

04 June 2026

Attention: AEP Bloemsmond Solar 1 (Pty) Ltd

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To whom it may concern:

SOIL, LAND USE, LAND CAPABILITY AND AGRICULTURAL POTENTIAL SPECIALIST INPUT FOR THE PART 1 AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION (EA) FOR THE PROPOSED DEVELOPMENT OF THE AEP BLOEMSMOND SOLAR PV 1 (Pty) Ltd, NEAR UPINGTON, NORTHERN CAPE.

1. Background

AEP Bloemsmond Solar 1 (Pty) Ltd is the proponent for the proposed Bloemsmond Solar Energy 1 Facility. The project is located on the farm Bloemsmond 455, portions 5 and 14, situated southwest of Upington, within the ZF Mgcawu District Municipality, in the Northern Cape Province, South Africa. The proposed solar development is planned to cover approximately 225 hectares to meet the required capacity. The facility is designed for a contracted generation capacity of 100 megawatts (MW).

The Environmental Authorisation (EA) for the facility was issued on the 26 April 2016, DEA Reference 14/12/16/3/3/2/815, and has subsequently been amended since:

- 14/12/16/3/3/2/815/AM1 – 13 March 2020 – Increase in facility capacity from 75MW to 100MW
- 14/12/16/3/3/2/815/AM2 – 20 February 2021 – Inclusion of a BESS facility in the project description and an extension to the EA validity to 26 April 2026
- 14/12/16/3/3/2/815/AM3 - 25-Mar-2021 – Correction to 14/12/16/3/3/2/815/AM2

For the purpose of this report, reference to the EA includes the original EA and all amendments thereto.

Condition 7 of the EA states that:

“This activity must commence within a period of ten (10) years from the date of issue of the authorisation (i.e. the EA lapses on 26 April 2026). If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.”

An application to extend the validity of the EA was submitted on 16 April 2026. The competent authority acknowledged receipt of the application on 24 April 2026 and confirmed that the application falls within the ambit of amendments to be applied for in terms of Part 1 of Chapter 5 of the Environmental Impact Assessment Regulations, 2014, as amended.

Further to the acknowledgement, the competent authority requested additional information in support of this application, including a review of all specialist studies undertaken, a detailed assessment, including a site verification report providing an indication of the status of the receiving environment (by the relative specialist, if applicable) and confirmation of validity of the impact ratings and mitigation measures recommended previously.

2. Scope of Work

The Biodiversity Company was appointed to provide specialist inputs for this Amendment Application. The Scope of Work for this report is as follows:

- Confirmation of the status of the environment and soil resources compared to that at the time of the original assessments done in 2015 by Savannah Environmental (Pty) Ltd, as well as the subsequent specialist impact statement provided in the BESS EA amendment application.
- An indication as to whether the impact rating as provided in the previous assessments remains valid; if the mitigation measures provided in the initial assessments are still applicable; or if there are any new mitigation measures which need to be included into the EA, should the request to extend the commencement period be granted by the DFFE.
- An indication as to whether there are any new assessments/guidelines which are now relevant to the authorised development which were not undertaken as part of the initial assessment, must be taken into consideration and addressed in the report.
- A description and an assessment of any changes to the biophysical environment that has occurred since the EA was issued.
- A description and an assessment of the surrounding environment, in relation to new developments or changes in land use which might impact on the authorised project, the assessment must consider the following:
 - Identified cumulative impacts, and where possible the size of the identified impact must be quantified and indicated, i.e., hectares of cumulatively transformed land.

3. Assumptions and Limitations

A field survey was conducted to meet the amendment requirements. The field survey sought to determine site characteristics and conditions to determine any changes from the baseline conditions and previous reports, supplemented by satellite imagery. The survey was conducted on 25 and 26 May 2026, during the early dry season. Although site conditions were dry at the time of the survey, this does not present a limitation for the purposes of this amendment process.

4. Project Description

The Project Area of Influence (PAOI) for the original Bloemsmond Solar PV 1 assessment is shown in Figure 1 below.

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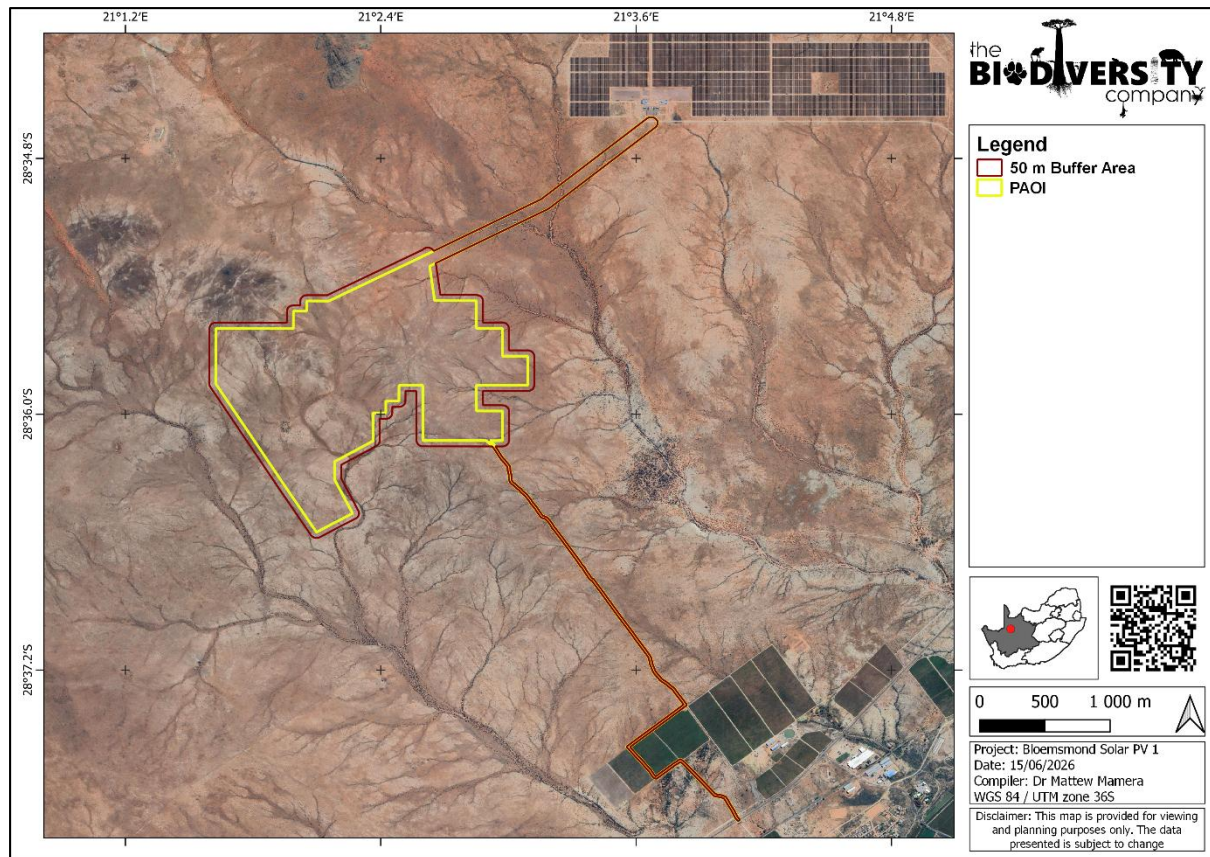


Figure 1 *The Project Area of Influence of Bloemsmond Solar PV 1*

The PAOI, project description and layout remain as authorised in the EA and no changes to the scope are proposed as part of this EA Amendment process (**Error! Reference source not found.**).

The EA authorised project infrastructure includes:

- Solar Technology: Several arrays of PV solar panels;
- Mounting structures to support the PV panels;
- On-site inverters to step up the power and a substation to facilitate the connection between the Solar Facility and the Eskom electricity grid;
- A new 132 kV power line between the on-site substation and the Dyasons Klip Substation (located on the farm Dyasons Klip RE/454);
- Cabling between the project components, to be laid underground where practical;
- Offices and workshop areas for maintenance and storage;
- Temporary laydown areas; and
- Internal access roads and fencing around the development area; and
- A Battery Energy Storage System of up to 500MWh.

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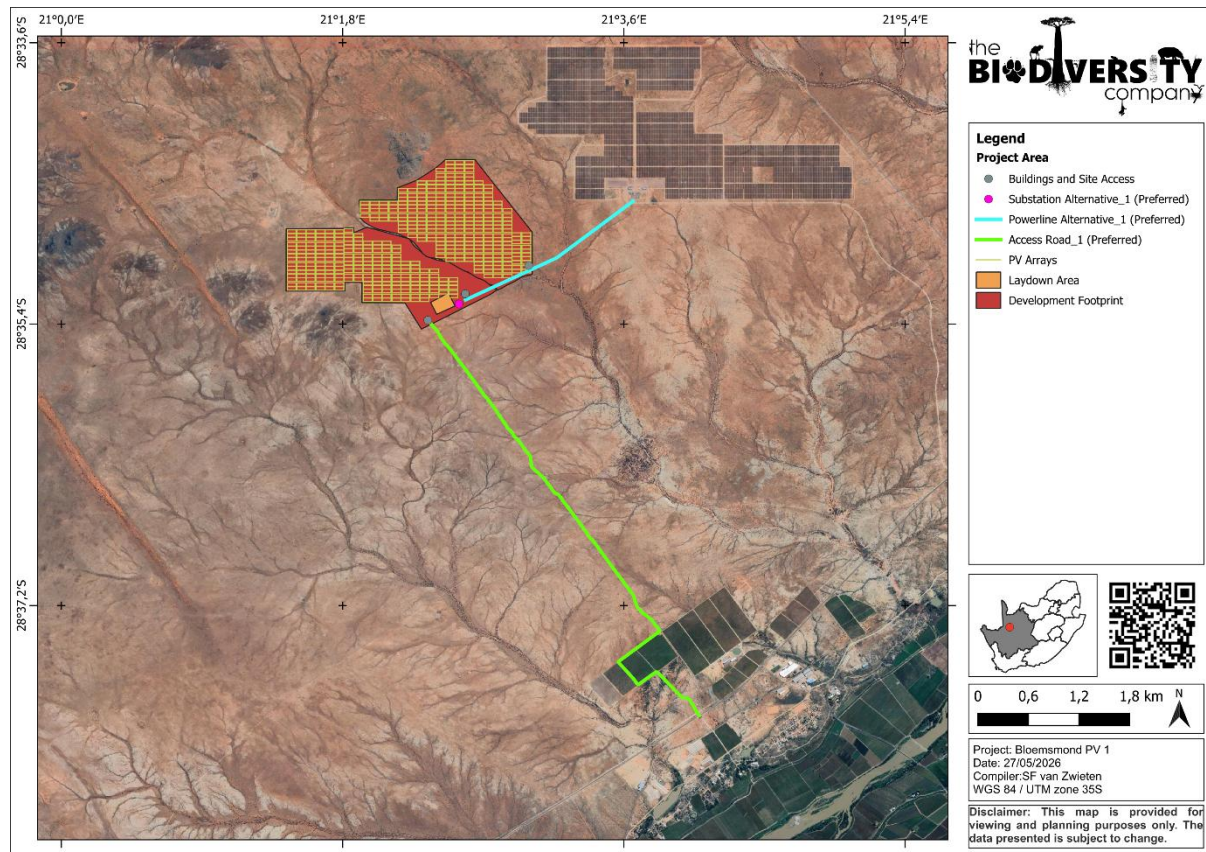


Figure 2 *Layout of Bloemsmond PV 1*

5. Site Baseline and Sensitivity (2015)

The initial 2015 Soil & Agricultural Specialist Impact Assessment (Savannah, 2015) evaluated the soil, land use, land capability and agricultural potential importance and sensitivity of the soil resource features within the proposed development area. In addition, an impact assessment was undertaken using the standard assessment methodology.

A summary of the Agricultural findings of Savannah 2015 is as follows:

- The study confirmed that no part of the development would occupy areas highly sensitive to erosion or areas of great agricultural significance.
- The Agricultural potential of the site falls under class VII and has very severe limitations on farming. No commercial farming practices could be undertaken under natural conditions.
- The area is dominated by sandy soils that show little pedological development. The soil is mostly very shallow occurring on hard- or weathering rock.
- The soil forms present on site are Plooyburg, Hutton and Mispah.
- No environmentally fatal flaws were reported on-site for the proposed development footprint.
- The study concluded that, the proposed development, considered with other developments in the area, has a potentially low to moderate cumulative impact on the environment and the associated agricultural activities.

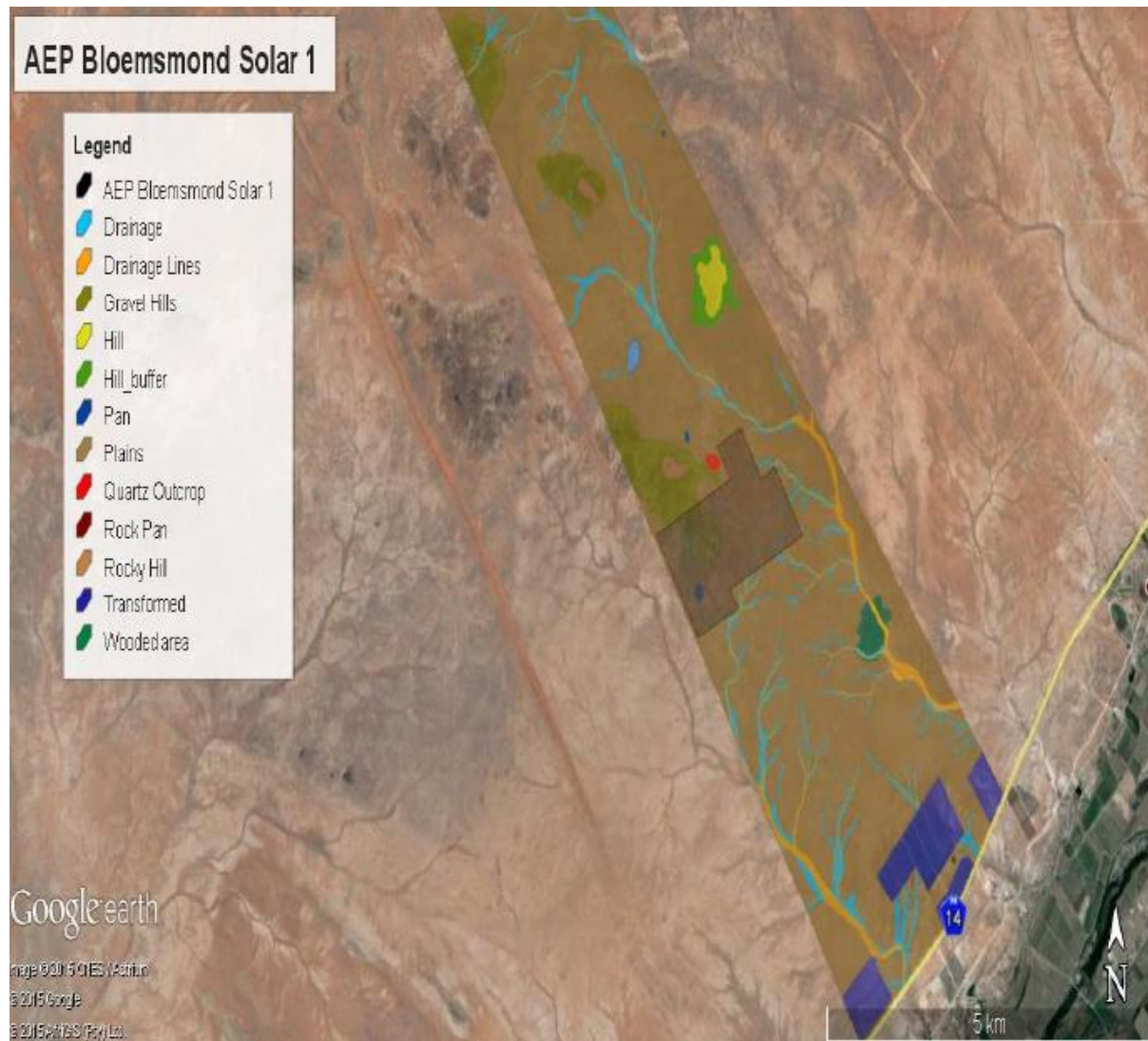


Figure 3 *Environmental sensitivity of Bloemsmond Solar PV 1 as described by Savannah (2015)*

6. Site Baseline and Sensitivity (2026)

A specialist from The Biodiversity Company (TBC) undertook a site survey on the 25th and 26th of May 2026. The photographs presented below were captured during the site visit (Figure 4). Four (4) representative soils were identified namely, Hutton, Vaalbos, Coega and Mispah soil forms. No active cropping areas were identified in the PV area; however, active vineyards under grape production were present in the 10 m buffer zone of the proposed access road. This small section of the access road is also categorised as Protected Agricultural Areas (PAAs) (DFFE, 2026). Minimal impacts are expected due to land segregation or land fragmentation of these areas. The road already exists in that section requiring only upgrades with less soil resources disturbance. These soil forms are similar in their diagnostics horizons and behaviour with those reported by Savannah (2015). Following the updated Soil Classification Working Group, (2018) classification; the Hutton and Vaalbos soils were previously classified as one form i.e. Hutton soils only, Coega soils (Carbonate subsurface layers are relatable in their uses and behaviour to the previously identified Plooyburg soils).

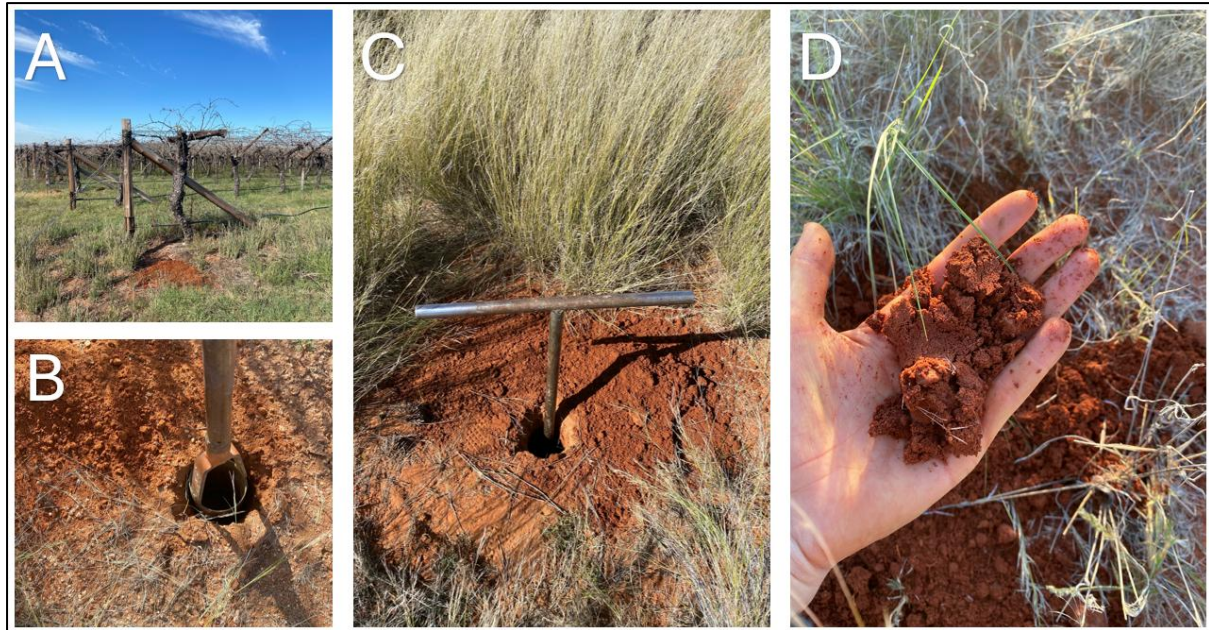


Figure 4 Representative photographs of the land uses; A) Vineyards along the access road, B-D) soil forms identified within Bloemsmond Solar PV 1.

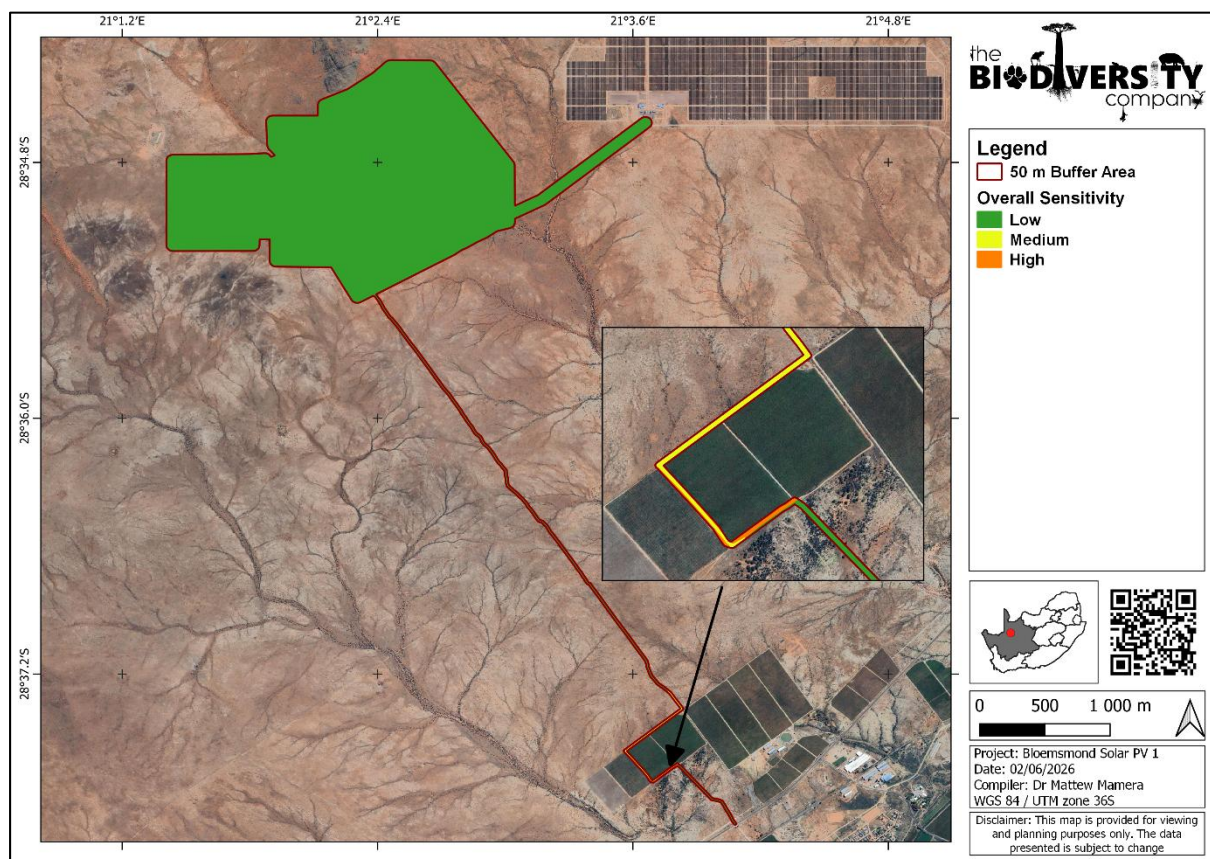


Figure 5 Overall site verified sensitivity of the Bloemsmond Solar PV 1.

6.1 Screening Tool

A screening tool report was generated for the project. Below are the outcomes for the theme:

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- Agriculture Theme – Low, for the PV 1 area due to the presence of shallow and low potential soils within the project area and marginal Very High in the access road due to the presence of active crop fields (Figure 6).

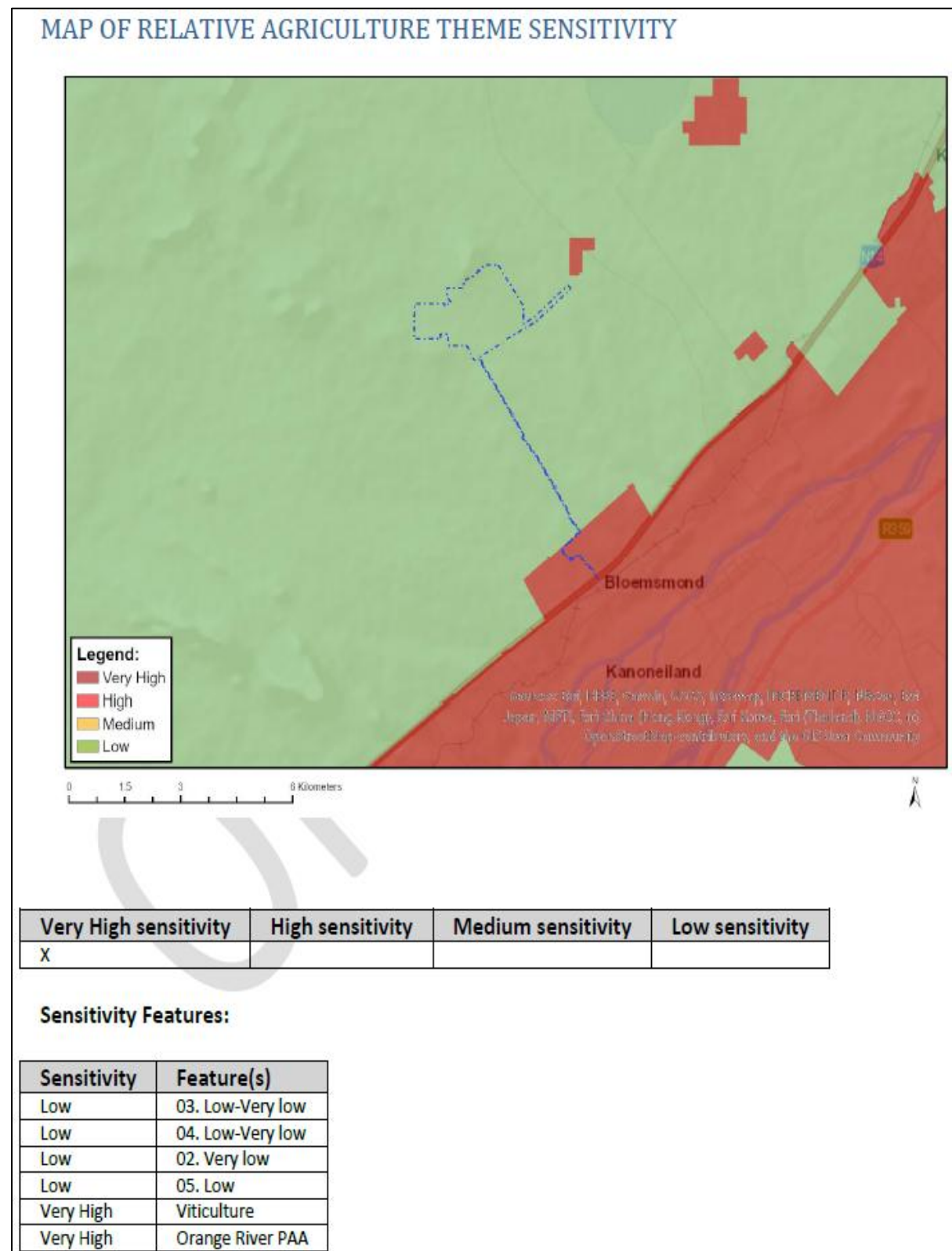


Figure 6 **Figure indicating the relative Agriculture Theme Sensitivity as identified by the Environmental Screening Tool for Bloemsmond PV 1**

7. Project Impacts

The following is based on the Soil and Agricultural Resources Assessment Study undertaken by Savannah (2015).

The following impacts were considered for the development of Bloemsmond Solar PV 1:

- Vegetation removal and construction activities will reduce ground cover, making soils more prone to erosion and instability.
- Soil erosion and dust generation are likely during construction, especially on slopes and disturbed areas, but can be managed with proper controls.
- Some agricultural land will be lost to the project footprint, but the area has low agricultural value.
- Soil contamination and compaction may occur from vehicle movement and accidental spills, but these risks can be minimized with good management.
- Power line construction may cause localized erosion if not managed carefully.
- Cumulative impacts from multiple projects in the area could increase erosion and dust but are expected to remain low with mitigation.
- Residual and indirect impacts (such as minor sediment movement and changes in runoff) may persist but are expected to be minor.
- Increase in sedimentation and erosion within the development footprint; and
- Physical disturbance by supporting infrastructure on the soil resources and environment.

The pre-mitigation and post-mitigation impact ratings for the development are shown in Table 1.

Table 1 *Summary of the impacts associated with the Bloemsmond Solar PV 1 (Savannah, 2015)*

Nature of the Impact	Status	Impact Significance	Impact Rating	Can impact be mitigated?	Is the impact acceptable?
Impacts on vegetation cover and soil stability	Before mitigation	55	Medium	Yes	Yes
	After mitigation	15	Low		
Loss of agricultural land;	Before mitigation	28	Low	Yes	Yes
	After mitigation	11	Low		
Dust generation;	Before mitigation	55	Medium	Yes	Yes
	After mitigation	21	Low		
Construction of power lines;	Before mitigation	40	Medium	Yes	Yes
	After mitigation	12	Low		

8. Mitigation Measures

The following conditions / mitigation measures are derived from Savannah (2015) report. The prescribed mitigation measures and supporting recommendations are considered adequate to achieve

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an acceptable residual impact and will remain applicable to the requested extension of the Environmental Authorisation (EA):

- Care must be taken with the ground cover during and after construction on the site.
- If it is not possible to retain a good plant cover during construction, technologies should be employed to keep the soil covered by other means, i.e. straw, mulch, erosion control mats, etc., until a healthy plant cover is again established. Care should also be taken to control and contain stormwater run-off.
- Rehabilitate construction sites by using indigenous grasses or prior vegetative cover to decrease runoff potential.
- Minimise activity on steep slopes / the side of slopes.
- Implement effective erosion control measures and an Erosion Management Plan.
- Keep to existing roads, where practical, to minimise impact on undisturbed ground, virgin soils, or agricultural land.
- Ensure stable slopes of stockpiles/excavations to minimise slumping.
- Stockpiles should not exceed 2m in height.
- Stockpiles not used within three (3) months after stripping must be seeded to prevent dust and erosion, only if natural seeding does not occur.
- Limit soil disturbance to the dry season.
- Cooperate with land owners in recommissioning farm land.
- Use dust suppression methods/material/chemicals.
- Care should also be taken to control and contain stormwater run-off.
- Limit the footprint of the power line to the project development area and select stable foundations to construct on.

9. Cumulative Impacts

The cumulative impact assessment was undertaken by a specialist from The Biodiversity Company (TBC) (Table 2).

Table 2 *Cumulative impact assessment*

<i>Nature: Loss of land capability through fertility losses, soil pollution, soil degradation, erosion and compaction</i>		
Destruction, loss and fragmentation of soil resources and agricultural areas		
	Overall impact of the proposed development considered in isolation	Cumulative impact of the project and other projects in the area
Extent	Low (2)	High (4)
Duration	Permanent (5)	Long term (4)
Magnitude	Low (4)	Moderate (6)

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Probability	Improbable (2)	Highly probable (4)
Significance	Low (22)	Medium (56)
Status (positive or negative)	Negative	Negative
Reversibility	Moderate	Moderate
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	
Mitigation: Mitigation measures implemented during the operation phase of the PV project will result in low impacts when properly applied during the lifespan of the project		

The quantitative impact of the proposed project in isolation and the cumulative impact on the soil and agricultural resources is anticipated to be “Low to Medium” (Table 2). As the layout avoids large and/or sensitive agricultural areas, and with adherence to the mitigation measures, no irreplaceable loss of soil and agricultural resources is anticipated.

10. Summary of Findings

The table below (Table 3) illustrates the comparisons between the 2015 Soil and Agricultural Assessment Study by Savannah assessment and this amendment process.

Table 3 *Table depicting the differences between the Savannah 2015 findings and the current amendment findings*

Aspect	Comments and Recommendations	
	Previous Study (Savannah , 2015).	Current study
Baseline	Findings: The area is dominated by sandy soils that show little pedological development and shallow soils, currently classified as grazing land. The soil forms present on site are Plooyburg, Hutton and Mispah.	Findings: The baseline soil resources and environment remain unchanged from that described in the 2015 assessments. The site is still characterised by these soil forms, Hutton, Vaalbos (previously classified as Hutton), Coega (Carbonate subsurface layers related to the Plooyburg) and Mispah soil forms which were identified within the development footprint. Additional findings are only in the access road buffer zone, now categorised as PAAs, under cropping practices. The road would avoid the cropped areas and make use of existing gravel areas. No new roads will be constructed in that section, only road upgrades of the existing road which will be acceptable for soil resources.
Sensitivity	Findings: The overall impacts of the proposed facility on agriculture and soil conditions will be fairly low, principally because of the climatic conditions and the low agricultural and grazing potential of the site. No commercial farming practices could be undertaken under natural conditions.	Findings: The soil and agricultural sensitivity remain as described in the 2015 assessment. The larger area is still under grazing practices for the PV area with shallow and low potential soils.
Impacts	Findings: The assessment identified the following key soil and agricultural-related impacts: impacts on vegetation cover and soil stability, increased erosion risk, loss of agricultural land, dust generation, soil contamination, soil compaction, land degradation, minor localized movement of sediment, slow regeneration of soil processes, and minor loss of grazing land may	Findings: The soil and agricultural impacts remain unchanged from those identified in the 2015 assessment. With implementation of the prescribed mitigation measures, the residual soil and agricultural impact is still expected to remain Low.

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	persist. With mitigation, all identified impacts reduced to Low significance.	
Cumulative Impacts	Findings: Cumulative impacts were assessed to be Low to moderate with adherence to mitigation measures.	Findings: The cumulative impact was determined to be medium, with consideration of the road upgrades.
Conditions	Findings: The report recommended regular erosion monitoring and a control programme; roads and areas receiving the most runoff water should be monitored frequently, and repairs should be implemented at least every 6 months; suitable stormwater management; monitoring of disturbed areas for erosion; strict management of hazardous materials and pollution sources; and rehabilitation of disturbed areas.	Recommendation: The original soil and agricultural mitigation measures and recommendations remain applicable. No additional soil and agricultural -specific conditions are required, provided that the original avoidance and mitigation measures are retained and implemented. Upgrades of the existing road along the active cropping areas will be acceptable for soil and agricultural resources.

11. Conclusion

It is the opinion of the specialist that the findings from the original assessments conducted in 2015 (Savannah, 2015) to be appropriate and relevant with no discrepancies. The appropriate authorities may proceed with the amendment authorisation.

Kind regards,



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Soil and Agricultural Scientist

The Biodiversity Company

June 2026