary buildings, inverter stations subterranean cabling, main access and internal service roads.
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	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Medium Term (2)	Very short (1)
Magnitude	Low (4)	Minor(2)
Probability	Probable (3)	Probable(3)
Significance	Low(21)	Low (12)
Status (Positive or negative)	Negative	Negative
Reversibility	Partly reversible	Fully reversible
Irreplaceable loss of Resources?	Yes	Yes
Can impacts be mitigated?	Yes	Yes
Mitigation:	Refuelling normally takes place in the workshop of the control building. A designated area for refuelling must be constructed with an impervious floor and low wall that will keep the spillage inside. Any spillage must be cleaned with absorbent material as soon as possible and disposed into clearly marked containers. Where spillage takes place, contaminated soil must be excavated and replaced with unpolluted soil. The contaminated soil should be collected by a licenced landfill contractor.	
Cumulative impacts:	No, site-bound.	
Residual Risks:	Yes, It is impossible to clear the affected area completely.	

5.4 ARCHAEOLOGICAL IMPACTS

The Archaeology specialist concluded that in terms of archaeological heritage, impacts associated with the amendment are expected to be negligible as the entire study area study area is considered to be of very low heritage significance.

The following impacts on the Archaeological resources are therefore still applicable to the amended footprint position.

Table 19: Impacts on archaeology resources.

Nature of Impact:	Clearing and levelling the ground for solar panels, access roads, cabling, substation and powerlines may impact archaeological resources.	
	Without Mitigation	With Mitigation
Nature/Type	Negative & Direct	Positive
Extent	Local (2)	On-site (1)
Duration	Permanent (5)	Long-term (4)
Magnitude	Low (3)	Low (2)
Probability/likelihood	Improbable (2)	Improbable (2)
Significance	Minor (20)	Minor (14)
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	
Mitigation:	If during ground clearance or construction, any graves or dense accumulations of stone tools are uncovered then the ECO should report this to SAHRA (Tel: 021 462 4502)	
Operational Phase:	None	
Decommissioning Phase:	None	
Cumulative impacts:	None	

5.5 PALAEOLOGICAL IMPACTS

Dr John Almond from Natura confirmed that there are no changes to palaeontological impacts as a result of the proposed amendments.

The overall palaeontological sensitivity of the entire property is assessed as LOW. Pockets of locally HIGH sensitivity along drainage lines and around pans are not expected here, although their presence cannot be entirely discounted. Plio-Pleistocene calcretised gravels and finer-grained alluvium in such settings might contain mammalian remains such as bones, teeth and horn cores in addition to abundant, low-diversity trace fossil assemblages.

5.6 VISUAL IMPACTS

The Visual specialist confirmed that the amendment of the footprint position for Hotazel Solar will not result in any additional impacts on Visual resources. The following Visual Impacts are therefore expected to be applicable to the proposed amendment.

Table 20: Visual Impacts Proposed PV Array

Impact Activity	Phase	Mitigation	Nature	Extent	Duration	Severity	Probability	Significance without	Significance with
Hotazel Solar amendment	Construction.	W/Out	negative	Local	Short	Med	P	Med	
		With	negative	Local	Short	Low	P		Low
	Operation	W/Out	negative	Local	Long	Med	P	Med	
		With	negative	Local	Long	Low	P		Low
	Closure	W/Out	negative	Local	Short	Med	P	Med	
		With	negative	Local	Short	Low	P		Low
Cumulative	W/Out	negative	Local	Long	Med	P	Low		
	With	negative	Local	Long	Med	P		Low	

Table 21: Visual Impacts of Hotazel Solar Access Road

Impact Activity	Phase	Mitigation	Nature	Extent	Duration	Severity	Probability	Significance without	Significance with
Road access (both options)	Construction	W/Out	negative	Site	Short	Medium - Low	P	Medium - Low	
		With	negative	Site	Short	Low	P		Low
	Operation	W/Out	negative	Site	Long	Medium - Low	P	Medium - Low	
		With	negative	Site	Long	Very Low	P		Very low
	Closure	W/Out	negative	Site	Short	Medium - Low	P	Medium - Low	
		With	negative	Site	Short	Low	P		Very low
Cumulative	W/Out	negative	Site	Long	Medium	I	Medium		
	With	positive	Site	Short	Very Low	P		Low	

Table 22: Visual Impacts of Preferred Grid Connection

Impact Activity	Phase	Mitigation	Nature	Extent	Duration	Severity	Probability	Significance without	Significance with
Preferred LILO (no difference between authorised and amendment)	Cons.	W/Out	-ve	Local	Short	L	P	L	
		With	-ve	Local	Short	L	P		VL
	Ops.	W/Out	-ve	Local	Long	L	P	L	
		With	-ve	Local	Long	L	P		VL
	Close	W/Out	-ve	Local	Short	L	P	L	
		With	-ve	Local	Short	VL	P		VL
	Cuml.	W/Out	-ve	Reg.	Long	H	P	M	
		With	-ve	Local	Short	L	P		L

5.7 FRESHWATER IMPACTS

Dr Brian Colloty has confirmed that there will be no additional impacts on freshwater resources as a result of the proposed amendments.

It was determined that the site and associated infrastructure, regardless of the alternatives or options, would not have any direct impact on local or regional aquatic waterbodies. This included, rivers, springs, depressions and floodplain wetlands.

6. SOCIAL IMPACTS

The social specialist confirmed that no additional social impacts would occur as a result in the change in footprint. The following impacts associated with the construction and planning phases of the development were identified and assessed by the specialist and these remain applicable to the amended footprint position.

Table 23: Impact assessment on direct and indirect employment opportunities

Nature:		
The creation of direct and indirect employment opportunities during the construction phase of the project.		
	Without enhancement	With enhancement
Extent	Local-Regional (3)	Local-Regional (3)
Duration	Short term (2)	Short term (2)
Magnitude	Minor (2)	Moderate (6)
Probability	Highly probable(4)	Definite (5)
Significance	Low (28)	Medium (55)
Status (positive or negative)	Positive	Positive
Reversibility	N/A	N/A
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Enhancement:		
<ul style="list-style-type: none"> • A local employment policy should be adopted to maximise opportunities made available to the local labour force. • Labour should be sourced from the local labour pool, and only if the necessary skills are unavailable should labour be sourced from (in order of preference) the greater LM, John Taolo Gaetsewe DM, Northern Cape Province, South Africa, or elsewhere. • Where feasible, training and skills development programmes should be initiated prior to the commencement of the construction phase. • As with the labour force, suppliers should also as far as possible be sourced locally. • As far as possible local contractors that are compliant with Broad-Based Black Economic Empowerment (B-BBEE) criteria should be used. • The recruitment selection process should seek to promote gender equality and the employment of women wherever possible. 		
Cumulative impacts:		
<ul style="list-style-type: none"> • Opportunity to decrease the local unemployment levels and increase the levels of income and spending power within the region. • Opportunity to upgrade and improve skills levels in the area. • Opportunity for local entrepreneurs to develop their businesses (which could result in the creation of additional employment opportunities, levels of income and spending power through sustainable growth). 		
Residual impacts:		
<ul style="list-style-type: none"> • Improved pool of skills and experience in the local area. • Economic growth for small-scale entrepreneurs. • Temporary employment during the construction phase will result in job losses and struggles for construction workers to find new employment opportunities. 		

Table 24: Economic multiplier effects impact assessment

Nature:		
Significance of the impact from the economic multiplier effects from the use of local goods and services.		
	Without enhancement	With enhancement
Extent	Local-Regional (3)	Local-Regional (3)
Duration	Short term (2)	Short term (2)
Magnitude	Low (4)	Moderate (6)
Probability	Highly probable (4)	Definite (5)
Significance	Medium (36)	Medium (55)
Status (positive or negative)	Positive	Positive
Reversibility	N/A	N/A
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Enhancement:		
<ul style="list-style-type: none"> It is recommended that a local procurement policy is adopted to maximise the benefit to the local economy. A database of local companies, specifically Historically Disadvantaged Individuals (HDIs) which qualify as potential service providers (e.g. construction companies, security companies, catering companies, waste collection companies, transportation companies etc.) should be created and companies listed thereon should be invited to bid for project-related work where applicable. Local procurement is encouraged along with engagement with local authorities and business organisations to investigate the possibility of procurement of construction materials, goods and products from local suppliers where feasible. 		
Cumulative impacts:		
Opportunity for local capital expenditure, potential for the local service sector.		
Residual impacts:		
Improved local service sector, growth in local business.		

Table 25: Assessment of impacts from an influx of jobseekers and change in population in the study area

Nature:		
In-migration of labourers in search of employment opportunities, and a resultant change in population, and increase in pressure on local resources and social networks, or existing services and infrastructure.		
	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Short-term (2)	Short-term (2)
Magnitude	Moderate (6)	Low (4)
Probability	Improbable (2)	Improbable (2)
Significance	Low (18)	Low (14)
Status (positive or negative)	Negative	Negative
Reversibility	Yes	
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Mitigation:		
<ul style="list-style-type: none"> Develop and implement a local procurement policy which prioritises “locals first” to prevent the movement of people into the area in search of work. Engage with local community representatives prior to construction to facilitate the adoption of the locals first procurement policy. Provide transportation for workers (from Hotazel and surrounds) to ensure workers can easily access their place of employment and do not need to move closer to the project site. Working hours should be kept between daylight hours during the construction phase, and / or as any deviation that is approved by the relevant authorities. Compile and implement a grievance mechanism. 		

<ul style="list-style-type: none"> • Appoint a Community Liaison Officer (CLO) to assist with the procurement of local labour. • Prevent the recruitment of workers at the project site. • Implement a method of communication whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process. • Establish clear rules and regulations for access to the proposed site. • Appoint a security company and implement appropriate security procedures to ensure that workers do not remain onsite after working hours. • Inform local community organisations and policing forums of construction times and the duration of the construction phase. • Establish procedures for the control and removal of loiterers from the construction site.
<p>Cumulative impacts</p> <p>Additional pressure on natural resources, services, infrastructure and social dynamics in the area due to an increase in people and change in population. Possible increase in criminal activities and economic losses in area for property owners.</p>
<p>Residual impacts:</p> <p>Possibility of outside workers remaining in the area after construction is completed and subsequent pressures on local infrastructure, resources and services.</p>

Table 26: Assessment of safety and security impacts

Nature:		
Temporary increase in safety and security concerns associated with the influx of people during the construction phase.		
	Without mitigation	With mitigation
Extent	Local (2)	Local (2)
Duration	Short term (2)	Short term (2)
Magnitude	High (8)	Moderate (6)
Probability	Probable (3)	Improbable (2)
Significance	Medium (36)	Low (20)
Status (positive or negative)	Negative	Negative
Reversibility	Yes	
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Mitigation:		
<ul style="list-style-type: none"> • Working hours should be kept within daylight hours during the construction phase, and / or as any deviation that is approved by the relevant authorities. • Provide transportation for workers to prevent loitering within or near the project site outside of working hours. • The perimeter of the construction site should be appropriately secured to prevent any unauthorised access to the site. The fencing of the site should be maintained throughout the construction period. • The appointed EPC Contractor must appoint a security company to ensure appropriate security procedures and measures are implemented. • Access in and out of the construction site should be strictly controlled by a security company appointed to the project. • A CLO should be appointed as a grievance mechanism. A method of communication should be implemented whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process. • The EPC Contractor should implement a stakeholder management plan to address neighbouring farmer concerns regarding safety and security. • The project proposed must prepare and implement a Fire Management Plan; this must be done in conjunction with surrounding landowners. • The EPC Contractor must prepare a Method Statement which deals with fire prevention and management. 		
Cumulative impacts:		
<ul style="list-style-type: none"> • Possible increase in crime levels (with influx of people) with subsequent possible economic losses. • Increased risk of veld fires if vegetation clearing is not appropriately implemented, monitored and maintained. 		
Residual impacts:		
None anticipated.		

Table 27: Assessment of impacts on daily living and movement patterns.

Nature:		
Temporary increase in traffic disruptions and movement patterns during the construction phase.		
	Without mitigation	With mitigation
Extent	Local-Regional (3)	Local-Regional (3)
Duration	Short term (2)	Short term (2)
Magnitude	High (8)	Moderate (6)
Probability	Probable (3)	Probable (3)
Significance	Medium (39)	Medium (33)
Status (positive or negative)	Negative	Negative
Reversibility	Yes	
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Mitigation:		
<ul style="list-style-type: none"> All vehicles must be road worthy and drivers must be qualified, obey traffic rules, follow speed limits and be made aware of the potential road safety issues. Heavy vehicles should be inspected regularly to ensure their road worthiness. Provision of adequate and strategically placed traffic warning signs and control measures at gravel farm access roads to warn road users of the construction activities taking place for the duration of the construction phase. Warning signs must be visible at all times, and especially at night. Implement penalties for reckless driving as a way to enforce compliance to traffic rules. Avoid heavy vehicle activity during "peak" hours (when children are taken to school, or people are driving to work). The developer and EPC Contractor must ensure that all fencing along access roads is maintained in the present condition or repaired if disturbed due to construction activities. The developer and EPC Contractor must ensure that the roads utilised for construction activities are either maintained in the present condition or upgraded if disturbed due to construction activities. The EPC Contractor must ensure that damage / wear and tear caused by construction related traffic to the access roads is repaired before the completion of the construction phase. A method of communication must be implemented whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process. 		
Cumulative impacts:		
Possible increased traffic and traffic disruptions impacting local communities.		
Residual impacts:		
None anticipated.		

Table 28: Assessment of nuisance impacts (noise and dust)

Nature:		
Nuisance impacts in terms of temporary increase in noise and dust, and wear and tear on access roads to the site.		
	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Short-term (2)	Short-term (2)
Magnitude	High (8)	Moderate (6)
Probability	Highly probable (4)	Probable (3)
Significance	Medium (44)	Low (27)
Status (positive or negative)	Negative	Negative
Reversibility	Yes	
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Mitigation:		
<ul style="list-style-type: none"> The movement of heavy vehicles associated with the construction phase should be timed to avoid weekends, public holidays and holiday periods where feasible. Dust suppression measures must be implemented for heavy vehicles such as wetting of gravel roads on a regular basis and ensuring that vehicles used to transport sand and building materials are fitted with tarpaulins or covers. Ensure all vehicles are road worthy, drivers are qualified and are made aware of the potential noise and dust issues. 		

<ul style="list-style-type: none"> A CLO should be appointed. A method of communication should be implemented whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process.
Cumulative impacts:
<ul style="list-style-type: none"> If damage to roads is not repaired then this will affect other road users and result in higher maintenance costs for vehicles of road users. Other construction activities in the area will heighten the nuisance impacts, such as noise, dust and wear and tear on roads.
Residual impacts:
Only damage to roads that is not fixed could affect road users.

Table 29: Assessment of impacts on the sense of place

Nature:		
Intrusion impacts from construction activities will have an impact on the area’s “sense of place”.		
	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Short-term (2)	Short-term (2)
Magnitude	Low (4)	Low (4)
Probability	Highly probable (4)	Probable (3)
Significance	Low (28)	Low (21)
Status (positive or negative)	Negative	Negative
Reversibility	Yes	Yes
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Mitigation:		
<ul style="list-style-type: none"> Implement mitigation measures identified in the Visual Impact Assessment (VIA) prepared for the project. Limit noise generating activities to normal daylight working hours and avoid weekends and public holidays. The movement of heavy vehicles associated with the construction phase should be timed to avoid weekends, public holidays and holiday periods where feasible. Dust suppression measures must be implemented for heavy vehicles such as wetting of gravel roads on a regular basis and ensuring that vehicles used to transport sand and building materials are fitted with tarpaulins or covers. All vehicles must be road-worthy and drivers must be qualified and made aware of the potential road safety issues and need for strict speed limits. Communication, complaints and grievance channels must be implemented and contact details of the CLO must be provided to the local community in the study area. 		
Cumulative impacts:		
Other construction activities in the area will heighten the intrusion impacts, such as noise, dust and aesthetic pollution and further negatively impact the area’s ‘sense of place’.		
Residual impacts:		
None anticipated.		

Table 30: Employment opportunities and skills development

Nature:		
The creation of employment opportunities and skills development opportunities during the operation phase for the country and local economy.		
	Without mitigation	With mitigation
Extent	Local-Regional (3)	Local-Regional (3)
Duration	Long term (4)	Long term (4)
Magnitude	Low (4)	Low (4)
Probability	Highly probable(4)	Definite (5)
Significance	Medium (44)	Medium (55)
Status (positive or negative)	Positive	Positive
Reversibility	N/A	
Irreplaceable loss of resources?	No	

Can impacts be mitigated?	Yes
Mitigation:	
<ul style="list-style-type: none"> It is recommended that local employment policy is adopted to maximise the opportunities made available to the local community. The recruitment selection process should seek to promote gender equality and the employment of women wherever possible. Vocational training programs should be established to promote the development of skills. 	
Cumulative impacts:	
Opportunity to reduce unemployment rates.	
Residual impacts:	
Improved pool of skills and experience in the local area.	

Table 31: Assessment of the development of non-polluting, renewable energy infrastructure

Nature:		
Development of non-polluting, renewable energy infrastructure.		
	Without mitigation	With mitigation
Extent	Local-Regional-National (4)	Local-Regional-National (4)
Duration	Long term (4)	Long term (4)
Magnitude	Minor (2)	Minor (2)
Probability	Definite (5)	Definite (5)
Significance	Medium (50)	Medium (50)
Status (positive or negative)	Positive	Positive
Reversibility	Yes	
Irreplaceable loss of resources?	Yes (impact of climate change)	
Can impacts be mitigated?	No	
Mitigation:		
None identified.		
Cumulative impacts		
Reduce carbon emissions through the use of renewable energy and contribute to reducing global warming.		
Residual impacts		
Reduce carbon emissions through the use of renewable energy and contribute to reducing global warming.		

Table 32: Assessment of the contribution to Local Economic Development (LED) and social upliftment

Nature:		
Contribution to LED and social upliftment during the operation of the project.		
	Without mitigation	With mitigation
Extent	Local-Regional-National (4)	Local-Regional-National (4)
Duration	Long term (4)	Long term (4)
Magnitude	Moderate (6)	High (8)
Probability	Highly probable (4)	Highly probable (4)
Significance	Medium (56)	High (64)
Status (positive or negative)	Positive	Positive
Reversibility	N/A	
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Mitigation:		

<ul style="list-style-type: none"> • A Community Needs Assessment (can) must be conducted to ensure that the LED and social upliftment programmes proposed by the project are meaningful. • Ongoing communication and reporting is required to ensure that maximum benefit is obtained from the programmes identified, and to prevent the possibility for such programmes to be misused. • The programmes should be reviewed on an ongoing basis to ensure that they are best suited to the needs of the community at the time (bearing in mind that these are likely to change over time).
Cumulative impacts:
Significant LED and social upliftment of the local communities as a result of other IPP projects within the area.
Residual impacts:
Social upliftment of the local communities through the development and operation of the project.

Table 33: Assessment of the visual impact and impacts on sense of place

Nature:		
Visual impacts and sense of place impacts associated with the operation phase of Hotazel Solar.		
	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Long term (4)	Long term (4)
Magnitude	Low (4)	Minor (2)
Probability	Highly Probable (4)	Probable (3)
Significance	Medium (36)	Low (21)
Status (positive or negative)	Negative	Negative
Reversibility	Yes	
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Mitigation:		
Implement mitigation measures identified in the VIA report prepared for the project.		
Cumulative impacts:		
Potential impact on the current sense of place in the area due to other solar power developments within the area.		
Residual impacts:		
The visual impact of Hotazel Solar will remain if the facility is not decommissioned and dismantled after the end of its operational life.		

Table 34: Assessment on the loss of agricultural land and overall productivity

Nature:		
Loss of agricultural land and overall productivity as a result of the operation of the proposed project on an agricultural property.		
	Without mitigation	With mitigation
Extent	Site (1)	Site (1)
Duration	Long term (4)	Long term (4)
Magnitude	Moderate (6)	Low (4)
Probability	Not probable (2)	Improbable (1)
Significance	Low (22)	Low (9)
Status (positive or negative)	Negative	Negative
Reversibility	Reversible	Reversible
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Mitigation:		
<ul style="list-style-type: none"> • Implement the mitigation measures detailed in the Agricultural Impact Assessment 		

Cumulative impacts:
Loss of agricultural land as a result of the number of solar energy facilities proposed within the area. Decrease in overall productivity as a result of the loss of grazing land.
Residual impacts:
Economically unviable portions of agricultural land which may reduce overall productivity.

6.1 IMPACT STATEMENT

None of the participating specialists identified any impacts that remain high after mitigation.

As can be seen in the table below, the participating specialists did not identify any changes to the nature of the impacts, nor are there any increases in the level of significance of the impacts associated with the amendment of the EA.

Furthermore, it must be noted that none of the specialists identified any additional mitigations needed to achieve the significance ratings detailed above.

Table 35: The table below provides a comparative summary of the nature and post mitigation level of key impacts between the authorised Hotazel Solar and this amendment.

Nature of Impact	Level and Status of Impact – Hotazel Solar as Authorised	Level and Status of Impact – Hotazel Solar as Amended
Terrestrial Ecology		
Impact on vegetation and faunal habitat	Medium (negative)	Medium (negative)
Impact on protected species (<i>v. erioloba</i> and <i>v. haematoxylon</i>)	Medium (negative)	Medium (negative)
Impact on Critical Biodiversity Areas (CBA's)	Negligible	Negligible
Impact on National Protected Area Expansion focus areas (NPAES)	Negligible	Negligible
Avifauna		
Construction phase impacts on Avifauna	Medium - Low (negative)	Medium – Low (negative)
Operational phase impacts on Avifauna	Low (negative)	Low (negative)
Agriculture		
Soil pollution with contaminants during the construction phase may take place, including spillages of hydrocarbon (fuel oil) and cement.	Low (negative)	Low (negative)
The establishment of the PV Solar facility will be done at the expense of agricultural land.	Low (negative)	Low (negative)
The construction of a PV Solar facility will cause impairment of the land capability with the potential risk of erosion	Low (negative)	Low (negative)
The establishment of the PV Solar facility may alter drainage patterns with construction and cause erosion	Low (negative)	Low (negative)
Soil pollution with contaminants during the operational phase may take place, including spillages of hydrocarbon (fuel oil) and cement. This is possible during the maintenance of the facility.	Low (negative)	Low (negative)

Nature of Impact	Level and Status of Impact – Hotazel Solar as Authorised	Level and Status of Impact – Hotazel Solar as Amended
Soil pollution with contaminants during the decommissioning phase may take place, including spillages of hydrocarbon (fuel oil) and cement	Low (negative)	Low (negative)
Heritage		
Impact on Archaeology due to construction of PV facility and infrastructure (Clearing and levelling the ground for solar panels, access roads, cabling, substation and powerlines may impact archaeological resources.)	Low (negative)	Low (negative)
Visual		
Visual Impact of Visual PV Array and Structures during construction	Low (negative)	Low (negative)
Visual Impact of Visual PV Array and Structures during operation	Low (negative)	Low (negative)
Visual Impact of Visual PV Array and Structures during decommissioning	Low (negative)	Low (negative)
Cumulative visual Impact	Medium (negative)	Medium (negative)
Visual Impact of preferred Grid Connection and Substation	Very Low (negative)	Very Low (negative)
Freshwater		
Direct impact on local or regional aquatic waterbodies (including, rivers, springs, depressions and floodplain wetlands)	None (negative)	None (negative)
Palaeontology		
Impact on Palaeontological Resources	Very Low (negative)	Very Low (negative)
Cumulative Impact on Palaeontological Resources	Low (negative)	Low (negative)
Social		
The creation of direct and indirect employment opportunities during the construction phase of the project	Medium (positive)	Medium (positive)
Significance of the impact from the economic multiplier effects from the use of local goods and services.	Medium (positive)	Medium (positive)
In-migration of labourers in search of employment opportunities, and a resultant change in population, and increase in pressure on local resources and social networks, or existing services and infrastructure.	Low (negative)	Low (negative)
Temporary increase in safety and security concerns associated with the influx of people during the construction phase.	Low (negative)	Low (negative)

Nature of Impact	Level and Status of Impact – Hotazel Solar as Authorised	Level and Status of Impact – Hotazel Solar as Amended
Temporary increase in traffic disruptions and movement patterns during the construction phase	Medium (negative)	Medium (negative)
Nuisance impacts in terms of temporary increase in noise and dust, and wear and tear on access roads to the site.	Low (negative)	Low (negative)
Intrusion impacts from construction activities will have an impact on the area's "sense of place".	Low (negative)	Low (negative)
Contribution to Local Economic Development and social upliftment during the operation of the project.	High (positive)	High (positive)

7. MITIGATION MEASURES

Please refer to the table below, which summarises the mitigation measures recommended by both the Specialists and Cape EAPrac and are equally applicable to the Hotazel Solar as authorised as well as the proposed amendment.

Table 36: Mitigation measures required for the construction, operation and decommissioning of the Hotazel Solar development.

Mitigation	Condition of Approval	Included in EMPr
ECOLOGY		
Undertake preconstruction walk-through of the facility in order to locate species of conservation concern that can be translocated (such as aloes) as well as comply with the Northern Cape Nature Conservation Act and DENC/DAFF permit conditions.	X	
Vegetation clearing to commence only after walk through has been conducted and necessary permits obtained.	X	
Preconstruction environmental induction for all construction staff on site to ensure that basic environmental principles are adhered to. This includes awareness of no littering, appropriate handling of pollution and chemical spills, avoiding fire hazards, minimizing wildlife interactions, remaining within demarcated construction areas etc.		X
Environmental Control Officer (ECO) to provide supervision and oversight of vegetation clearing activities within sensitive areas such as near high density <i>Acacia erioloba</i> .	X	
Vegetation clearing to be kept to a minimum. No unnecessary vegetation to be cleared.		X
All construction vehicles should adhere to clearly defined and demarcated roads. No off-road driving to be allowed outside of the construction area.		X
All personnel should undergo environmental induction with regards to fauna and, in particular, awareness about not harming or collecting species such as snakes, tortoises and owls, which are often persecuted out of superstition.		X
Any fauna threatened by the construction activities should be removed to safety by the ECO or appropriately qualified environmental officer.		X
All construction vehicles should adhere to a low speed limit to avoid collisions with susceptible species such as snakes and tortoises.		X
All hazardous materials should be stored in the appropriate manner to prevent contamination of the site. Any accidental chemical, fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill.		X
If trenches need to be dug for water pipelines or electrical cabling, these should not be left open for extended periods of time as fauna may fall in and become trapped in		X

Mitigation	Condition of Approval	Included in EMPr
them. Trenches which are standing open should have places where there are soil ramps allowing fauna to escape the trench.		
Temporary lay-down areas should be located within previously transformed areas or areas that have been identified as being of low sensitivity. These areas should be rehabilitated after use.	X	
All personnel should undergo environmental induction with regards to fauna and, in particular, awareness about not harming or collecting species such as snakes, tortoises and owls, which are often persecuted out of superstition.		X
Any fauna threatened by the construction activities should be removed to safety by the ECO or appropriately qualified environmental officer.		X
The development footprint should be kept to a minimum and natural vegetation should be encouraged to return to disturbed areas		X
An open space management plan should be developed for the site, which should include management of biodiversity within the fenced area, as well as that in the adjacent rangeland.		X
AVIFAUNAL		
The use of lay-down areas within the footprint of the development should be used where feasible, to avoid habitat loss and disturbance to adjoining areas.		X
All building waste produced during the construction phase should be removed from the development site and be disposed of at a designated waste management facility. Similarly, all liquid wastes should be contained in appropriately sealed vessels/ponds within the footprint of the development, and be disposed of at a designated waste management facility after use. Any liquid and chemical spills should be dealt with accordingly to avoid contamination of the environment.		X
Preconstruction environmental induction for all construction staff on site to ensure that basic environmental principles are adhered to, and awareness about not harming or hunting ground-dwelling species (e.g. bustards, korhaans, thick-knees and coursers), and owls, which are often persecuted out of superstition.		X
This induction should also include awareness as to no littering, appropriate handling of pollution and chemical spills, avoiding fire hazards, minimizing wildlife interactions, remaining within demarcated construction areas etc.		X
All construction vehicles should adhere to a low speed limit to avoid collisions with susceptible species such nocturnal and crepuscular species (e.g. nightjars, thick-knees and owls) which sometimes forage or rest along roads.		X
Sensitive microhabitats should be avoided, such as nesting sites during the breeding season of large terrestrial birds (generally summer; Hockey et al., 2005).		X
Any avifauna threatened by the construction activities should be removed to safety by the ECO or appropriately qualified environmental officer		X
If holes or trenches need to be dug, these should not be left open for extended periods of time as ground-dwelling avifauna or their flightless young may fall in and become trapped in them. Holes should only be dug when they are required and should be used and filled shortly thereafter.		X
No construction activity should occur near to active raptor nests should these be discovered prior to or during the construction phase. If there are active nests near construction areas, these should be reported to ECO and should be monitored until the birds have finished nesting and the fledglings left the nest.		X
If the site must be lit at night for security purposes, this should be done with downward-directed low-UV type lights (such as most LEDs), which do not attract insects. The use of lighting at night should be kept to a minimum, so as not to unnecessarily attract invertebrates to the solar facility and possibly their avian predators, and to minimise disturbance to birds flying over the facility at night.		X
All incidents of collision with panels should be recorded as meticulously as possible, including data related to the species involved, the exact location of collisions within the facility, and suspected cause of death. Post-construction monitoring with the aid of video surveillance should be considered, as this will contribute towards understanding bird interactions with solar panels.		X

Mitigation	Condition of Approval	Included in EMPr
If birds are nesting on the infrastructure of the facility and cannot be tolerated due to operational risks of fire, electrical shorts, soiling of panels or other concerns, birds should be prevented from accessing nesting sites by using mesh or other manner of excluding them. Birds should not be shot, poisoned or harmed as this is not an effective control method and has negative ecological consequences. Birds that already have eggs or nestlings should be allowed to fledge their young before nests are removed. If there are any persistent problems with avifauna, then an avifaunal specialist should be consulted for advice on further mitigation.		X
All food waste and litter at the site should be placed in bins with lids and removed from the site on a regular basis.		X
During decommissioning, all above-ground infrastructure should be removed from the site. Below-ground infrastructure such as cabling can be left in place if it does not pose a risk, as removal of such cables may generate additional disturbance and impact, however, this should be in accordance with the facilities' decommissioning and recycling plan, and as per the agreements with the land owners concerned.		X
During decommissioning, rehabilitation and revegetation of the site in accordance with a site-specific revegetation and rehabilitation plan, with follow-up monitoring to ensure compliance and adequate achievement of revegetation targets.		X
The design and layout of any proposed power lines must be endorsed by members of the Eskom-EWT Strategic Partnership, taking into account the mitigation guidelines recommended by Birdlife South Africa (Smit, 2012; Jenkins et al., 2017).	X	
The route that the power line will follow should be the shortest distance possible across an area where collisions are expected to be minimal, or follow existing power lines, and be marked with bird diverters to make the lines as visible as possible to collision-susceptible species. Recommended bird diverters such as brightly coloured 'aviation' balls, thickened wire spirals, or flapping devices that increase the visibility of the lines should be fitted were considered necessary.		X
Regular monitoring of power lines should be undertaken to detect bird carcasses, to enable the identification of any areas of high impact to be marked with bird diverters.		X
Only power lines structures that are considered safe for birds should be erected to avoid the electrocutions of birds (particularly large raptors) perching or attempting to perch. Where necessary, deterrent devices such as bird guards should be mounted on relevant parts of the pylons to further reduce the possibility of electrocutions.	X	
Any raptors or other birds nesting on the power line structures should not be disturbed while the birds are breeding. If species such as sociable weavers are present, which are making the line unsafe, then these nests should be regularly removed before breeding can commence. Measures should also be put in place to prevent birds persistently nesting in problem areas by using artificial nesting platforms and perches positioned away from live components.		X
The facility should be fenced off in a manner which allows small fauna to pass through the facility, but that does not result in ground-dwelling avifauna (e.g. bustards, korhaan, francolin, thick-knees) being trapped and electrocuted along the boundary fences (Visser, 2016). In practical terms this means that the facility should be fenced-off to include only the developed areas and should include as little undeveloped ground or natural veld as possible. In addition, there should not be electrified ground-strands present within 30cm of the ground and the electrified strands should be located on the inside of the fence and not the outside. Furthermore, the fence should be a single layer fence and not a double fence with a large gap between. Images of suitable fencing types from existing PV facilities are available on request.		X
AGRICULTURE		
Refuelling normally takes place in the laydown area. Proactive measures must be taken which include constructing a designated area where refuelling can take place. This area must have an impervious floor with low wall that will keep the spillage inside. This area should be cleaned with absorbent material on a regular basis. The use of cut-off drains must be incorporated to divert upslope clean storm water around the site into a natural drainage system. On the down slope, polluted water must be collected via a cut-off drain into a leachate collection and recovery system. When		X

Mitigation	Condition of Approval	Included in EMPr
spillage accidentally takes place, it should be removed and replaced with unpolluted soil. The clean soil can be sourced from excavations nearby. The polluted soil must be piled at a temporary storage facility with a firm waterproof base and is protected from inflow of storm water. It must have an effective drainage system to a waterproof spillage collection area. Contaminated soil must be disposed of at a hazardous waste storage facility.		
Brush cut only to clear bush leaving topsoil un-disturbed. Use mechanised machinery when installing posts to eliminate need for foundations. Where possible construct on alternate strips to combat possible erosion.		
Refuelling normally takes place in the workshop of the control building. A designated area for refuelling must be constructed with an impervious floor and low wall that will keep the spillage inside. Any spillage must be cleaned with absorbent material as soon as possible and disposed into clearly marked containers. Where spillage takes place, contaminated soil must be excavated and replaced with unpolluted soil. The contaminated soil should be collected by a licenced landfill contractor.		
The general objective is to position the PV facilities on the lowest potential soil and not in places that may have impact on agricultural activities, drainage lines and places with a sensitive nature. Where possible, existing road alignments are followed and roads upgraded for use during the live span of facility.		X
ARCHAEOLOGY		
Archaeological resources identified during this study do not require further recording/studies, and because they are considered to be of low heritage value and have been adequately recorded through this assessment, it is suggested that they can be disturbed or damaged without a permit from SAHRA.		X
In the event that excavations and earthmoving activities expose significant archaeological or heritage resources, such activities must stop and SAHRA must be notified immediately.	X	
If exposed during development, archaeological resources must be dealt with in accordance with the National Heritage Resources Act (No. 25 of 1999) and at the expense of the developer.	X	
In the event of exposing human remains during construction, the matter will fall into the domain of the South African Heritage Resources Agency and will require a professional archaeologist to undertake mitigation if needed. Such work will also be at the expense of the developer	X	
PALAEONTOLOGY		
The ECO and / or the Site Engineer responsible for the development must remain aware that all sedimentary deposits have the potential to contain fossils and he / she should thus monitor all substantial excavations into sedimentary bedrock for fossil remains. If any substantial fossil remains (e.g. vertebrate bones, teeth, horn cores) are found during construction SAHRA should be notified immediately (Contact details: SAHRA, 111 Harrington Street, Cape Town. PO Box 4637, Cape Town 8000, South Africa. Phone: +27 (0)21 462 4502. Fax: +27 (0)21 462 4509. Web: www.sahra.org.za) so that appropriate mitigation (i.e. recording, sampling or collection) by a palaeontological specialist can be considered and implemented, at the developer's expense	X	
A chance-find procedure should be implemented so that, in the event of fossils being uncovered, the ECO / Site Engineer will take the appropriate action, which includes: <ul style="list-style-type: none"> - Stopping work in the immediate vicinity and fencing off the area with tape to prevent further access; - Reporting the discovery to the provincial heritage agency and/or SAHRA; - Appointing a palaeontological specialist to inspect, record and (if warranted) sample or collect the fossil remains; - Implementing any further mitigation measures proposed by the palaeontologist; and - Allowing work to resume only once clearance is given in writing by the relevant authorities. 		X
SAHRA		

Mitigation	Condition of Approval	Included in EMPr
The Final EIA and EMPr must be submitted to SAHRA for record purposes;		X
If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA APM Unit (Natasha Higgitt/Phillip Hine 021 462 5402) must be alerted. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Thingahangwi Tshivhase/Mimi Seetelo 012 320 8490), must be alerted immediately as per section 35(3) and 36(6) of the NHRA. A professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA;		X
The decision regarding decision on the amendment must be communicated to SAHRA and uploaded to the SAHRIS Case Application.		X
VISUAL		
Bushveld trees surrounding the proposed PV sites should be retained for visual screening where possible.	X	
Topsoil from the footprints of the road and structures should be dealt with in accordance with EMP.		X
The buildings should be painted a grey-brown colour or similar.		X
Fencing should be simple, diamond shaped (to catch wind-blown litter) and appear transparent from a distance. The fences should be checked on a monthly basis for the collection of litter caught on the fence.		X
It is recommended that mitigations be implemented to reduce light spillage in night-time (refer to appendix for general guidelines).		X
Control of lights at night to allow only local disturbance to the current dark sky night landscape (refer to appendix for general guidelines).		X
Continued erosion control and management of dust.		X
All structures should be removed and where possible, recycled		X
Building structures should be broken down (including foundations) unless they can be repurposed.		X
The rubble should be managed according to NEMWA and deposited at a registered landfill if it cannot be recycled or reused.		X
All compacted areas should be rehabilitated according to a EMPr		
Monitoring for soil erosion should be undertaken on a routine basis		
FRESHWATER		
Any stormwater within the site must be handled in a suitable manner, i.e. separate clean and dirty water streams around the plant, and install stilling basins to capture large volumes of run-off, trap sediments and reduce flow velocities.		X
SOCIAL		
A local employment policy should be adopted to maximise opportunities made available to the local labour force.		X
Labour should be sourced from the local labour pool, and only if the necessary skills are unavailable should labour be sourced from (in order of preference) the greater Joe Morolong LM, John Taolo Gaetsewe DM, Northern Cape Province, South Africa, or elsewhere.		X
Where feasible, training and skills development programmes should be initiated prior to the commencement of the construction phase.		X
As far as possible local contractors that are compliant with Broad-Based Black Economic Empowerment (B-BBEE) criteria should be used.		X
The recruitment selection process should seek to promote gender equality and the employment of women wherever possible.		X
A database of local companies, specifically Historically Disadvantaged Individuals (HDIs) which qualify as potential service providers (e.g. construction companies,		X

Mitigation	Condition of Approval	Included in EMPr
security companies, catering companies, waste collection companies, transportation companies etc.) should be created and companies listed thereon should be invited to bid for project-related work where applicable.		
Local procurement is encouraged along with engagement with local authorities and business organisations to investigate the possibility of procurement of construction materials, goods and products from local suppliers where feasible.		X
Develop and implement a local procurement policy which prioritises "locals first" to prevent the movement of people into the area in search of work.		X
Engage with local community representatives prior to construction to facilitate the adoption of the locals first procurement policy.		X
Provide transportation for workers (from Kathu and surrounds) to ensure workers can easily access their place of employment and do not need to move closer to the project site.		X
Working hours should be kept between daylight hours during the construction phase, and / or as any deviation that is approved by the relevant authorities.		X
Compile and implement a grievance mechanism.		X
Appoint a Community Liaison Officer (CLO) to assist with the procurement of local labour.		X
Prevent the recruitment of workers at the project site.		X
Implement a method of communication whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process.		X
Establish clear rules and regulations for access to the proposed site.		X
Appoint a security company and implement appropriate security procedures to ensure that workers do not remain onsite after working hours.		X
Inform local community organisations and policing forums of construction times and the duration of the construction phase.		X
Establish procedures for the control and removal of loiterers from the construction site.		X
Working hours should be kept within daylight hours during the construction phase, and / or as any deviation that is approved by the relevant authorities.		X
Provide transportation for workers to prevent loitering within or near the project site outside of working hours.		X
The perimeter of the construction site should be appropriately secured to prevent any unauthorised access to the site. The fencing of the site should be maintained throughout the construction period.		X
The appointed EPC Contractor must appoint a security company to ensure appropriate security procedures and measures are implemented.		X
Access in and out of the construction site should be strictly controlled by a security company appointed to the project.		X
A CLO should be appointed as a grievance mechanism. A method of communication should be implemented whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process.		X
The EPC Contractor should implement a stakeholder management plan to address neighbouring farmer concerns regarding safety and security.		X
The project proposed must prepare and implement a Fire Management Plan; this must be done in conjunction with surrounding landowners.		X
Communication, complaints and grievance channels must be implemented and contact details of the CLO must be provided to the local community in the study area.		X
The EPC Contractor must prepare a Method Statement which deals with fire prevention and management.		X
The movement of heavy vehicles associated with the construction phase should be timed to avoid weekends, public holidays and holiday periods where feasible.		X
It is recommended that local employment policy is adopted to maximise the opportunities made available to the local community.		X

Mitigation	Condition of Approval	Included in EMPr
<p>A Community Needs Assessment must be conducted to ensure that the Local Economic Development and social upliftment programmes proposed by the project are meaningful.</p> <p>Ongoing communication and reporting is required to ensure that maximum benefit is obtained from the programmes identified, and to prevent the possibility for such programmes to be misused.</p> <p>The programmes should be reviewed on an ongoing basis to ensure that they are best suited to the needs of the community at the time (bearing in mind that these are likely to change over time).</p>		X

8. PUBLIC PARTICIPATION

This Assessment report and all appendices were available for public review and comment for a 30 Day period extending from 16 July 2020 to 17 August 2020. All details regarding the public participation are included in annexure R (R1 -R7) of this Final Assessment Report.

8.1 STAKEHOLDER IDENTIFICATION AND REGISTRATION OF I&AP'S

A number of key stakeholders were automatically registered and were given an opportunity to comment on the Amendment Assessment Report. Copies and proof of these notifications are included in **Appendix R4**. A list of key stakeholders automatically registered and notified of this amendment process are included in the table below.

Table 37: Key Stakeholders automatically registered as part of the EA amendment Process

Stakeholders Registered		
Neighbouring property owners	Department of Environmental Affairs and Nature Conservation	Department of Water and Sanitation
All parties registered as having prospecting rights on Remainder of Farm 279	Joe Morolong Municipality: Municipal Manager	Department of Science and Technology
Joe Morolong: Ward 4 Councillor	South African National Roads Agency Limited	The Council for Scientific and Industrial Research
South African Heritage Resources Agency	Department of Transport and Public Works	The South African Square Kilometre Array
Northern Cape Heritage Resources Authority	Department of Health	The South African Civil Aviation Authority
Department of Agriculture, Forestry and Fisheries	Department of Minerals and Energy	Department of Science and Technology
Provincial Department of Agriculture	Eskom	Department of Communications
Endangered Wildlife Trust.	Department of Mineral Resources	SENTECH
Department of Environmental Affairs, Biodiversity Directorate.	Birdlife Africa.	Land Owner of the Remainder of Farm 280
Land Owner of Portion 11 of Farm 279	Landowner Portion 3 of Farm York A 279	Landowner Remaining Extent (Portion 0) of Farm York A 279

Apart from the key stakeholders listed in the table above, all I&AP's that were registered as part of the original EIA process were also provided with an opportunity to review the amendment assessment report and associated appendices. A copy of this I&AP register is attached in Annexure R1.

8.2 I&AP AND STAKEHOLDER NOTIFICATION.

The notification of stakeholders was done digitally by means of a letter served via email. All key stakeholders identified in section 8.1 above as well as those previously registered for the original EIA process had access to emails communication. Therefore, no parties required postal or courier copies of documentation.

Other than the parties listed in section 8.1 above, a notice was also placed in the Kathu Gazette on 18 July 2020, calling for the registration of I&P's. Two additional parties registered in response to this newspaper as listed in section 8.4 below.

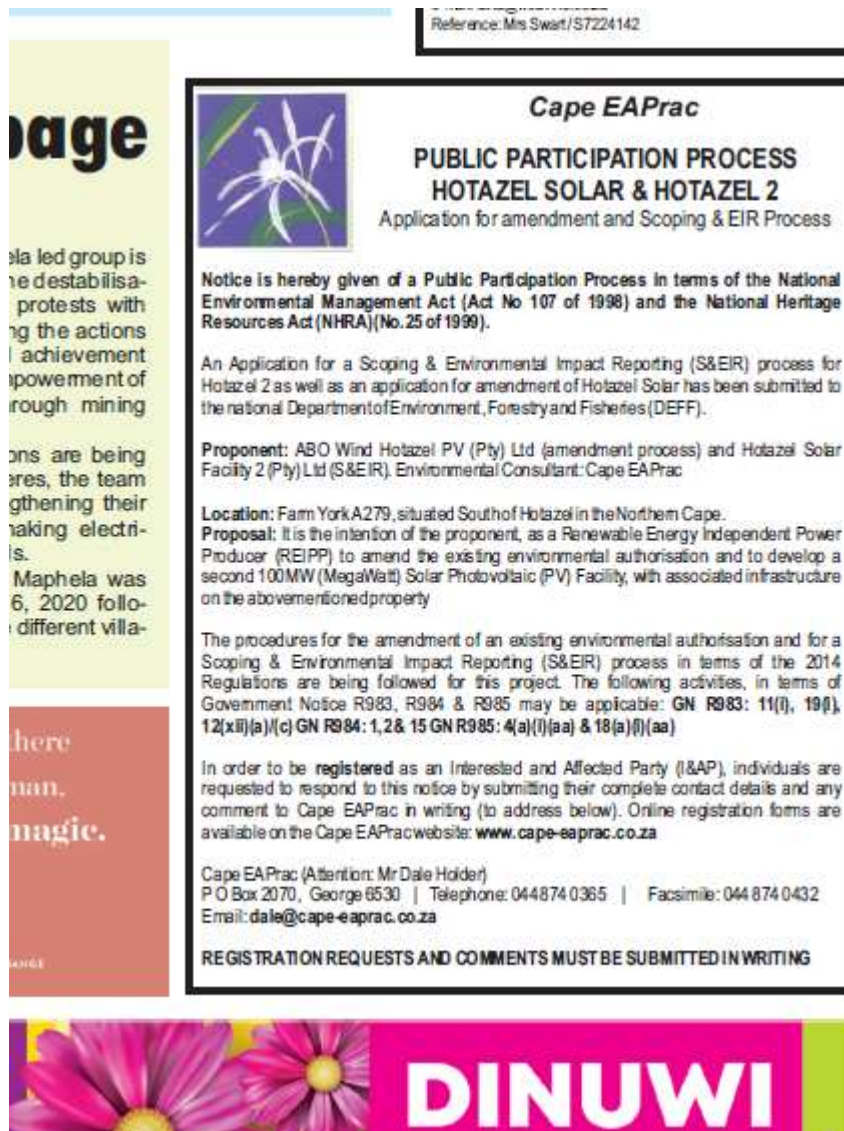


Figure 3: Excerpt of advert placed in Kathu Gazette (please also refer to Annexure R3)

8.3 AVAILABILITY OF AMENDMENT ASSESSMENT REPORT.

As per the approved public participation plan (Annexure R6), the amendment assessment report and all appendices were available on the Cape EAPrac Website and a dedicated publicly available download link.

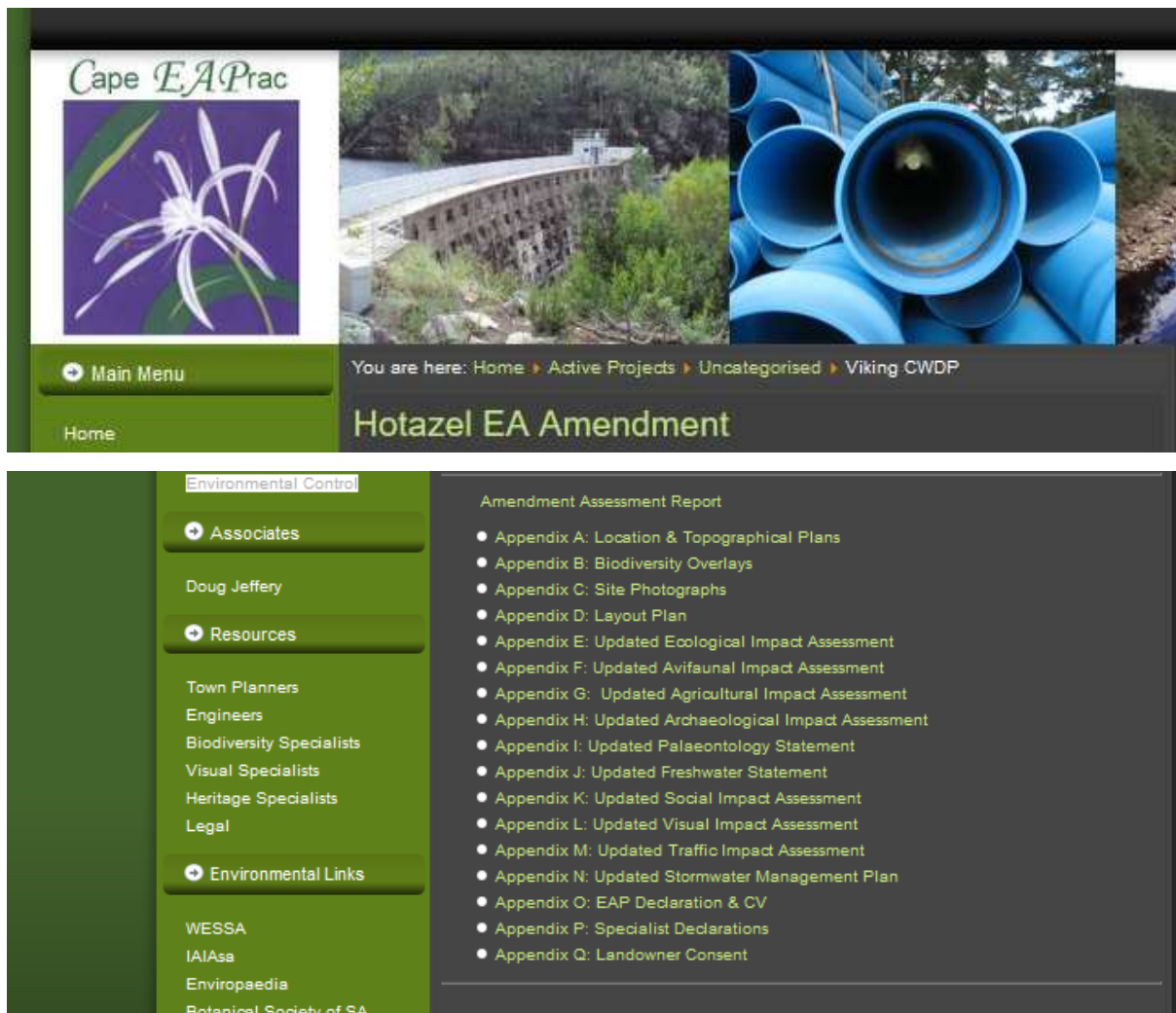


Figure 4: Amendment Assessment Report as available on the Cape EAPrac Website.

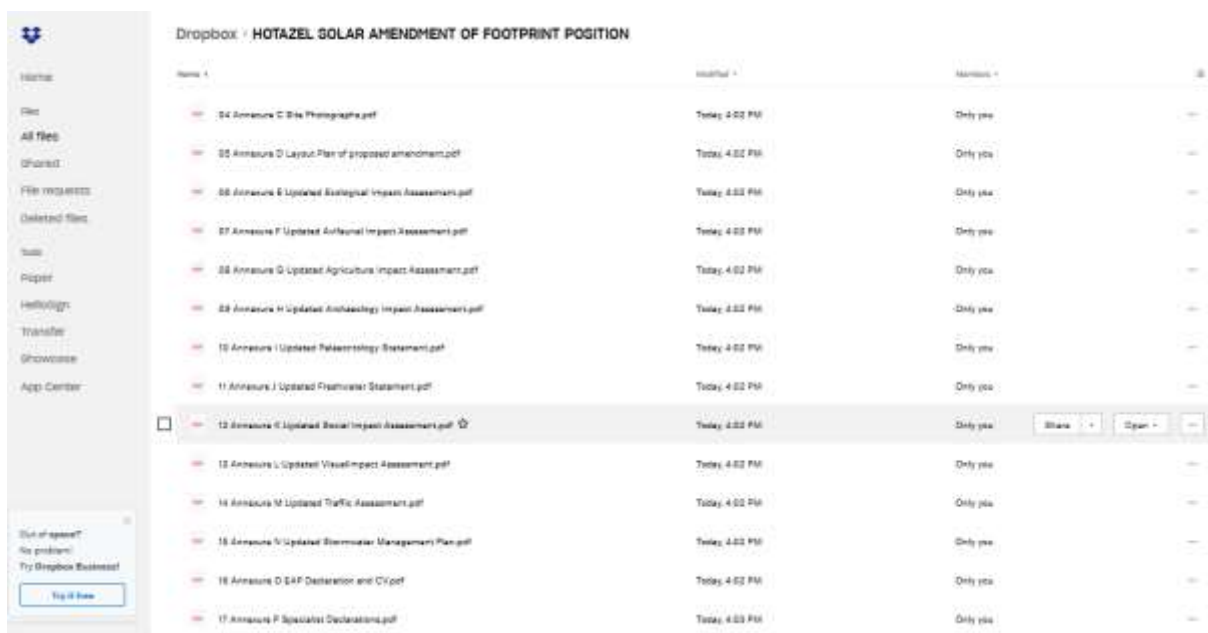


Figure 5: Amendment Assessment Report as available on a dedicated download link.

Apart from the Website accessibility and direct download links, the following key stakeholders were also provided with a digital copy of the amendment assessment report with all appendices on CD.

Table 38: Key stakeholders provided with copies of the amendment assessment report on CD.

First Name	Surname	Organization
Thoko	Buthelezi	Department of Agriculture, Forestry & Fisheries
Anneliza	Collett	Department of Agriculture, Forestry & Fisheries
Rene	de Kock	SANRAL
Seppie	Esterhuizen	Department of Agriculture, Forestry & Fisheries
Marshall	Felaar	ESKOM Distribution - Western Operating Unit
Thembelani	Gantsho	Kudumane Manganese Resources
John	Geeringh	ESKOM
Belinda	Glen	Endangered Wildlife Trust (EWT)
Phillip	Hine	SAHRA
Danita	Hohne	Dept. Water Affairs: Northern Cape
Garth	Julius	SANRAL
Julia	Katong	Joe Morolong Municipality
Johan	Koegelenberg	SENTECH
Kevin	Leask	ESKOM
Seoka	Lekota	DEA: Directorate of Biodiversity & Conservation
Jacoline	Mans	Department of Agriculture, Forestry & Fisheries
Mashudu	Marubini	Department of Agriculture, Forestry & Fisheries
Ayanda	Mbolekwa	Department of Communications
Deneo	Moleko	Department of Environmental Affairs & Nature Conservation North Cape
Mmboneni Kevin	Mutheiwana	Department of Mineral Resources
V	Phiri	Joe Morolong Municipality
Noma	Qase	Department of Minerals and Energy
Samantha	Ralston	Birdlife Africa
Ntsundeni	Ravhugoni	Department of Mineral Resources
Danie	Stander	Northern Cape Department of Health
Lizelle	Stroh	South African Civil Aviation Authority
Adrian	Tiplady	Department of Science & Technology
T	Tlhaole	Joe Morolong Municipality
Nico	Toerien	Department of Agriculture, Land Reform & Rural Development
Justine	Wyngaardt	ESKOM Distribution - Western Operating Unit

8.4 COMMENTS AND RESPONSES

During the comment period, comments were received from the following parties:

- Department of Environment, Forestry and Fisheries
- Eskom – provided standard protocol for working within or near Eskom Servitudes
- Mr SD du Plessis – Private – Interested in opportunities when the project is constructed (Dust Suppression)
- Mr Roy Mayef – SCS - Interested in opportunities when the project is constructed (Air conditioner supplier)

These comments and their responses are contained in Annexure R5 and are also summarised in the comments and responses report in Annexure R2.

9. CONCLUSION AND RECOMMENDATIONS

Cape EAPrac is of the opinion that the information contained in this Impact Report and the documentation attached hereto is sufficient to allow the competent authority to apply their minds to the potential negative and/or positive impacts associated with the proposed amendment of the development footprint, in respect of the activities authorised.

This assessment process has not identified any fatal flaws with the proposed amendment and as such it is our reasoned view that the amendment can be considered for authorisation. All impacts range from high positive to medium negative and all highly negative impacts have been avoided in both the authorised project as well as this proposed amendment.

It is the recommendation of the EAP that the proposed amendment of Hotazel Solar be considered for approval.

10. ABBREVIATIONS

AIA	Archaeological Impact Assessment
BGIS LUDS	Biodiversity Geographic Information System Land Use Decision Support
CBA	Critical Biodiversity Area
CDSM	Chief Directorate Surveys and Mapping
CEMPr	Construction Environmental Management Programme
DEA	Department of Environmental Affairs
DEA&NC	Department of Environmental Affairs and Nature Conservation
DME	Department of Minerals and Energy
DSR	Draft Scoping Report
EAP	Environmental Impact Practitioner
EHS	Environmental, Health & Safety
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMPr	Environmental Management Programme
ESA	Ecological Support Area
GPS	Global Positioning System
GWh	Giga Watt hour
HIA	Heritage Impact Assessment
I&APs	Interested and Affected Parties
IDP	Integrated Development Plan
IFC	International Finance Corporation
IPP	Independent Power Producer
kV	Kilo Volt
LUDS	Land Use Decision Support
LUPO	Land Use Planning Ordinance
MW	Mega Watt

NEMA	National Environmental Management Act
NEMBA	National Environmental Management: Biodiversity Act
NERSA	National Energy Regulator of South Africa
NHRA	National Heritage Resources Act
NPAES	National Protected Area Expansion Strategy
NSBA	National Spatial Biodiversity Assessment
NWA	National Water Act
PM	Post Meridien; “Afternoon”
PSDF	Provincial Spatial Development Framework
REIPPPP	Renewable Energy Independent Power Producer Procurement Programme
S.A.	South Africa
SACAA / CAA	South African Civil Aviation Authority
SAHRA	South African National Heritage Resources Agency
SANBI	South Africa National Biodiversity Institute
SANS	South Africa National Standards
SDF	Spatial Development Framework
TOPS	Threatened and Protected Species

11. REFERENCES

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