HOTAZEL SOLAR PARK NEAR HOTAZEL, NORTHERN CAPE PROVINCE (DEA REF. NO 14/12/16/3/3/2/987/AM1)

Draft EA Amendment Report

juwi Renewable Energies (Pty) Ltd

25 November 2019

Revision: 0

DEA Reference:
14/12/16/3/3/2/987/AM1

Document control record

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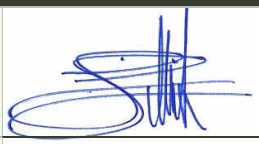
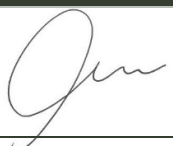
Document control						
Report title	HOTAZEL SOLAR PARK NEAR HOTAZEL, NORTHERN CAPE PROVINCE (DEA REF. NO 14/12/16/3/3/2/987)					
Document ID	505889		**Project number**		14/12/16/3/3/2/987/AM1	
File path	N:\Data\PROJECT\ENVIRO\PROJECTS\505889~Hotazel EA Amendement\3 Project delivery\Phase ii - EA Amendement\2 Deliverables (Modify to needs)\3 Draft report\0-Draft EA Amendment Report_KALO_DEVS_KALO_18112019.docx					
Client	juwi Renewable Energies (Pty) Ltd		**Client contact**		Chris Bellingham	
This report is to be referred to in bibliographies as	AURECON. 2019. HOTAZEL SOLAR PARK NEAR HOTAZEL, NORTHERN CAPE PROVINCE (DEA REF. NO 14/12/16/3/3/2/987/AM1): Draft EA Amendment Report					
Rev	**Date**	**Revision details/status**	**Prepared by**	**Author**	**Verifier**	**Approver**
0	25 November 2019	Draft EA Amendment	Patrick Killick	Patrick Killick	Charles Norman	Charles Norman
Current revision	**0**					

Approval			
Project leader		Project director	
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Terms of Reference

The Environmental Assessment Practitioner (EAP) and Applicant conducted a pre-application meeting with the Department of Environmental Affairs (DEA) on 4 June 2019 to gain consensus and guide the way forward for this application. The notes of this meeting are found in Appendix 1 to the Application form, which is appended hereto as Annexure A.2. From thus we understood the application would follow and Part 2 Environmental Authorisation (EA) amendment process in terms of the Environmental Impact Assessment (EIA) Regulations of 2014, as amended. We also resolved the way forward on several other issues. The approach and terms of reference are further confirmed in the DEA's letter of acknowledgement and response to the application received on 17 October 2019, which is also appended hereto as Annexure A.5, which establishes the deadline for submission of the final amendment report as 6 February 2020 (90days). The standard and specific requirements for this application have been brought together into the following terms of reference with a notes column to indicate how or where these have been addressed:

Table 1 | Terms of Reference and information cross-reference

Tasks / requirement	Notes
1. Comprise a single Part II Application for EA amendment, as provided for in Regulation 31 and described in Regulation 32, here:	
Reg 32(1) 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 -	The final version of this report
(i) an assessment of all impacts related to the proposed change;	See Section 4 on page 15
(ii) advantages and disadvantages associated with the proposed change; and	See Section 3.3 on page 14
(iii) measures to ensure avoidance, management and mitigation of impacts associated with such proposed change; and	No new impacts and no change to impact significance ratings and no additional mitigation has been prescribed
(iv) any changes to the EMPr;	The EMPr has been split per project phase (with revisions to the project description and provisional project layouts) and appended as Annexure D.1 and Annexure D.2.
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 relevant portions as follows:	It was agreed that a public participation process as provided in Regulation 41 shall be undertaken.
Reg. 41 Public participation process	
(2) The person conducting a public participation process must take into account any relevant guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of an application or proposed application which is subjected to public participation by-	Details as follows:
(a) fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of-	Proof will be providing proof as Annexure F.1 to the final report
(i) the site where the activity to which the application or proposed application relates is or is to be undertaken; and	Confirmed
(ii) any alternative site;	No alternative site considered
(b) giving written notice, in any of the manners provided for in section 47D of the Act, to	Letter (Annexure F.2) and email notifications (Annexure F.3) will be sent to all registered I&APs and proof will be provided in the final report as Annexure F.3
(i) the occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken;	Registered as original I&AP
(ii) owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken;	Registered as original I&AP

Tasks / requirement	Notes
(iii) the municipal councillor of the ward in which the site and alternative site is situated and any organisation of ratepayers that represent the community in the area;	Registered as original I&AP
(iv) the municipality which has jurisdiction in the area;	Registered as original I&AP
(v) any organ of state having jurisdiction in respect of any aspect of the activity; and	Registered as original I&AP
(vi) any other party as required by the competent authority;	Registered as original I&AP
(c) placing an advertisement in- (i) one local newspaper; or (ii) any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;	Proof of the advertisement will be provided in Annexure F.1 of the final report
(bb) reflects the incorporation of comments received, including any comments of the competent authority	Any comments will be included in the final report as Annexure F.4
2. Application form must clearly state what was originally authorised.	See copy of Application form in Annexure A.4
3. The Application must include written confirmation from the Southern Ambition (Devon Mine) confirming they have relinquished their interests to the 52ha area.	See email correspondence in Annexure A.3
4. The application should present the separate layouts (per solar facility), and review of impact significance ratings collectively. The old vs new layout will also form part of the application, showing all infrastructure proposed and a clear legend that communicate with the content of the layout.	Separate layouts have been provided in the in Figure 3-3 and Figure 3-4, on page 12 and 13 respectively, as well as in the separate EMPrs
5. Specialists to undertake a review of impact assessment, and where this is not necessary in their opinion, confirm this in writing for inclusion in the EA amendment report.	All 10 specialists have responded in writing (see Annexure B)
6. Reference from the final EIA report of May 2017 that the site of 52ha was assessed must be made.	Specialist have confirmed the 52ha formed part of the baseline assessment and this has been included in the respective statements in Annexure B
The EA Amendment report must include specialist inputs with regard to the proposed amendment. Specialists are to review the proposed amendment and:	Refer to the Section 4 of this report for a summary of key specialist inputs
a. Confirm in writing if a review is necessary, if yes, then,	Seven of ten Specialists indicated a review of their assessment, in light of the proposed amendment, was not required.
b. Undertake a review of their impact assessment to include the changes (collective).	Three Specialists (visual, botanical & socioeconomic) indicated that they needed to study the amendment further and were commissioned. On review, all three found that the amendments were not significant and have provided statements in this regard in Annexure B.
Split the EMPr into 2 and include a separate layout and separate project description in each EMPr.	The EMPr for Hotazel Solar 1 (Pty) Ltd can be found in Annexure D.1 while the EMPr for Hotazel Solar 2 (Pty) Ltd can be found in Annexure D.2

1 INTRODUCTION

The Applicant, Hotazel Solar Farm 1 (Pty) Ltd, a wholly owned subsidiary of juwi Renewable Energies (Pty) Ltd has been authorised to construct a 200MW Solar Energy Facility near Hotazel in the Northern Cape. The project was authorised in September 2017 and has a 5-year validity period. The Environmental Authorisation (EA) DEA Ref. No 14/12/16/3/3/2/987 is appended hereto as Annexure A.1 and has not undergone any amendments thus far. Aurecon South Africa (Pty) Ltd (Aurecon) has been commissioned to undertake an EA amendment process in terms of the National Environmental Management Act (Act 107 of 1998), as amended.

Since the issuing of the authorisation, a 52ha area on the project property, which was previously excluded, has become available. This area was excluded due to mineral exploration activities by the neighbouring Devon Mine. The Applicant would therefore like to amend the current EA to reintroduce of this 52ha area into the project area and then, with the additional space, split the 200MW solar facility into two discreet 100MW solar facilities, each with its own with supporting facilities and infrastructure. The splitting of the facility will therefore require some duplication and rearrangement the project components and layout.

A pre-application meeting was held with the Department of Environmental Affairs (DEA) on 4 June 2019 (Annexure A.2) to determine a way forward for this application. It was agreed that the amendment would constitute change in scope of the EA in terms of section 31 of Government Notice Regulation 982 of 4 December 2014 (GN R.982) and may result in a change to the nature or scope of the associated impacts and thus a Part 2 EA amendment process must be undertaken in accordance with Section 32 of GN R.982.

This draft EA Amendment report has been complied in compliance with Section 32(1)(a) of the Environmental Impact Assessment (EIA) Regulations and includes an assessment of impacts related to the proposed changes, a description and motivation for the proposed changes, a description of the advantages and disadvantages of the proposed changes, and, any new mitigation and avoidance measures in respect of any impacts resulting from the proposed amendment, including additions or changes to the respective Environmental management Programmes (EMPr). The nature of the changes and the key sensitivities on the site required a review by the following specialists, visual, botanical and socioeconomic specialists, while all other specialists were able confirm on initial review that the proposed amendments did not warrant a review of their assessment (as agreed with the DEA) and the original impact profiles would be unaffected.

This report will be subjected to a 30-day public participation process (meeting the requirements of Section 41 of the EIA Regulations) and any comments received will be considered, addressed in the Final Report to be submitted to the DEA for their consideration in taking a decision on the proposed amendment. All Registered I&APs will be notified of the DEA's final decision and provided with an opportunity to appeal.

2 PROJECT DESCRIPTION

2.1 Overview and location

The project site is situated approximately 5km south east of the town of Hotazel in the in the Joe Morolong Local Municipality in the Northern Cape Province, as indicated by the red polygon in the adjoining Surveyor General's 1: 50,000 topocadastral map. The project is located on a single property, namely Portion 0 of the Farm Annex Langdon 278, which it shares partially with an existing open cast mining operation known as Devon mine. Figure 2-1 provides a locality map of the project site and surrounds properties. Figure 2-2 which follows and provides a sequence of site photos to provide the reader with a sense of place.

Figure 2-1 | Project locality

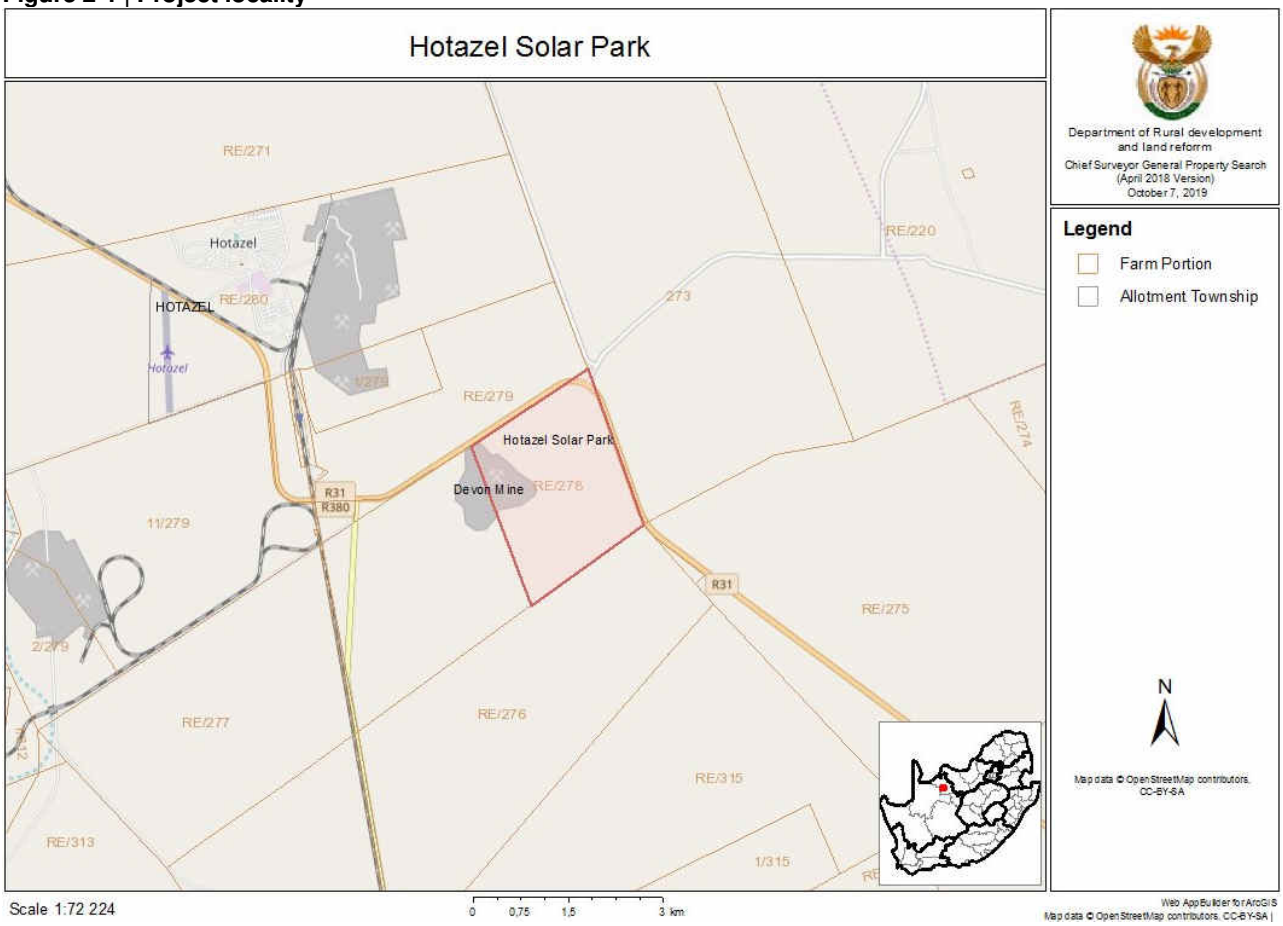

Figure 2-2 | General site photos / sense of place

2.2 Authorised project components

The following project components were assessed and authorised:

- **Solar Farm:** A 200MW solar facility with PV panels on steel mountings with single axis tracking mechanisms and concrete footings covering an estimated 250ha, below ground electrical cables connecting the PV systems to the onsite collector substation and inverters.
- **Battery Storage System:** A ≤100MWh battery storage facility for energy storage, maximum height of 8m and a maximum volume of 1120m^3 of batteries (dangerous goods) and associated operational, safety and control infrastructure.
- **Access road:** A ≤1.9km long, ≤8m wide gravel access road running from the R31, west ward along the southern boundary of Annex Langdon Farm.
- **Service roads**: ≤17km of ≤4m wide gravel service roads linking the access road and various project components and servicing the solar panel arrays. Roads fitted with traffic control systems and stormwater controls as required.
- **Collector substation:** ≤1ha collector substation to receive, convert and step up electricity from the PV facility to the 132kV grid suitable supply. The facility will house control rooms and grid control yards for both Eskom and the Independent Power Producer. A 32m telecommunications tower (lattice or monopole type) will be established in the substation area.
- **O&M area:**
  - ≤1ha hectare O&M laydown area (near / adjacent substation);
  - Parking, reception area, offices and ablutions facilities for operational staff, security and visitors;
  - Workshops, storage areas for materials and spare parts;
  - Water storage tanks or lined ponds (~160kl/day during first 3 months; ~90kl/day for 15 months during rest of construction period; ~20kl/day during operation);
  - Septic tanks and sewer lines to service ablution facilities; and
  - Central Waste collection and storage area.
- **Other infrastructure:**
  - Perimeter fencing, and internal security fencing and gates as required;
  - Access control gate and guard house on access road; and
  - ≤3.5km length of small diameter water supply pipeline connecting existing boreholes to storage.
- **Temporary infrastructure:**
  - A ≤4ha construction yard and laydown area to be used for the construction period and rehabilitated afterwards.
  - Open space (space between structures, solar panels, roads) required for movement, construction and shade avoidance, etc.

2.3 NEMA Activities authorised

In terms of the National Environmental Management Act (NEMA) EIA regulations, the activities listed in Table 2-1 were authorised. It is important to note that the proposed amendment will not affect these activities nor are any activities added or removed as a result of the proposed amendment.

Table 2-1 | Listed activities authorised in terms of NEMA GN No. 983, 984 and 985

Listed activity as described in GN R. 983, GN R. 984 and GN R.985	Description of the activities to be undertaken, including associated structures and infrastructure
Listed activities in terms of NEMA GN No. 983	
GN No. 983 Activity No. 11 (i) The development of facilities or infrastructure for the transmission and distribution of electricity- (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or	Onsite infrastructure including underground cabling for collection of electricity, with a capacity of ≤33kV would be required to connect the proposed PV facility to the proposed onsite central 132kV substation. The proposed facility is situated outside of the urban edge. This activity would therefore be triggered.
GN No. 983 Activity No. 24 (ii) The development of- (ii) a road with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;	Permanent roads outside the urban area will be required for the proposed PV facility. The width of the proposed access roads including sidings will be ≤8 metres to accommodate heavy two directional traffic, and this activity is thus triggered.
GN No. 983 Activity No. 28 (ii) Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 1 April 1998 and where such development: (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare.	The property is currently not being used for any formal agriculture. The north western corner of the property is used by the Strata-Africa Resources Pty Ltd for manganese prospecting. Historically, the land would have been used for extensive grazing, and thus will need to be rezoned to "Special Zone: Renewable Energy" use and so this activity will thus be triggered.

Listed activity as described in GN R. 983, GN R. 984 and GN R.985	Description of the activities to be undertaken, including associated structures and infrastructure
Listed activities in terms of NEMA GN No. 984	
GN No. 984 Activity No. 1 The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more.	The proposed PV facilities would have a generation capacity of ≤200MW and as such this activity is triggered.
GN No. 984 Activity No. 4 The development of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.	A utility scale battery storage facility, which consists of dangerous goods, with a maximum of 1120m^3 of batteries will be installed for certain alternatives. This activity will thus be triggered. The battery storage facility will cover an area of approximately 1ha.
GN No. 984 Activity No. 15 The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for- (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	More than 20ha of land will be cleared for the solar farm, substation, construction yards, O&M area, access and service roads, approximately 300ha in total. The land is currently used for extensive grazing of cattle and ostrich, whilst there is some degradation and invasive plant species present, it can be largely considered as indigenous. This activity will thus be triggered.
Listed activities in terms of NEMA GN No. 985	
Due to the site not being in or near any sensitive or protected areas no activities in terms of GN No. 985 are triggered.	

2.4 Summary of the original Impact assessment findings

The following table provides an overview of the project impact assessment from the original application and was taken from the original EIA report. Note that all impacts denoted here are the highest post-mitigation impact significance ratings per aspect.

Table 2-2 | Original EIA impact significance ratings per phase

IMPACTS		Construction	Operation	Decommissioning	Cumulative
1	Impact on flora	Medium (-)	Neutral	Assess in future	Low (-)
2	Impact on avifauna	Medium (-)	Medium (-)	Low (-)	Low (-)
3	Impact on heritage resources (including Palaeontology)	Low (-)	Very low (-)	Assess in future	Very low (-)
4	Impact on freshwater	Neutral	Neutral	Neutral	Neutral
5	Impact on agricultural resources	Low (-)	Low (-)	Low (-)	Low (-)
6	Visual Impacts	Low (-)	Low (-)	Assess in future	Low (-)
7	Socioeconomic impacts	High +	High +	Assess in future	High +
8	Hydrology	Low (-)	Low (-)	Assess in future	Neutral
9	Dangerous good hazards (Battery Storage facility)	Medium (-)	Medium -	Assess in future	Very low (-)
10	Traffic Impacts	Low (-)	Low (-)	Low (-)	Neutral

2.4.1 Summary of the findings and recommendations of original EIA specialist reports

The section provides summary of the findings and recommendations made by specialists in the original EIA for the Hotazel Solar Park.

a) Impact on Avifauna

The proposed Hotazel Solar Park PV facility had several pre-mitigation impacts on avifauna at a site and local level which will range from High to Low. The impact of displacement of priority species due to habitat transformation associated with the operation of the plant and associated infrastructure is rated as High. This impact can be partially reversed through mitigation, putting it at a Medium level, after mitigation. The impact of displacement due to disturbance during the construction phase is rated as Medium and will remain at a Medium level despite mitigation thereof. The remaining envisaged impacts, i.e. mortalities in the operational phase due to collisions with the solar panels and entrapment in perimeter fences are both rated as Low and should be mitigatable to a Very Low level with appropriate mitigation.

The relatively small size of the footprint, coupled with the existing degraded state of the environment at the development area, leads one to the conclusion that the cumulative impact of the facility on priority avifauna should in all likelihood be Low, taking into account the current impacts on avifauna within a 30km radius around the development area.

From an avifaunal impact perspective, the proposed development could go ahead, provided the proposed mitigation measures are strictly implemented.

b) Impact on aquatic ecology

The Ga-Mogara River is the main aquatic feature within the study area. A few relatively small valley floor depressions associated with the Ga-Mogara River System occur along the river corridor outside of the immediate study area. These freshwater features tend to be ephemeral mostly only carrying water for short periods of time during the rainy season (November - March). The topography within the proposed development site for the PV facility consists of lower lying areas that contain vegetation which indicates an increased dampness within these areas however no aquatic ecosystems are considered to be present in this area.

The Ga-Mogara River is considered to be in a moderately modified ecological condition and is of moderate to low ecological importance and sensitivity. In terms of aquatic biodiversity conservation importance, the Ga-Mogara River and its catchment have been mapped as an Upstream Catchment to the Kuruman River which has been identified as a Freshwater Ecosystem Priority Area river. No wetland clusters occur within the study area, only wetland areas associated with the river upstream and downstream of the study area.

Due to the very limited potential freshwater impact of the proposed project, particularly with mitigation, there is very little difference from a freshwater perspective between the proposed project and the no-go alternative. In addition, the potential cumulative freshwater impacts that would result for the proposed and other renewable energy projects in the area are of a low significance.

Providing that the recommended mitigation measures are implemented (minimising the impacts of stormwater runoff), the significance of the impact is expected very low to negligible. A water use authorization is unlikely to be required from the Department of Water and Sanitation: Northern Cape Regional Office for any possible Section 21 c and i water use aspects of the proposed activities associated with the Hotazel Solar Park. This is due to the fact that there are no freshwater features to be impacted by the proposed activities.

c) Impact on flora

The natural vegetation type found at Annex Langdon farm near Hotazel is mapped by SANBI (2012) as Kathu Bushveld. Analysis of the data collected in this study suggest that the vegetation should more correctly be classified as Gordonia Plains Shrubland. According to the National Biodiversity Assessment (Driver et al. 2001) and the List of Threatened Terrestrial Ecosystems (Government Gazette, 2011), both these vegetation types (ecosystems) are Least Threatened.

The study area for the proposed Hotazel Solar Park does not fall within or near any Critical Biodiversity Area or Ecological Support Area. In addition, it is far from any NPAES Focus Area.

In general, the study area is not botanically sensitive except for the presence of two protected tree species, *Vachellia erioloba* and *Vachellia haematoxylon*. Their removal would require permits from the Department of Agriculture, Forestry and Fisheries

The principal impact would be clearing of vegetation for the footprint and associated infrastructure of the solar park. Owing mainly to the presence of two protected tree species, the impact is rated as High Negative without mitigation. Opportunities for mitigation are limited but would mostly involve rehabilitation. It may be possible to raise the protected trees from seed and use the seedlings for rehabilitation purposes. With mitigation this would result in a Medium Negative impact.

The associated infrastructure would mostly have Medium Negative impacts without mitigation since they would be within the boundary of the property earmarked for the solar park.

No other plant species of conservation concern were recorded but the precautionary principle is invoked since the site was very dry at the time of sampling.

Care must be taken to not spread alien invasive plant species, particularly *Prosopis glandulosa* var. *torreyana* (honey mesquite) during construction. Careful monitoring for the occurrence of this species must be implemented and this must be written into the EMPr[1]. Where this species occurs, it should be eradicated.

There is no compelling reason from a botanical viewpoint to prevent the proposed Hotazel Solar Park from being constructed at Annex Langdon Farm, near Hotazel, and the application is supported.

[1] Note that this requirement was captured in the EMPr during the original impact assessment and has been carried over to both EMPr..

d) Impact on heritage resources (including palaeontology)

There are no significant heritage indicators related to this project or its footprint area. No significant impacts are expected, although there is always the remote possibility that buried archaeological material, palaeontological material or isolated graves could be found. Such finds cannot be predicted and do not materially affect the decision to proceed with the project. The is a grave site located within the Devon mine area, and it is suggested that this be afforded a 30 m buffer in the event the "extra area" reserved by the mine is not viable and can be used for the solar park.

Because of the very limited potential for impacts to heritage resources, it is recommended that the project be authorised.

e) Impact on agricultural resources

The proposed development is on land zoned and used for agriculture (at the time of the EIA). South Africa has very limited arable land and it is therefore critical to ensure that development does not lead to an inappropriate loss of land that may be valuable for cultivation. This assessment has found that the investigated site is on land which is of low agricultural potential and is not suitable for cultivation.

No agriculturally sensitive areas occur within the proposed site and no part of it is therefore required to be set aside from the development. Because the site is uniformly low potential, from an agricultural point of view, there is no preferred location or layout within the assessed site. There are no conditions resulting from this assessment that need to be included in the environmental authorisation.

Because of the low agricultural potential, and the consequent low agricultural impact, there are no restrictions relating to agriculture which would preclude authorisation of the proposed development.

f) Visual Impacts

The Visual Significance of the Preferred Alternative, Pre-mitigation, was rated Medium as the local sense of place is degraded to some degree by the adjacent mine and is likely to become further degraded by possible expansion. Existing trees along the R31 would offer some partial screening, but the proposed landscape modification would still dominate the attention of the casual observer, creating a semi-industrial landscape context. Further modification of the impact is due to the contained project zone of visual influence. This contained zone of visual influence is due to the surrounding Bushveld vegetation that is prolific in the area, and the relatively flat terrain, which restricts clear views as seen from farm residential receptors, with the main access routes located further away from the project. The Visual Significance of the Preferred Alternative Post-mitigation was rated Low. The retention of a natural vegetation buffer along the R31, would effectively screen the high exposure views as seen from the R31 road receptors. As the magnitude of the status quo is rated Zero (it remains the same), the Visual Significance of the No-go Alternative is rated Neutral.

Cumulative visual impacts associated with the proposed PV project is the potential degradation of the surrounding landscapes due to strong visual contrast generated by the structural intrusion and visual massing where large areas of PV panels are viewed. Within the proposed project zone of visual influence, the landscape character is mainly dominated by Bushveld vegetation and isolated mines, as such the potential for landscape degradation is reduced to some degree. The Hotazel area is an established mining area within which there are four large mining landscapes. These landscapes include waste rock dumps, mine headgear as well as large structures. The potential for Cumulative Effects for the Alternative Preference pre-mitigation was rated Medium. This is due to the partially degraded nature of the site which is in close proximity to an open cast mine, but with potentially high levels of visual intrusion generated by the long views of the PV panels along almost three kilometres of road located adjacent the proposed PV site. The Alternative Preference post-mitigation was rated Low for Cumulative effects. The retention of a buffer along the road of the existing Bushveld trees will assist in breaking up clear views of the PV panels, and further growth within this buffer zone would further reduce visibility. Due to the Bushveld trees surrounding the proposed PV development sites in the area, inter-visibility potential is significantly reduced. Importantly, the vegetation screen will be maintained such that it does not result in shadowing of the panels.

Visual opportunities include the general Bushveld vegetation surrounding the site consists of small to medium sized trees, which have the potential to assist in vegetation screening of the PV from outside of the high exposure areas (note larger trees would be removed to prevent shading of the solar panels). This would result in a moderate zone of visual influence. The greater landscape is strongly associated with Manganese mining and has limited tourism potential. Furthermore, the study area is in close proximity to the Intertek Mine, which is associated with a degraded mining landscape and where the study area visual resources are limited. The Kathu Bushveld Vegetation in certain areas of the study area appears to be fairly degraded. Other Renewable Energy projects in the area would not be visible from this location reducing potential cumulative effects from

massing of PV infrastructures. Conversely the only major constraint from a visual perspective would be the high visual exposure to the R31 road receptors. **The opportunities identified for the study area outweigh the constraints, and no Fatal Flaws were identified.**

g) Social Economic impacts

The proposed Hotazel Solar Park is aligned with the national, regional, and local policies. The development of renewable energy infrastructure, particularly solar systems, within the JMLM is considerably recognised as an important facet concerning sustainable development in South Africa. Given the reviewed documentation, it is evident that no fatal flaws from an economic policy perspective exist in the implementation of the Hotazel Solar Project.

The population in Hotazel is approximately 2,000 people with most the population in these study areas having access to the minimum standard levels of electricity, water and sanitation. Additionally, only 13.9% of the population in the JMLM is employed, while 24.9% is unemployed and 61.2% is not economically active. In Hotazel, two thirds of the population (66%) is employed in Hotazel, while 3.6% is unemployed and 30.4% is not economically active. From a socio-economic perspective, the study area is highly sensitive to the proposed Hotazel Solar Park and the Park would have a positive impact.

The socio-economic impact analysis indicates that the construction of the proposed Hotazel Solar Park would have an overall positive impact. This impact may be maximised through the employment of local workers. Once construction is completed, the economic stimulus of the expenditure will be lost, as well as employment opportunities created during this phase would cease to exist. The establishment of the proposed Hotazel Solar Park and associated transmission lines would assist in improving the supply of electricity to the region, as well as the country which would allow it to continue developing. However, some potential negative impacts could result, such as increased pressure on social and economic infrastructure; potential change in demographics in the area due to an influx of workers and job seekers as well as the effect on land owners and households. Through with various mitigation measures these negative impacts can be minimised and are assessed as being of low significance.

h) Dangerous good hazards (Battery Storage facility)

The battery alternatives described in this study would all be obtained from specific vendors, who would supply the batteries as well as the configuration for the control of charging and discharging of the batteries. Units containing the batteries would be prefabricated by the specialist vendor and would include the features necessary for safe operation. The products would be delivered to site and assembled in accordance with the vendor instructions.

While potential hazards were described for the respective battery alternatives, the study found only one historical incident of a battery failure, a sodium sulphur battery fire (September 2011). Vendors have investigated the incident, but the cause of the fire is not available in the public domain. It is highly likely that current designs have mitigated the cause.

It should be noted that the vendors of these batteries have designed and fabricated a number of these units around the world, particularly for the use of renewable energy (mostly wind farms and solar parks). With numerous installations worldwide, a single incident of fire constitutes a good safety record.

It can therefore be said that from a risk potential and safety viewpoint there should be no preference for battery type and the choice would be made with other criteria in view.

As a result of the risk assessment study conducted for the proposed Hotazel Solar Park near Hotazel, RISCOM did not find any fatal flaws that would prevent the project proceeding to the detailed engineering phase of the project.

RISCOM would support the inclusion in the environmental management programme (EMPr) with the following conditions:

- Compliance with all statutory requirements i.e. National Building Regulations, the OHS Act; etc.;
- Demonstration that the battery housing has been designed for the hazards posed by the chosen battery technology with input from vendors:
  - For example, secondary containment must be provided for leaks of electrolyte and adequate ventilation should be provided to prevent hydrogen build-up in buildings with fire and explosion hazards;
- Compliance with applicable National Building Regulations and Building Standards Act 103 of 1977 and SANS codes included in the Act as well as other applicable codes and standards i.e. SANS 10108;
- Incorporation of applicable guidelines or equivalent international recognised codes of good design and practice into the designs;
- Preparation and issue of a safety document detailing safety and design features reducing the impacts from fires, explosions and toxic atmospheres to the MHI assessment body at the time of MHI assessment including:

- Compliance to statutory laws, applicable codes and standards and world's best practice;
- Listing of statutory and non-statutory inspections, giving frequency of inspections;
- Auditing of the built facility against the safety document;

- Demonstration by the owner or their contractor that the final designs would reduce the risks posed by the installation to internationally acceptable guidelines;
- Signature of all designs by professional engineers or built environment professionals registered with their respective professional bodies, who take responsibility for suitable designs;
- Completion of an emergency preparedness and response document for on-site and off-site scenarios prior to initiating MHI risk assessment (with input from local authorities).

i) Increased traffic

The transport needs for the proposed Hotazel Solar Farm, with a generating capacity of 200MW on farm portions F278P0 near Hotazel, were investigated to confirm access route alternatives and site access for the development of a solar facility.

The general requirements are:

- Legal limits for normal heavy vehicle freight;
- Abnormal Permits required for transport of transformers; and
- Maximum vertical clearance on most routes is 5,2m for Abnormal Load but should preferably be limited to 4,8m.

The general freight for the solar farms comprise of building materials, solar panels and frames and an 80MVA transformer(s). The imported freight will be transported from South African ports to the site. Building materials will be transported from sources in surrounding towns while certain elements will be transported from various manufacturing centres in South Africa.

The preferred import origin of the imported elements to the proposed Hotazel Solar Park will be from the Durban Port. The distance of 1020 km comprises of surfaced roads the full way. However, should the Durban Port not be available for handling the freight, the Port Elizabeth/Coega Port could be used as an alternative port. The transport distance in this case is similar to the preferred route. Toll fees are required on the route from the preferred port. Abnormal Permits will be required for transport of the transformer in any event. The traffic during construction and during operation will have negligible impact on existing and future traffic.

The preferred route is predominantly on National or Provincial Roads with suitable standards for transport of container freight. It is also suitable for abnormal loads with permits. There is a possibility of limited risk of delays for normal routine maintenance works (repairs and reseals) depending of the time of transport and scheduling of roads contracts.

The transport of elements from manufacturing centres within South Africa is predominantly on National and Provincial roads, which presents no limitations for normal freight.

The proposed access roads from the R31 to the site is situated in the on the eastern side of the proposed farm and have to be newly constructed. The access is at an acceptable safe point with sufficient sight distance which would be acceptable to SANRAL.

There is a limited risk of delays to the various deliveries required for the construction of the facility, due to potential routine maintenance works (such as repairs and reseals). The impact of such activities is dependent on the scheduling of deliveries and of roads contracts and may be mitigated by the use of the alternative routes proposed in this report.

In general, no obvious problems are expected with freight transport along the proposed routes to the site necessary for the construction and maintenance of the site.

j) Hydrology

On the site itself no evidence of existing drainage channels were found. Studies have shown that solar panels do not have a significant effect on the runoff volumes if there is enough space between the rows to allow infiltration. Therefore, as there are no watercourses on the site the main potential impacts from the proposed PV infrastructure are localised erosion from removing vegetation and disturbing soils and possible erosion and increased runoff from the hardened gravel access road.

The mitigating measures should as far as possible mimic natural hydrology with the use of non-structural techniques. Stormwater management may be provided in a cost-effective manner by allowing adequate spacing between each row for infiltration which allows runoff to infiltrate over the vegetated areas between the individual rows. This approach works best in undisturbed soils and as far as possible the natural vegetation should be retained. Allowing for infiltration of water between

and underneath the panels is the key element.

The deep sandy soils, poorly defined topography and slope and homogenous nature of the site do not raise any concerns as far as hydrology is concerned. Mitigation measures aimed at addressing concentrated water flows within the confines of the site is the only significant consideration and can be readily dealt with.

3 THE PROPOSED AMENDMENT

3.1 Proposed changes to the project

The proposed amendment would involve the following:

1. Expand the collective development area with 52ha (from 300ha to 352ha).
2. Split the project into two discreet 100MW solar facilities (1Hotazel Solar Farm 1 and Hotazel Solar Farm 2), including the duplication and rearrangement support infrastructure and PV array (Revised layouts) as follows:
    a. One 250ha solar array (200MW) becomes two 150Ha 100MW solar arrays
    b. One ≤100MWh battery storage facility (1ha) becomes two ≤100MWh battery storage facilities for energy storage facilities (2ha)
    c. A 1ha (≤1.9km long, ≤8m wide) gravel access road becomes a shared 0.6ha (10m wide 600m long) gravel access road
    d. 6.8ha of service road (17km, 4m wide) becomes 4.4ha of service road or two 2.2ha of service roads per project
    e. The one 1ha collector substation becomes two 1ha substations.
    f. The one 4ha temporary laydown areas becomes two 3ha laydown areas
3. Update Applicant details for separate EAs (i.e. Hotazel Solar 1 (Pty) Ltd and Hotazel Solar 2 (Pty) Ltd).

The following table provides more detailed overview of changes to components and footprints. Under the revised layout the grey text indicates where there is no change and black text allows the reader can quickly identify the changes. This is followed by the authorised and amendment layout for comparison. These items should be read together.

Table 3-1 | Comparison between the approved and proposed (amended) layout footprints in hectares

Original (as per EIA)		Proposed (amended)	North	South	Combined
Solar Farm: A 200MW solar facility with PV panels on steel mountings with single axis tracking mechanisms and concrete footings, below ground electrical cables connecting the PV systems to the onsite collector substation and inverters.	**250**	**Solar Farm:** Two 100MW solar facilities with PV panels on steel mountings with single axis tracking mechanisms and concrete footings, below ground electrical cables connecting the PV systems to the onsite collector substation and inverters.	150	150	**300**
Battery Storage System: A ≤100MWh battery storage facility for energy storage, maximum height of 8m and a maximum volume of 1120 m^3 of batteries (dangerous goods) and associated operational, safety and control infrastructure.	**1.0**	**Battery Storage System:** Two ≤100MWh battery storage facility for energy storage, maximum height of 8m and a maximum volume of 1120m^3 (2240 m^3 combined) and associated operational, safety and control infrastructure.	1.0	1.0	**2.0**
Access road: A ≤1.9km long, ≤8m wide gravel access road running from the R31, west ward along the southern boundary of Annex Langdon Farm.	**1.0**	**Access road:** A **shared** ≤0.6km long, ≤10m wide gravel access road intersecting the R31	0.6		**0.6**
Service roads: ≤17km of ≤4m wide gravel service roads linking the access road and various project components and servicing the solar panel arrays. Roads fitted with traffic control systems and stormwater controls as required.	**6.8**	**Service roads:** ≤11 km (5.3km each site) of ≤4m wide gravel service roads linking the access road and various project components and servicing the solar panel arrays. Roads fitted with traffic control systems and stormwater controls as required.	2.2	2.2	**4.4**
Collector substation: ≤1ha collector substation to receive, convert and step up electricity from the PV facility to the 132kV grid suitable supply. The facility will house control rooms and grid control yards for both Eskom and the Independent Power Producer. A 32m telecommunications tower (lattice or monopole type) will be established in the substation area.	**1.0**	**Collector substation:** Two ≤1ha collector substations to receive, convert and step up electricity from the PV facility to the 132kV grid suitable supply. The facility will house control rooms and grid control yards for both Eskom and the Independent Power Producer. A 32m telecommunications tower (lattice or monopole type) will be established in the substation area.	1.0	1.0	**2.0**
O&M area:	**1.0**	**O&M area:**	0.5	0.5	**1.0**
– ≤1ha hectare O&M laydown area (near / adjacent substation);		– **2x ≤0.5ha hectare O&M laydown area (near / adjacent substation);**			
– Parking, reception area, offices and ablutions facilities for operational staff, security and visitors;		– Parking, reception area, offices and ablutions facilities for operational staff, security and visitors;			
– Workshops, storage areas for materials and spare parts;		– Workshops, storage areas for materials and spare parts;			
– Water storage tanks or lined ponds (~160kl/day during first 3 months; ~90kl/day for 15 months during rest of construction period; ~20kl/day during operation);		– Water storage tanks or lined ponds (~160kl/day during first 3 months; ~90kl/day for 15 months during rest of construction period; ~20kl/day during operation);			
– Septic tanks and sewer lines to service ablution facilities; and		– Septic tanks and sewer lines to service ablution facilities; and			

Original (as per EIA)		Proposed (amended)	North	South	Combined
– Central Waste collection and storage area.		– Central Waste collection and storage area.			
Other infrastructure:		Other infrastructure:			
– Perimeter fencing, and internal security fencing and gates as required.	**1.0**	– Perimeter fencing, and internal security fencing and gates as required.	0.7	0.7	**1.4**
– Access control gate and guard house on access road;		– Access control gate and guard house on access road;			
– ≤3.5km length of small diameter water supply pipeline connecting existing boreholes to storage.		– ≤3.5km length of small diameter water supply pipeline connecting existing boreholes to storage.			
Temporary infrastructure:		Temporary infrastructure:			
– A ≤4ha construction yard and laydown area to be used for the construction period and rehabilitated afterwards.	**4.0**	– A 2 x≤3ha construction yard and laydown area to be used for the construction period and rehabilitated afterwards.	3.0	3.0	**6.0**
Open space (space between structures, solar panels, roads) required for movement, construction and shade avoidance, etc.	**22.8**	Open space (space between structures, solar panels, roads) required for movement, construction and shade avoidance, etc.	13.2	16.0	**29.2**
▪ **Exclusion areas (unusable areas of the site)**	-	▪ Exclusion areas (unusable areas of the site)			-
– Devon mine	**92.0**	– Devon mine		92.0	92.0
– Devon mine exclusion area	**52.0**	– Devon mine exclusion area		0.0	0.0
		– Eskom line on southern boundary		6.0	**6.0**
– North eastern corner (R31 cuts through the North Eastern corner of site)	**5.4**	– North eastern corner (R31 cuts through the North Eastern corner of site)	5.4		5.4
▪ **EIA exclusions**	-	▪ EIA exclusions			-
– R31 visual buffer (high)	**10.1**	– R31 visual buffer (high)	8.8	1.3	10.1
		– R31 visual buffer (med)	12.8	2.4	**15.2**
		– Grave buffer	0.2		**0.2**
Total property area (Annex Langon)	444	Total property area (Annex Langon)	267	177	444
less Devon Mine and prospecting area	**300**	**less Devon Mine and including prospecting area**	175	177	**352**

Figure 3-1 | Currently Authorised layout

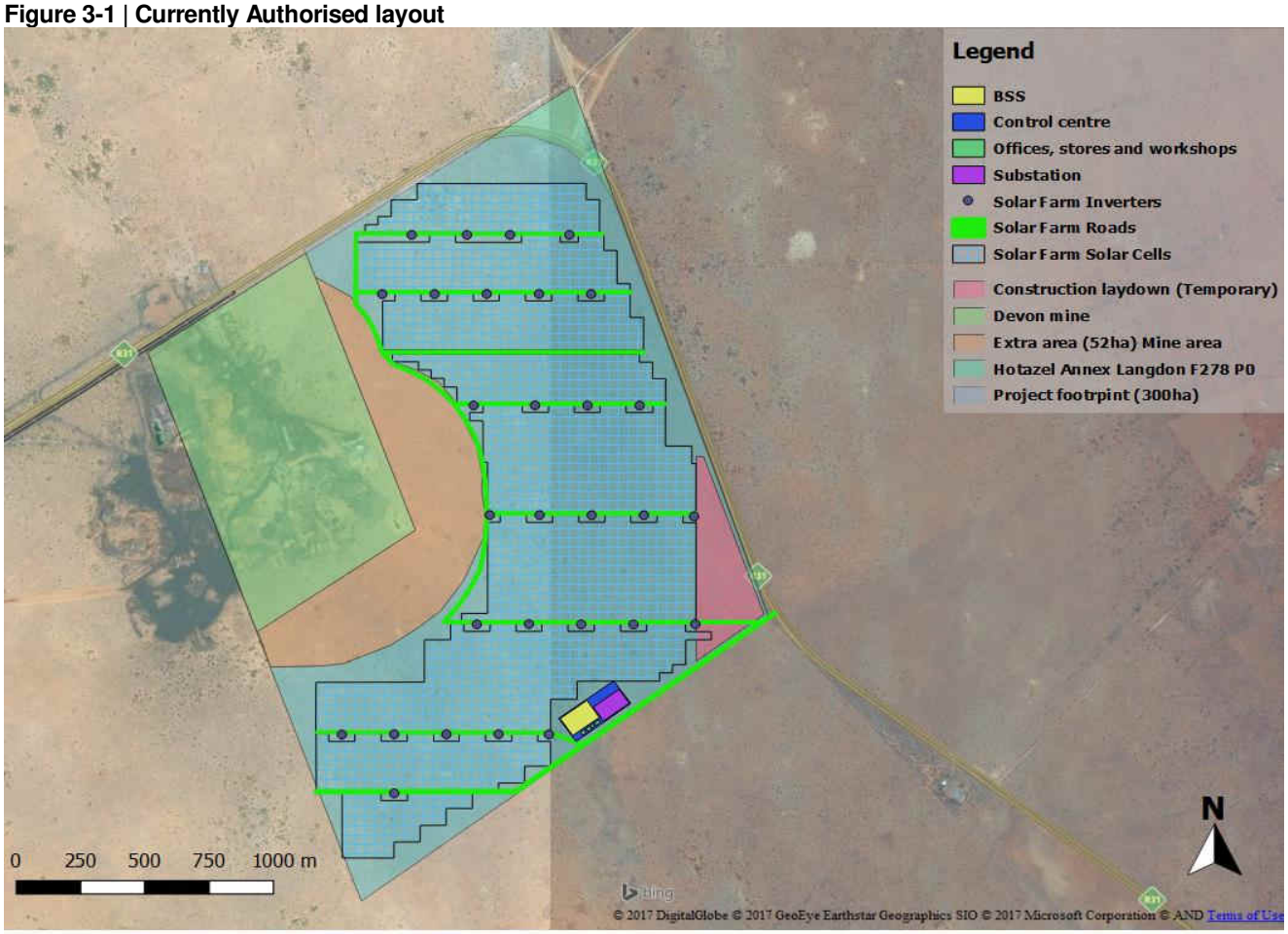

Figure 3-2 | provisional amended layouts (Combined) (phase 1 = Hotazel Solar Farm 1 and Phase 2 = Hotazel Solar Farm 2)

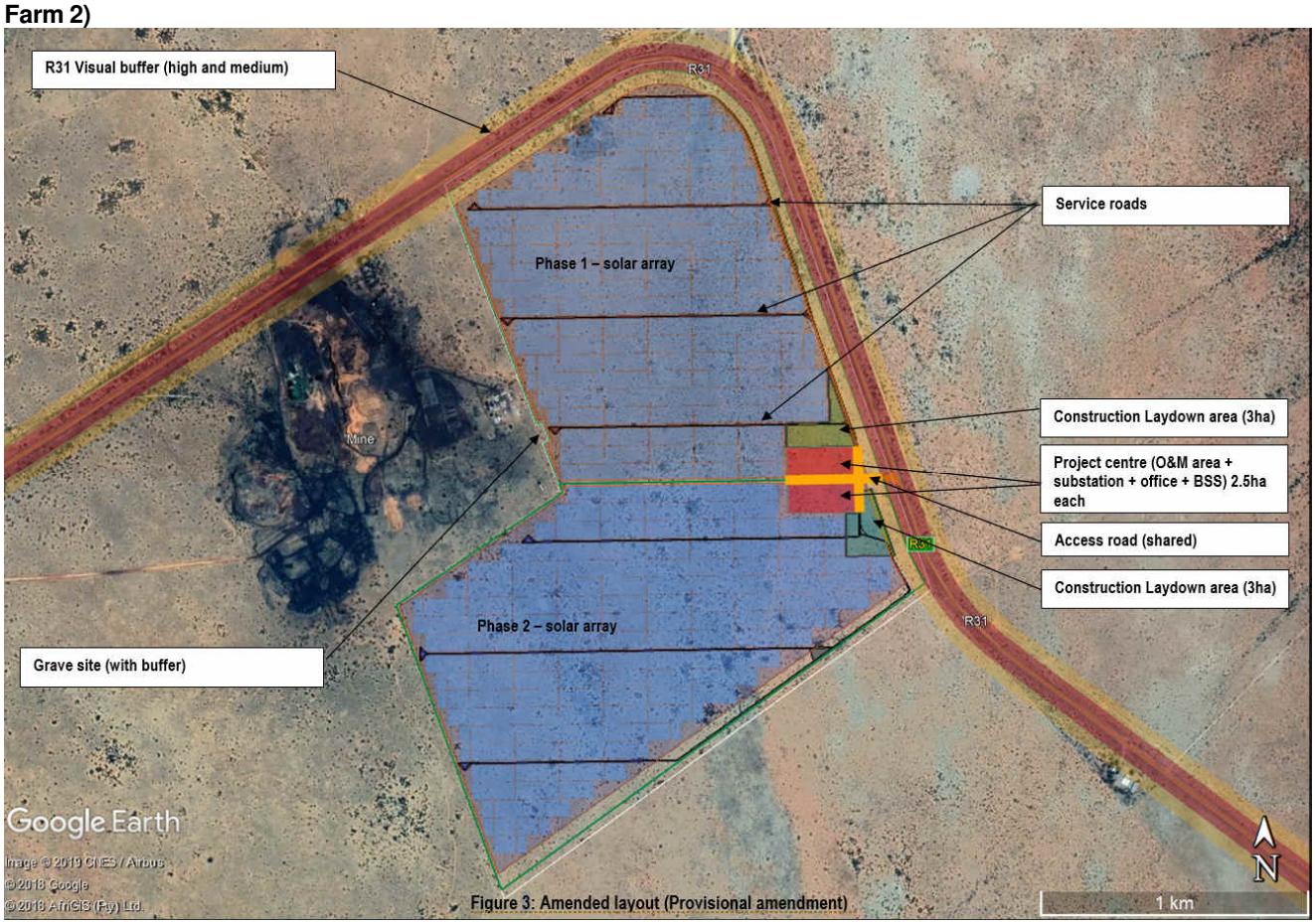

Figure 3: Amended layout (Provisional amendment)

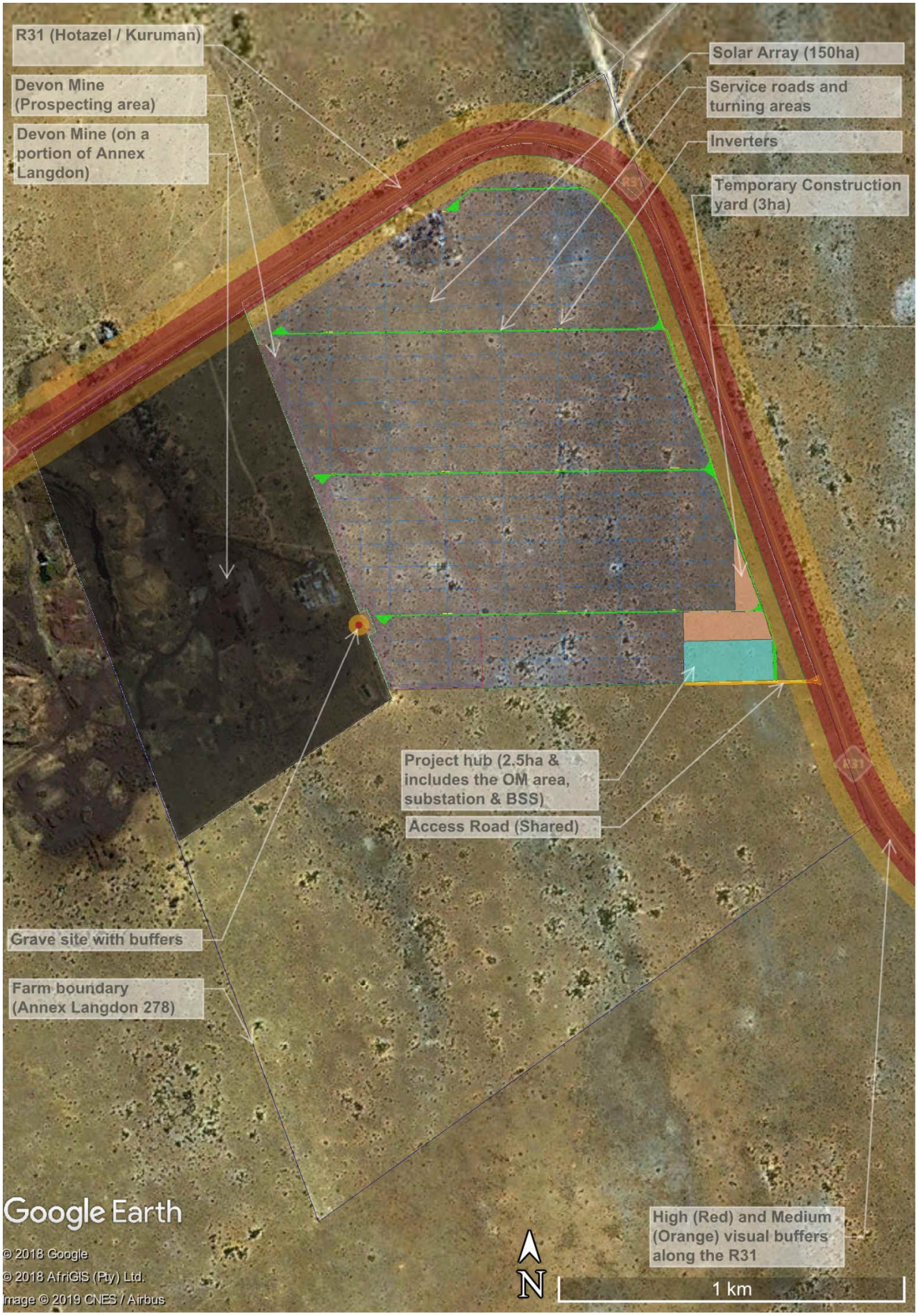

Figure 3-3 | Hotazel Solar Farm 1 layout

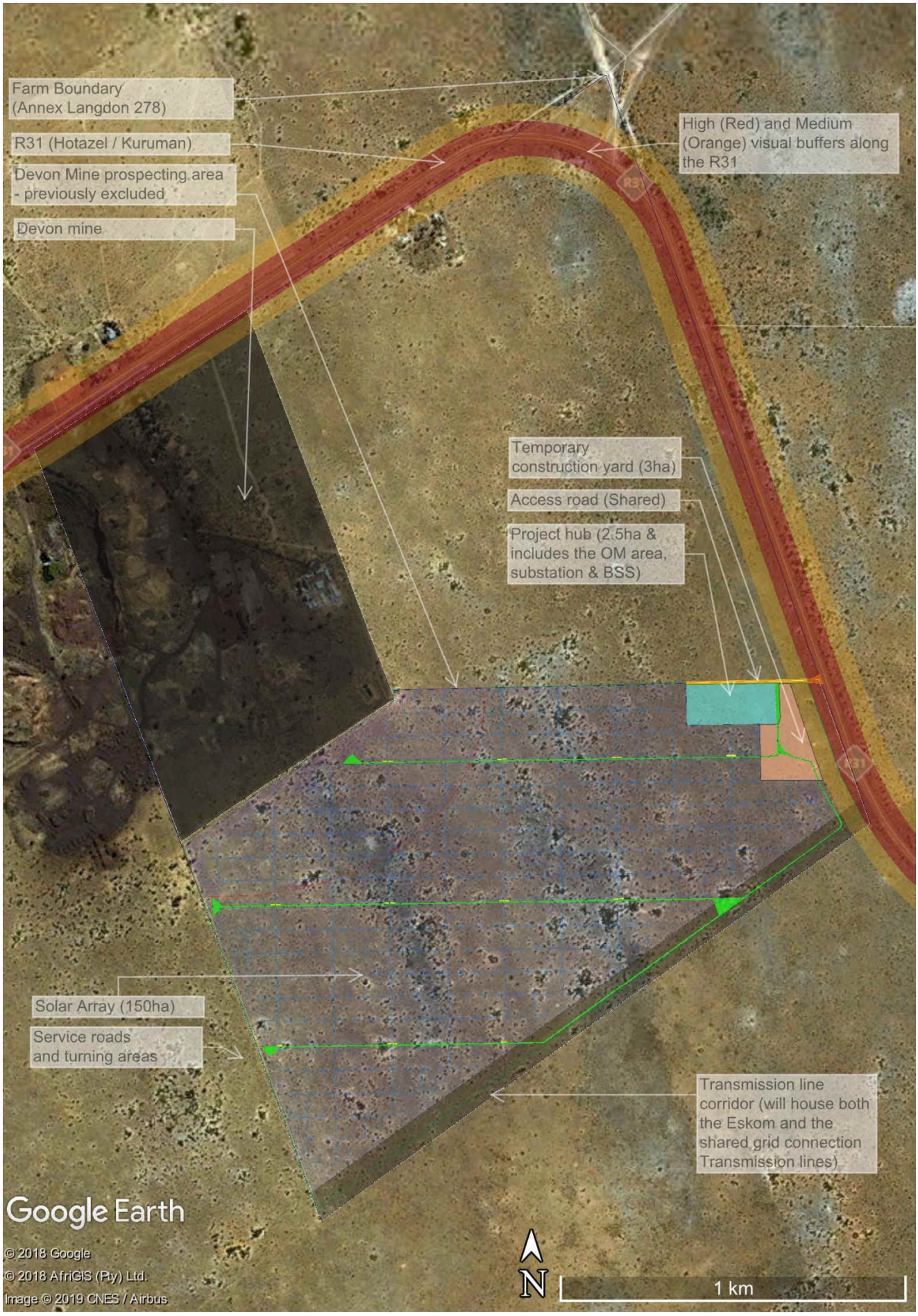

Figure 3-4 | Hotazel Solar Farm 2 layout

3.2 Motivation for the proposed change

During the early stage of the original EIA application, the 52ha area was part of the project footprint for a 2 X 75MW development and specialists included this area in their baseline assessments, so environmental features and sensitivities were identified in this area. The exclusion of this area came later, when an agreement was reached between the Applicant and Devon Mine, after which the Applicant revised their layout and reduced the application to a single 200MW facility, which was assessed in the EIA process.

Devon Mine have completed their prospecting and notified the Applicant that they are not pursuing the area further (for exploration or mining purposes). The correspondence between the Applicant and Devon Mine's owner, Strata Energy, Minerals and Resources (Pty) Ltd, has been Appended hereto as Annexure A.3, as requested by the DEA in the Pre-application meeting. The Applicant would like to use this additional space to revert to a 2-phase development by splitting the approved 200MW project into two (x2) discreet 100MW solar facilities with separate supporting facilities, as originally conceived.

3.3 Advantages and disadvantages of the proposed change

In accordance with Section 32(1)(a)(ii) of the 2014 EIA Regulations, the report for amendment must contain the advantages and disadvantages of the proposed changes, which are provided here:

Table 3-2 | Advantages and disadvantages of the proposed change

Advantages	Disadvantages
The project would have sufficient space to allow for the envisaged splitting to a 2-phase solar facility development. A 2-phase approach improves the flexibility of the project for funders and the REI4P bidding process.	The project footprint increases by an estimated 11% for the similar energy contribution to the national grid (i.e. A higher power per M^2 was achieve under the previous original EA). However, specialists have indicated that this increase in footprint is not significant.
With more space, the project layout has provided more space between the R31, including the medium sensitivity visual buffer (the previous layout encroached into the medium buffers) and thus the visual impact of the project maybe reduced for receptors traveling along the R31 as project infrastructure is set further back from the road.	Moving the O&M area, substations and Battery Storage facilities away from the Southern Boundary and closer to the R31 may increase their visual presence on the R31. This is not significant enough to alter the impact significance rating.
The working space or open space between solar array components increases from ~23ha to ~29ha, increasing the safety and operability of the facility while reducing the shading of PV panels by other panels.	
The relocation of the O&M areas closer to the R31 reduces the area required for the access road.	
The revised project layout is able to provide Eskom space for a transmission line along the southern boundary of the property (with special dispensations) which is was not possible under the previous layout (due to spatial constraints).	
The duplication of Battery Storage Systems located close to the large mines, could help Eskom manage sudden and heavy changes in load demand from users and provide local backup power for emergencies. Which is advantageous for the entire grid.	
The amended layout of the Hotazel PV project will have a greater positive social impact because of the increased impact on production and GDPR compared to the initial approved layout due to an increased capital expenditure. Even though direct jobs are unlikely to increase, local incomes will be positively impacted by the increased capital expenditure of the project while indirect and induced jobs will also positively be influenced.	

4 AMENDMENT RELATED IMPACTS

All specialists were asked to review the proposed amendments and advise if review of their original assessment was required. All, but three, confirmed that the proposed amendments would not change the scope, nature or magnitude of the impacts and that a review of their assessments was not necessary. These specialists have provided written statements to this effect (as requested by the DEA in the pre-application meeting) which have been appended as follows:

- Agriculture (see Annexure C.1)
- Aquatic (see Annexure C.2)
- Birds (see Annexure C.3)
- Heritage (see Annexure C.4)
- Hydrology (see Annexure C.5)
- Risk assessment for dangerous goods associated battery storage system (see Annexure C.6)
- Traffic Annexure C.7)

Three of the ten specialists, namely Botanical (Dr. Dave McDonald of Bergwind), Visual (Steve Stead of VRMA), and Socioeconomic (Alex Kempthorne of UrbanEcon), indicated that the proposed amendments may result in changes to the scope, nature or magnitude of the impacts. These specialists were commissioned and asked to undertake a more detailed review of the proposed amendments, their previous assessments and provide their findings as a report / written statement. These reports /statements are summarised under separate heading below and appended as follows:

- Botanical (see Annexure B.1)
- Socioeconomic (see Annexure B.2)
- Visual (see Annexure B.3)

The following section provides a summary of their findings in relation to proposed amendment, as described under Section 2.4.1. It should be noted that the proposed amendments would have no bearing on the impacts recorded and assessed for the construction phase, as the same level of construction would be required, methodologies and materials would remain unchanged and thus only exert influence in the operations phase.

4.1 Botanical impacts

Dr. Dave McDonald of Bergwind Botanical undertook a review of the proposed amendments and the original botanical impact assessment Botanical (see Annexure B.1). His findings are summarised as follows:

*Having done the original assessment and undertaken a review of the proposed amendments, I confirm that the proposed amendments would **not**:*

a) result in any new impacts on the flora and fauna,
b) change the nature or scope of the impacts assessed, or
c) materially change the impact significance rating or associated mitigation recommendations originally presented.

Points a, b & c above are made in view of the uniformity of the vegetation across the site and the very low probability of finding anything different or unusual in the additional area. This is supported by interpretation of relevant aerial imagery and the full 352ha area formed part of the baseline assessment.

Therefore, the proposed amendment would have negligible effect on the impact profile from a botanical perspective (i.e. significance ratings) and determine that a detailed review and re-assessment is not required and would not materially change any decision with respect to authorisation of the project or not.

4.2 Visual impacts

Stephen Stead of Visual Resource Management Africa (VRMA) undertook a review of the proposed amendments and the original visual impact assessment (see Annexure B.3). His findings are summarised as follows:

*The proposed amendment would have no material effect on the visual impact profile, as discussed below, as it would **not**:*

a) result in any new impacts,
b) change the nature or scope of the assessed impacts, or
c) materially change the impact significance rating or associated mitigation recommendations originally put forward.

The full 352ha area formed part of the baseline assessment but this was revised back to a single facility in the pre-scoping phase to concede to mining interests surrounding the Devon Mine open cast mine. The Visual Significance of the Preferred Alternative Pre-mitigation alternative was rated Medium (-) as the local sense of place was degraded to some degree by the

adjacent mine. This impact rating would remain unchanged through the proposed amendment, with the retention of a natural vegetation buffer along the R31 still an effective mechanism to screen the high exposure views as seen from the R31 road receptors. As previously recommended, during the construction phase, no trees between the layout areas and the R31 should be removed and the buildings and battery storage facility should be painted a grey-brown colour to assist in reducing colour contrast. Indigenous shade trees should be planted around the building to help break up the massing effects created by the cluster of buildings. Thus, the rearrangement and relocation of supporting infrastructure closer to the R31 would have negligible effect on the overall impact profile. The 100m buffer from the road to the proposed PV project also assists in moderating the visual significance of the proposed PV landscape modification. If implemented the post-mitigation impact significance would fall to ***Low*** *(-), as previously my assessed (i.e. No change).*

Cumulative visual impacts associated with the proposed PV project remain ***Low (-)*** *with mitigation. Within the proposed project zone of visual influence, the landscape character is mainly dominated by Bushveld vegetation and isolated mines, as such the potential for landscape degradation is reduced to some degree. The retention of a buffer along the road of the existing Bushveld trees assists in breaking up clear views of the PV panels and supporting infrastructure, and further vegetative growth within this buffer zone would further reduce visibility.*

It should be noted that painting the various buildings and battery storage facility in a grey-brown to mitigate the visual impact may not be possible, due to technical and environmental constraints. For example, to minimising heat accumulation and energy use associated with ventilation and cooling, buildings are painted white. Thus the planting of native trees and bush between the structures and R31 becomes increasingly important.

4.3 Socioeconomic Impacts

Marietha Jacobs of UrbanEcon undertook a review of the proposed amendments and the original visual impact assessment (see Annexure B.2). Her findings are summarised as follows:

The proposed amendment would increase some positive impacts, but not significantly enough to affect impact profile (as originally assessed). Additional discussion continues below, but the specialist sees no reason to not allow the proposed amendment, from a socioeconomics perspective and confirms the proposed amendment would ***not****:*

a) result in any new impacts,
b) change the nature or scope of the assessed impacts, or
c) materially change the impact significance rating or associated mitigation recommendations originally put forward.

The table below lists the key socio-economic impacts identified in the original impact assessment with a comparison of expected impacts based on the proposed amended layout, and the associated capital and operational expenditure estimates received from the applicant.

Table 4-1 | Impact comparison – solar PV project (excluding transmission lines)

	Initial impact (approved layout)	***Amended layout impact***
	Construction phase ***(temporary impacts for the duration of the construction period)***	
Positive impacts	*Increase in production and GDPR of the national and local economies due to project capital expenditure. From the expected capital expenditure of* ***R750.3 million****, it is estimated that the project will have a total impact of R2.5 billion on production and* ***R820.5 million*** *on Gross Domestic Product (GDP)* *(For comparison purposes, the initial expenditure and impact values were adjusted with an average annual estimated inflation rate of 4.8% and are therefore expressed in 2019 prices).*	*The amended layout will result in an increased spend in the economy compared to the impact of the approved layout. The new layout will have an estimated cost of* ***R1.3 billion*** *that will be spent in South Africa, which is R671.0 million more than the initial layout. The impact of the amended layout on production and GDPR will, therefore, be almost double that of the initial impact.* ***The amended impact will have a greater positive economic impact compared to the initial approved layout****, the overall impact significance remains unchanged (as impact magnitude remains in the upper category).*
	Creation of temporary employment in the local communities and elsewhere in the country. During the construction project, it is estimated that the project will create ***2 527 employment*** *opportunities, of which 600 will be direct employment opportunities.*	*Based on the information received from the applicant, the amended layout will create the same number of direct jobs (600), compared to the initial approved layout impact. However, due to the increased spending on construction activities,* ***more indirect and direct job opportunities will be created with the amended layout****, compared to the initial approved layout. This impact will be mainly in the*

	Initial impact (approved layout)	Amended layout impact
		manufacturing sector. This will also ***increase the impact on income*** *for households as a result of the amended layout and split facilities.*
	Skills development due to the creation of new employment opportunities	*Skills development will still occur with the amended layout. Skills development can be enhanced during a longer construction period.*
	Increase in government revenue due to investment	*The increase in government revenue as a result of the investment will be enhanced during the construction period of the amended and split facilities layout, compared to the initial approved layout.*
Negative impacts	*Change in demographics of the area due to the influx of workers and job seekers*	*No anticipated change in impact as a result of the amended layout and split facilities as direct employment will remain constant.*
	Added pressure on basic services and social and economic infrastructure	*No anticipated change in impact as a result of the amended layout and split facilities as direct employment will remain constant.*
Operation phase		
Positive impacts	*Increase in generation capacity in the province as well as the advancement of the renewable energy sector in achieving long term, sustainable supply*	*No anticipated change in impact as a result of the amended layout and split facilities.*
	Sustainable increase in production and GDPR of the national and local economies through operation and maintenance activities	*No anticipated change in impact as a result of the amended layout and split facilities.*
	Creation of long-term employment in local and national economies through operation and maintenance activities	*No anticipated change in impact as a result of the amended layout and split facilities.*
	Skills development due to the creation of new sustainable employment opportunities	*No anticipated change in impact as a result of the amended layout and split facilities.*
	Improved standard of living of households directly or indirectly benefitting from the created employment opportunities	*No anticipated change in impact as a result of the amended layout and split facilities.*
	Increase in government revenue stream	*No anticipated change in impact as a result of the amended layout and split facilities.*
	Investment in the local communities and economic development projects as part of a Social Economic Development and Enterprise Development Plan	*No anticipated change in impact as a result of the amended layout and split facilities.*

The amended layout of the Hotazel PV project will have a greater positive social impact as a result of the increased impact on production and GDPR compared to the initial approved layout due to an increased capital expenditure. Even though direct jobs are unlikely to increase, local incomes will be positively impacted by the increased capital expenditure of the project while indirect and induced jobs will also positively be influenced. These impacts will, however, be only temporary, for the duration of the construction period and are thus not significant enough to affect impact significance rating.

5 CONCLUSION

The reintroduction and expansion of the combined project by 52ha and the proposed splitting of the 200MW solar facility into two discreet 100MW solar facilities would have minimal impacts and none of which are significant enough to alter the project impact profile. Notwithstanding any new issues arising from the Public Participation Process we conclude that the proposed amendment would **not**:

a) Trigger any new activities in terms of Listing notices 1, 2 or 3 and splitting the EAS would also not reduce either facility below the activity thresholds (i.e. all listed activities also remain valid).
b) result in any new impacts (other than those already assessed),
c) change the nature or scope of the assessed impacts, or
d) materially change the impact significance rating and associated mitigation recommendations.

The splitting of the project requires that the Environmental Management Program (EMPr) be split for the separate projects. In accordance with pre-application meeting two discreet EMPrs, one for the Hotazel Solar 1 and one Hotazel Solar 2 solar facilities have been created and appended these here as Annexure D.1 and Annexure D.2, respectively. Since the proposed amendment does not materially change the project's impact profile, the mitigations measures remain mostly unchanged from

the original and also in **draft format**. In accordance with Condition 15 of the EA, the EMPrs would still need to be updated with the detailed plans, programmes and "updated and amended to include measures dictated by the final site lay-out map and micrositing and the provisions of the environment authorisation" that will arise from the final detailed design and pre-construction walkthroughs by key specialists.

In light of this, the updates to the EMPrs focus largely on the project descriptions and provisional layouts, which have been aligned with the two separate applications. The only change is the additional of the buffer area around a grave site located in Hotazel Solar 1's area, which was previously part of the excluded area. The EMPr must however, still undergo further finalisation and public consultation before being approved, in future.

As the EAP, I find no reason to withhold the authorisation of this proposed amendment.

6 PUBLIC PARTICIPATION PROCESS

As a Part 2 amendment in terms of the NEMA EIA regulations of 2014 (as amended), this report is to be subjected to a 30-day public participation process (PPP) to comply with Regulation 32 of the EIA Regulations (GN R 982). The aim of the PPP is to inform potential and registered Interested and Affected Parties (I&APs) and stakeholders (including organs of state, which have jurisdiction in respect of the relevant activity and the competent authority) of the proposed amendment and the associated changes and to allow opportunity for all potential and registered I&APs to review and comment on the application for amendment. Registered I&APs are listed in Annexure E.1 and proof of the notification measures described below have been included as (Annexure F). The PPP includes the implementation of the 2014 EIA Regulations 39, 40 41, 42, 43 and 44 of the EIA Regulations 2014, as agreed with the DEA at the pre-application meeting, and specifically the following -

- An English and Afrikaans advertisement in the Kathu Gazette notifying the potential I&APs of the proposed amendment and opportunity to participate;
- Notice boards erected on the site to inform potential I&APs of the proposed amendment and opportunity to participate, placed on the fence line of the project site along the R31;
- Copies of the report placed at the Hotazel Public Library;
- Written notifications sent by email and normal mail to all registered I&APs;
- Download links for the Draft EA amendment report provided in all correspondence. The EA report can be downloaded here: **http://tiny.cc/qsdbgz** (A link to the Drobox® folder that will be active for the period of the PPP)
- I&APs may also contact **patrick.killick@aurecongroup.com** and request a digital copy of this report to be sent to them via email.

All comments and queries will be recorded, and responses provided where required (see Annexure E.3 – not used yet). Where required, changes will be made to this report in response to comments and before submission to DEA for a decision regarding the amendment. This approach and terms of reference are confirmed in the DEA's acknowledgement and response to the application, which is also appended hereto as Annexure A.5, and establishes the deadline for submission of the final amendment report as 6 February 2020 (90 days). All comments should reach the EAP, in writing, before 15 January 2020