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7 June 2025

Attention: Humansrus Solar PV Energy Facility 2 (Pty) Ltd
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To whom it may concern:

AQUATIC BIODIVERSITY SPECIALIST INPUT FOR THE PART 1 AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION (EA) FOR THE PROPOSED DEVELOPMENT OF THE HUMANSRUS SOLAR PV ENERGY FACILITY 2 (PTY) LTD (PREVIOUSLY KNOWN AS THE RE CAPITAL 14 SOLAR POWER PLANT) GRID CONNECTION, HUMANSRUS, NORTHERN CAPE.

1. Background

Humansrus Solar PV Energy Facility 2 (RF) (Pty) Ltd proposes the amendment of the Environmental Authorisation (EA) for the construction, operation and maintenance of the grid connection (referred to as HR2). The grid connection runs from the proposed solar photovoltaic (PV) Project, Humansrus Solar PV 2, with a generation of 100 megawatt (MW), to the nearby Kronos substation. The project is located near Copperton, within the Remainder of Farm 147, Humansrus, within the Pixley Ka Seme District in the Northern Cape Province, under the jurisdiction of the Siyathemba Local Municipality, in the Northern Cape Province.

The proposed project consists of the construction of a new 132 kilo-volt (kV) powerline linking the onsite substation 1 to the existing Kronos substation. The powerline runs from the proposed Humansrus Solar PV 2, parallel to the gravel road, R357 (Prieska-Vanwyksvlei) across the farm Hoekplaas 146 property, to the existing Kronos substation. The powerline is approximately 4.5 km in length.

A 50 metre (m) buffer was applied to the provided powerline to determine the Project Area of Influence (PAOI) for the purposes of this report (Figure 1).

The amendment Environmental Authorisation issued on the 26th of March 2020, DEA Reference 14/12/16/3/3/1/1318/AM2 states that:

"This activity must commence within a period of five (5) years from the date of expiry of the EA issued on 30 April 2025 (i.e. commence by 30 April 2025). 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."

The EA for Humansrus Solar PV 2 Grid Connection (HR2) is nearing expiration and as such Humansrus Solar PV Energy Facility 2 (Pty) Ltd is applying for an extension of the validity of the existing Environmental Authorisation. The amendment request is to extend the validity period of the Environmental Authorisation by an additional 10 years to 2035.

Cape EAPrac has been appointed as the Registered Environmental Assessment Practitioner (EAP) to prepare the EA Amendment Application. The EA Amendment is being completed in terms of Regulation 29 of the Environmental Impact Assessment (EIA) Regulations, 2014, as amended and in terms of Regulation 30(1)(a), Department of Forestry, Fisheries and the Environment (DFFE) have requested specialist input to inform the amendment application.

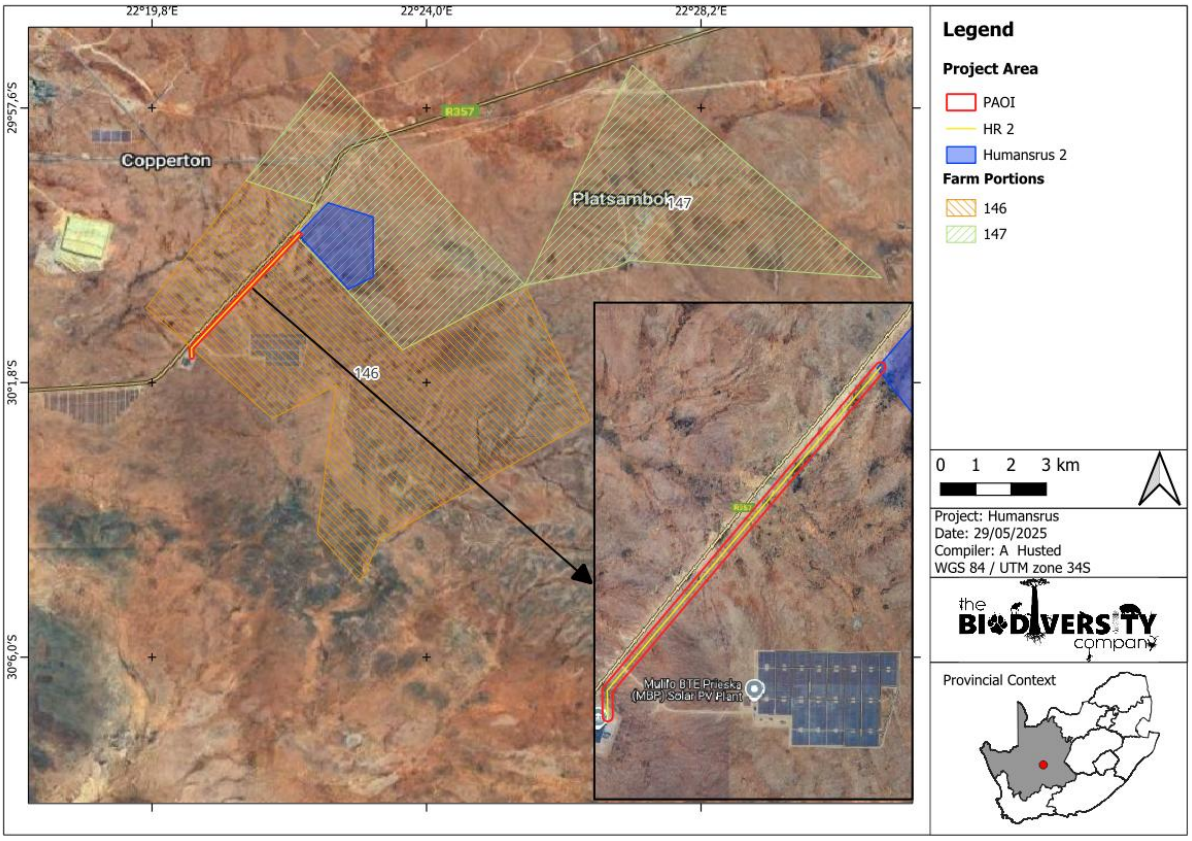


Figure 1 ***The Project Area of Influence, consisting of the proposed powerline route with a 50-meter buffer. Humansrus Solar PV 2 and the farm portions are also shown***

2. Scope of Work

The Biodiversity Company was appointed to provide specialist inputs for this Amendment Application. This report is a component of the Aquatic Biodiversity Assessment and the Scope of Work for this report is as follows:

- Confirmation of the status of the environment compared to that at the time of the original assessments done in 2014 by Simon Todd.
- An indication as to whether the impact rating as provided in the initial assessment remains valid; if the mitigation measures provided in the initial assessment 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 initial 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 field survey was conducted during 3 April 2025, which constitutes the wet season (between August to April). Despite the survey being conducted during the preferred season, site conditions were 'dry' for the period. However, this doesn't present a limitation for the purposes of this amendment process.

4. Project Description

The project description remains as per the EA and no changes to the scope are proposed as part of this EA Amendment process. The project description as authorised:

- 132 kV overhead transmission powerline, connection Humansrus PV Solar Energy Facility 2 to the nearby Kronos Eskom substation;
- Pylon structures of approximately 21 m in height; and
- Access or maintenance track beneath or parallel to the overhead line.

5. Site Baseline and Sensitivity (2014)

The initial EIA undertaken in 2014 didn't include a standalone aquatic impact assessment. Characterisation and commentary on sensitivity was rather addressed in the ecology impact assessment.

Simon Todd Consulting undertook the initial ecological impact assessment (inclusive of aquatic aspects) i the project in 2014. The baseline environment is summarised as follows in the 2014 assessment:

5.1. No specific features were identified during the field assessment and the entire corridor is deemed to have a sensitivity rating of Low, due to the absence of water resources.

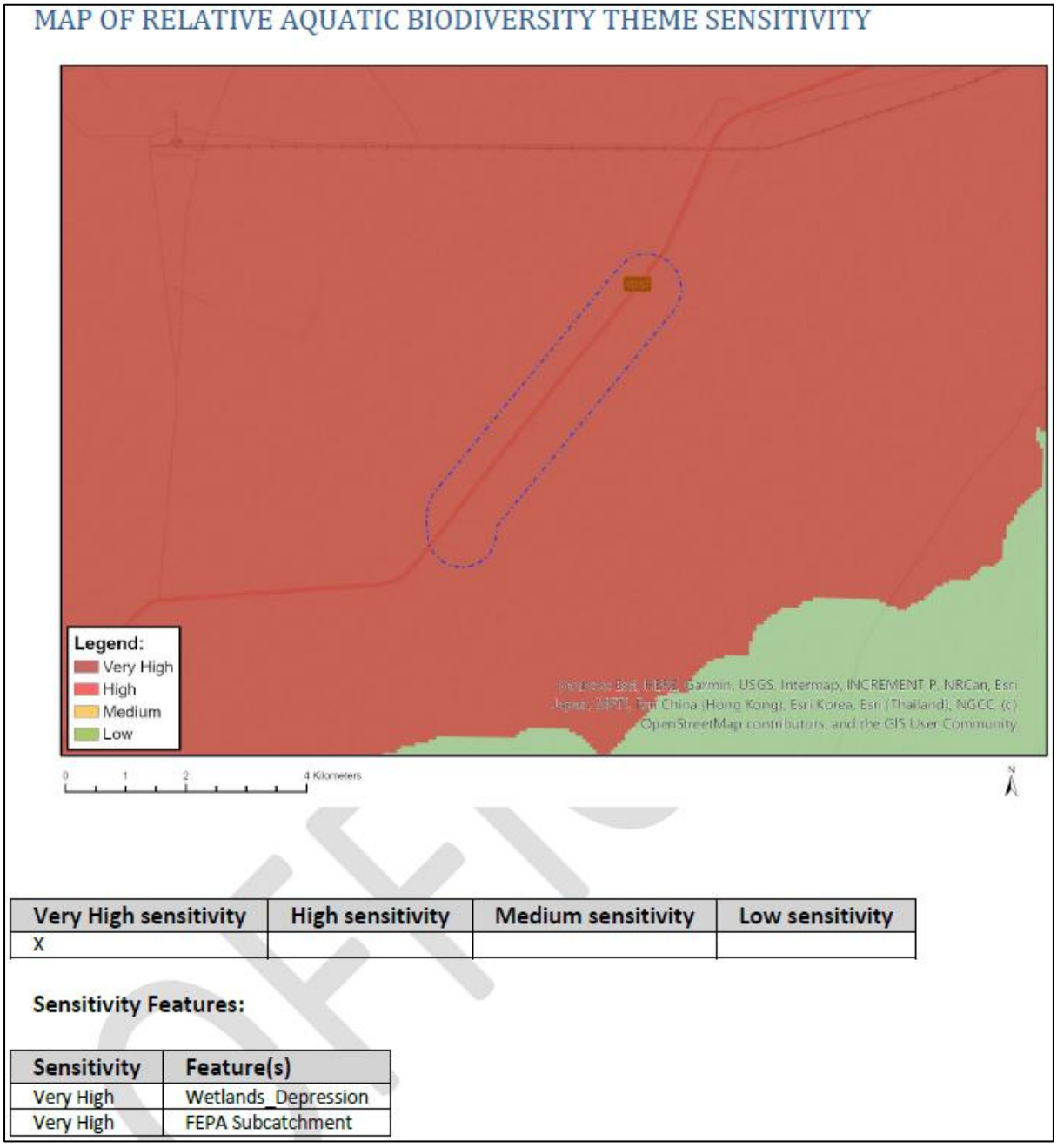
6. Site Baseline and Sensitivity (2025)

A specialist from The Biodiversity Company (TBC) undertook a site survey on the 3rd April 2025. The pictures below were taken during the site visit. No wetlands or rivers were identified. A borrow pit filled with water was identified adjacent to the road. Evidence of this pit dates back to 2006.

Figure 22 Example of the borrow pit (left) and dryland habitat (right) for the area.

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

- Aquatic Biodiversity Theme – High. This is due to the site being within a FEPA Sub catchment and potential depressions (see below).



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Wetlands_Depression
Very High	FEPA Subcatchment

Figure 33 Figure indicating the relative Aquatic Biodiversity Theme Sensitivity as identified by the Environmental Screening Tool for Humansrus Solar PV 2 Grid Connection

No specific features were identified during the field assessment and the entire corridor is deemed to have a sensitivity rating of Low, due to the absence of water resources. No natural depressions were identified.

Although the proposed powerline corridor intersects a subcatchment classified as a Freshwater Ecosystem Priority Area (FEPA), no natural watercourses, wetlands, or associated aquatic features were identified within the development footprint during the site assessment. The FEPA designation is intended to guide the conservation of freshwater ecosystems at a catchment scale, but its presence

does not inherently indicate ecological sensitivity across the entire subcatchment. Given the absence of any discernible aquatic features within the corridor, the functional ecological value of the specific area to freshwater conservation objectives is considered limited. As such, despite its location within a FEPA subcatchment, the site-specific sensitivity of the proposed corridor is regarded as Low.

7. Project Impacts

No formal impact assessment that pertains to aquatic biodiversity was completed by Simon Todd (2014) and potential aquatic features were considered as part of the ecological assessment. The assessment of impact significance for this amendment process considers pre-mitigation as well as implemented post-mitigation scenarios, see the tables below. Two phases were considered for the impact assessment, with no decommissioning phase being considered.

The following impacts were considered during the construction phase:

- Loss or degradation in ecosystem services;
- Increase in erosion and sedimentation; and
- Introduction and spread of alien and invasive vegetation.

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

Table 1 Impacts associated with the Construction Phase

Nature of the Impact	Status	Cumulative Effect	Impact Significance	Impact Rating	Can impact be mitigated?	Is the impact acceptable ?
Loss or degradation in ecosystem services;	Before mitigation	2	24	Low (6-28)	Yes	Yes
	After mitigation	1	6	Low (6-28)		
Increase in erosion and sedimentation;	Before mitigation	2	20	Low (6-28)	Yes	Yes
	After mitigation	1	4	Low (6-28)		
Introduction and spread of alien and invasive vegetation;	Before mitigation	2	20	Low (6-28)	Yes	Yes
	After mitigation	1	4	Low (6-28)		

The following impacts were considered during the operational phase:

- Loss or degradation in ecosystem services;
- Increase in erosion and sedimentation of receiving systems; and
- Introduction and spread of alien and invasive vegetation.

The pre-mitigation and post-mitigation impact ratings for the construction phase are shown in Table 2.

Table 2 Impacts associated with the Operational Phase

Nature of the Impact	Status	Cumulative Effect	Impact Significance	Impact Rating	Can impact be mitigated?	Is the impact acceptable ?
Loss or degradation in ecosystem services;	Before mitigation	2	20	Low (6-28)	Yes	Yes
	After mitigation	1	4	Low (6-28)		

Increase in erosion and sedimentation of receiving systems;	Before mitigation	2	20	Low (6-28)	Yes	Yes
	After mitigation	1	4	Low (6-28)		
Introduction and spread of alien and invasive vegetation;	Before mitigation	2	20	Low (6-28)	Yes	Yes
	After mitigation	1	4	Low (6-28)		

Based on the impact ratings for this amendment process (see tables above), it is the opinion of the specialist that due to no specific freshwater features being identified for the corridor, and also achieving avoidance of drainage systems, the overall residual impact is expected to be low.

8. Mitigation Measures

8.1. The following conditions/mitigations were recommended by Simon Todd (2014):

8.1.1. Drainage lines and areas near waterbodies should be avoided during route planning and construction to reduce risks of erosion and alien plant invasion.

9. Cumulative Impacts

The 2014 study made the following comments on development in the area:

The development would however contribute to cumulative impacts in the area, which are becoming increasingly large given the concentration of renewable energy facilities in the immediate area. However, the total footprint of the power line would be low and the contribution to terrestrial habitat loss would be very small and is not considered significant.

The quantitative impact of the proposed project in isolation on aquatic biodiversity is anticipated to be “Absent” due to the avoidance of these systems (Table 3). The cumulative impact of the proposed project on aquatic biodiversity is also anticipated to be “Low”. It should be noted that pre-existing modifications to the systems do exist to some degree. Since the layout achieves avoidance of large and/or sensitive watercourses and that stormwater plan will be implemented, no irreplaceable loss of freshwater biodiversity is anticipated.

Table 3 Cumulative Impacts to avifauna associated with the proposed project

Status	Cumulative Effect	Impact Significance	Impact Rating	Can impact be mitigated?	Is the impact acceptable ?
Impact in isolation	-	-	Absent	Yes	Yes
Cumulative impact	1	16	Low (6-28)		

10. Summary of Findings

The initial aquatic biodiversity study was conducted in 2014 by Simon Todd. The table below (Table 4) illustrates the comparisons between the original (or initial) assessments and this amendment process.

Table 4 Table depicting the differences between the Simon Todd 2014 findings and the current amendment findings

Aspect	Comments and Recommendations	
	Pervious Study (Simon Todd, 2014)	**Current study**
Baseline	**Findings:** No specific features were identified.	**Findings:** No wetlands are rivers were identified.
Sensitivity	**Findings:** The low open shrubland is of low sensitivity.	**Findings:** The sensitivity of the aquatic biodiversity theme is low.

Impacts	**Findings:** No clear assessment of water resources were considered.	**Findings:** No natural water resources were identified in the corridor, so all residual impacts remain low.
Cumulative Impacts	**Findings:** No cumulative assessment was completed, but it is noted that the contribution of the powerline to cumulative impacts would be very small or negligible.	**Findings:** The cumulative impact is Low Negative.
Conditions	**Findings:** Several conditions were provided.	**Recommendation:** Authorisation is not subject to any further conditions.

11. Conclusion

It is the opinion of the specialist that the findings from the original assessments conducted in 2014 (Simon Todd) appear to be appropriate and relevant with no discrepancies. The appropriate authorities may proceed with the amendment authorization.

Kind regards,

Andrew Husted (Pr Sci Nat 400213/11)

Freshwater Ecologist

The Biodiversity Company

June 2025