APPENDIX 4: Site Verification Report

SITE SENSITIVITY VERIFICATION
(IN TERMS OF PART A OF THE ASSESSMENT PROTOCOLS PUBLISHED IN GN 320 ON 20 MARCH 2020

1 Introduction

Landscape Dynamics Environmental Consultants (Pty) Ltd was appointed by Mulilo Renewable Project Developments (Pty) Ltd to obtain Environmental Authorisation for the Mercury Cluster Solar PV Project and associated gridline infrastructure. The project will involve the development of five Photo Voltaic (PV) solar facilities on privately owned land in the vicinity of Viljoenskroon in the Free State Province, together with associated grid connections (power lines) to connect the solar farms to the existing Mercury Transmission Substation (MTS). This HIA assesses the likely impacts of the proposed 5xPV facilities to heritage resources.

The results of the DFFE Screening Tool are included in the table below per project:

Theme	Kleinfontein	Vlakfontein	Zaaiplaats	Hormah	Ratpan
Archaeology and Heritage	Low	Low	Low	Low	Low
Palaeontology	Very High	High	Medium	Very High	Very High

In accordance with Appendix 6 of the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) Environmental Impact Assessment (EIA) Regulations of 2014, a site sensitivity verification has been undertaken in order to confirm the current land use and environmental sensitivity of the proposed project area as identified by the National Web-Based Environmental Screening Tool (Screening Tool).

2 Site sensitivity verification

The site sensitivity verification was undertaken as follows:

- A Desktop Study was conducted of relevant reports previously written (please see the reference list for the age and nature of the reports used)
- An archaeologist conducted an assessment of archaeological resources likely to be disturbed by the proposed development. The archaeologists conducted their site visit from 18 to 22 March 2022
- A palaeontologist conducted a desktop assessment of palaeontological resources likely to be disturbed by the proposed development.

3 Outcome of site sensitivity verification

Archaeology and Heritage:

The site at VK4 has a concentration of artefacts that look to be eroding from a potentially dateable sedimentary context, and therefore should be avoided with the guidance of a 20m buffer zone for development. Apart from this one site, the potential for finding a dateable *in-situ* archaeological horizon based on current surface observations appears to be low. The documented archaeology is therefore classified as scientifically LOW-SIGNIFICANCE.

One isolated historic burial and an historic burial ground were identified within the vicinity of the Zaaiplaats farm werf. These resources have high levels of social and intrinsic cultural value and are graded IIIA. The presence of these burials highlights the possibility of further hidden or unmarked burials located throughout the development area.

Calcrete formation was documented in one place on the landscape, which suggests that there may be potential for fossil preservation below surface in some places, although no exposed fossils were documented during the survey. Concerning Stone Age archaeology, there are no objections to the authorization of the proposed development provided that if any evidence of human remains or archaeological material is exposed during excavation, that development activities cease in the area of the identified remains.

No significant archaeological resources were noted within the proposed Kleinfontein PV1 Facility, Vlakfontein PV1 Facility or the Hormah PV1 Facility.

One archaeological site of low local significance (VK4, Grade IIIC) was identified within the development area for the proposed Ratpan PV2 Facility. A no development buffer of 20m is recommended for implementation around this site to ensure its preservation. Furthermore, this area has been excluded from the final layouts for this development.

Two significant resources were identified within the Zaaiplaats PV area - CVK100 and CVK101, both representing burials within close proximity to the farm werf and occupied structures. A no-development buffer of 40m is recommended around the isolated burial (CVK100) and a no-development buffer of 100m is recommended around the burial ground (CVK101) to ensure that no impact takes place and that the sense of place associated with the burials is retained.

Palaeontology

Based on the nature of the project, surface activities may impact upon the fossil heritage if preserved in the development footprint. The geological structures suggest that the rocks are the right age and type to contain fossils but the area is covered in deep cultivated soils. Since there is an extremely small chance that fossils from the Vryheid Formation may occur below ground and may be disturbed a Fossil Chance Find Protocol has been added to this report. Taking account of the defined criteria, the potential impact to fossil heritage resources is extremely low.

Based on experience and the lack of any previously recorded fossils from the area, it is extremely unlikely that any fossils would be preserved in the overlying deep soils and sands of the Quaternary. In the northernmost section (Kleinfontein PV1 only north of the grid connection) there is a very small chance that fossils may occur in the shales below ground of the early Permian Vryheid Formation. The impact on the palaeontological heritage would be low, therefore, as far as the palaeontological is concerned, the projects should be authorised.

4 National environmental screening tool

According to the DFFE Screening Tool analysis, the development area has Very High, High and Medium levels of sensitivity for impacts to palaeontological heritage and Low levels of sensitivity for impacts to archaeological and cultural heritage resources. The results of this assessment in terms of site sensitivity are summarised below:

- The cultural value of the broader area has some significance in terms of its mining and agricultural history (Moderate)
- Some significant archaeological resources were identified within the broader area (Moderate)
- No highly significant palaeontological resources were identified within the development

area, however the geology underlying the development area is very sensitive for impacts to significant fossils (Moderate)

As per the findings of this assessment, and its supporting documentation, the outcome of the sensitivity verification disputes the results of the DFFE Screening Tool for Palaeontology and disputes the results of the screening tool for archaeology and cultural heritage - these should be considered to be Moderate. This evidence is provided in the body of the HIA report and in its appendices (Appendix 1 and 2).

5 Conclusion

It is confirmed that the site sensitivities identified in the specialist study have been verified.

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APPENDIX 5: Cumulative Impact Letter

Cumulative Impact Statement

The cumulative impact of a development is the impact that development will have when its impact is added to the incremental impacts of other past, present or reasonably foreseeable future activities that will affect the same environment. It is important to note that the cumulative impact assessment for a particular project, like what is being done here, is not the same as an assessment of the impact of all surrounding projects. The cumulative assessment for this project is an assessment only of the impacts associated with this project, but seen in the context of all surrounding impacts. It is concerned with this project's contribution to the overall impact, within the context of the overall impact. But it is not simply the overall impact itself.

The most important concept related to a cumulative impact is that of an acceptable level of change to an environment. A cumulative impact only becomes relevant when the impact of the proposed development will lead directly to the sum of impacts of all developments causing an acceptable level of change to be exceeded in the surrounding area. If the impact of the development being assessed does not cause that level to be exceeded, then the cumulative impact associated with that development is not significant.

The Department of Forestry, Fisheries and the Environment (DFFE) requires compliance with a specified methodology for the assessment of cumulative impacts. The DFFE compliance for this project requires considering all renewable energy project applications within a 30 km radius.

According to the DFFE database, there are 7 other renewable energy projects within a 30 km radius. Furthermore there are another 4 projects associated with this current one. The cumulative impact is affecting an environment that has been declared a Renewable Energy Development Zones (REDZ) precisely because it is an environment that can accommodate numerous renewable energy developments

In REDZ areas, there is a reasonable expectation that the cultural landscape of an area will be changed to be dominated, or at least heavily altered, by renewable energy development. In fact, this is the intention of the REDZ areas.

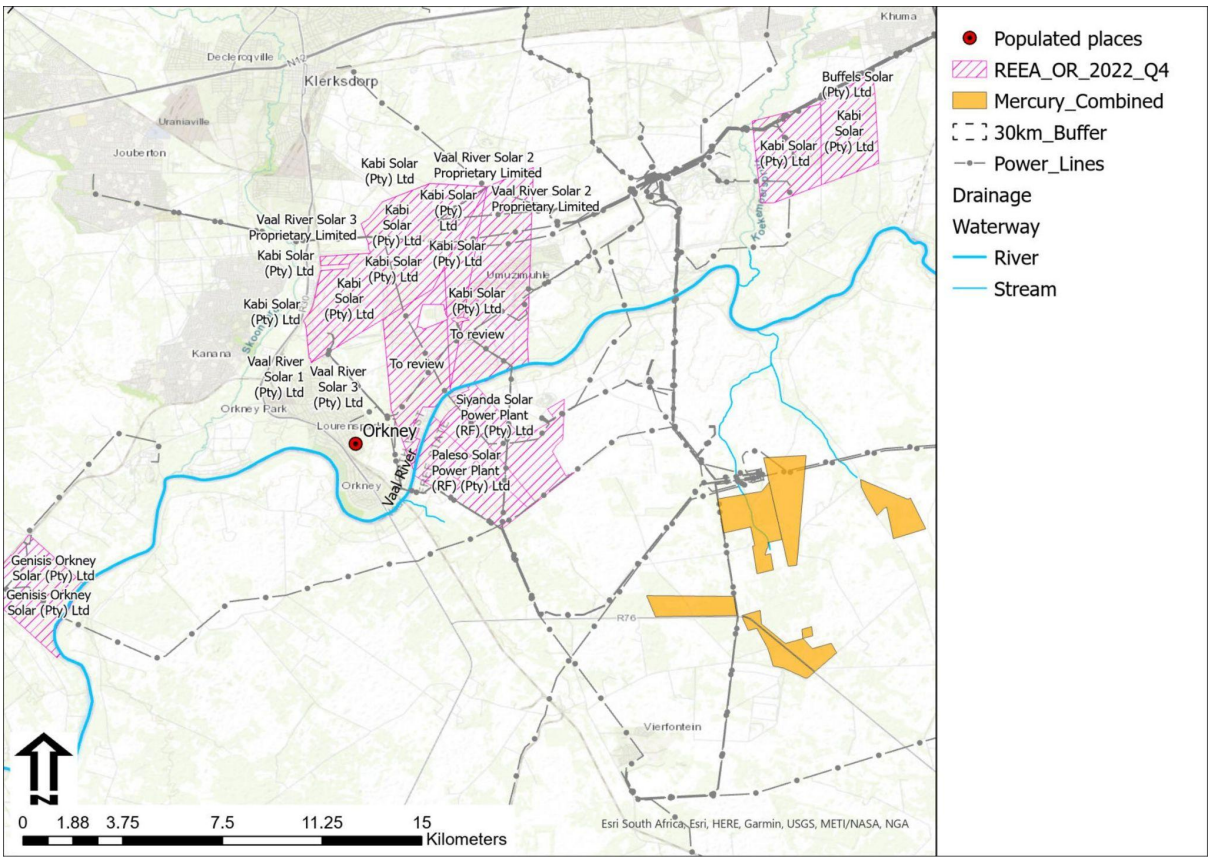
In terms of cumulative impacts to heritage resources, impacts to archaeological and palaeontological resources are sufficiently dealt with on a case by case basis. The primary concern from a cumulative impact perspective would be to the cultural landscape. the cultural landscape is defined as the interaction between people and the places that they have occupied and impacted. In some places in South Africa, the cultural landscape can be more than 1 million years old where we find evidence of Early Stone Age archaeology (up to 2 million years old), Middle Stone Age archaeology (up to 200 000 years old), Later Stone Age archaeology (up to 20

000 years old), evidence of indigenous herder populations (up to 2000 years old) as well as evidence of colonial frontier settlement (up to 300 years old) and more recent agricultural layers.

Modern interventions into such landscapes, such as renewable energy development, constitute an additional layer onto the cultural landscape which must be acceptable in REDZ areas. The primary risk in terms of negative impact to the cultural landscape resulting from renewable energy development lies in the eradication of older layers that make up the cultural landscape. There are various ways that such impact can be mitigated.

In terms of impacts to heritage resources, it is preferred that this kind of infrastructure development is concentrated in one location and is not sprawled across an otherwise agricultural landscape. The proposed development is therefore unlikely to result in unacceptable risk or loss, nor will the proposed development result in a complete change to the sense of place of the area or result in an unacceptable increase in impact due to its location as one of many renewable energy facilities in this area, and its proximity to the existing Mercury Substation. Furthermore, this development is located within the Klerksdorp REDZ, an area that has been pre-identified as suitable for renewable energy development and as such, cumulative impact is expected in this area.

The landscape within which the proposed project areas are located, is not worthy of formal protection as a heritage resource and has the capacity to accommodate such development from a heritage perspective.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Vaal River
Buffels Solar (Pty) Ltd
Kabi Solar (Pty) Ltd
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Siyanda Solar Power Plant (RF) (Pty) Ltd
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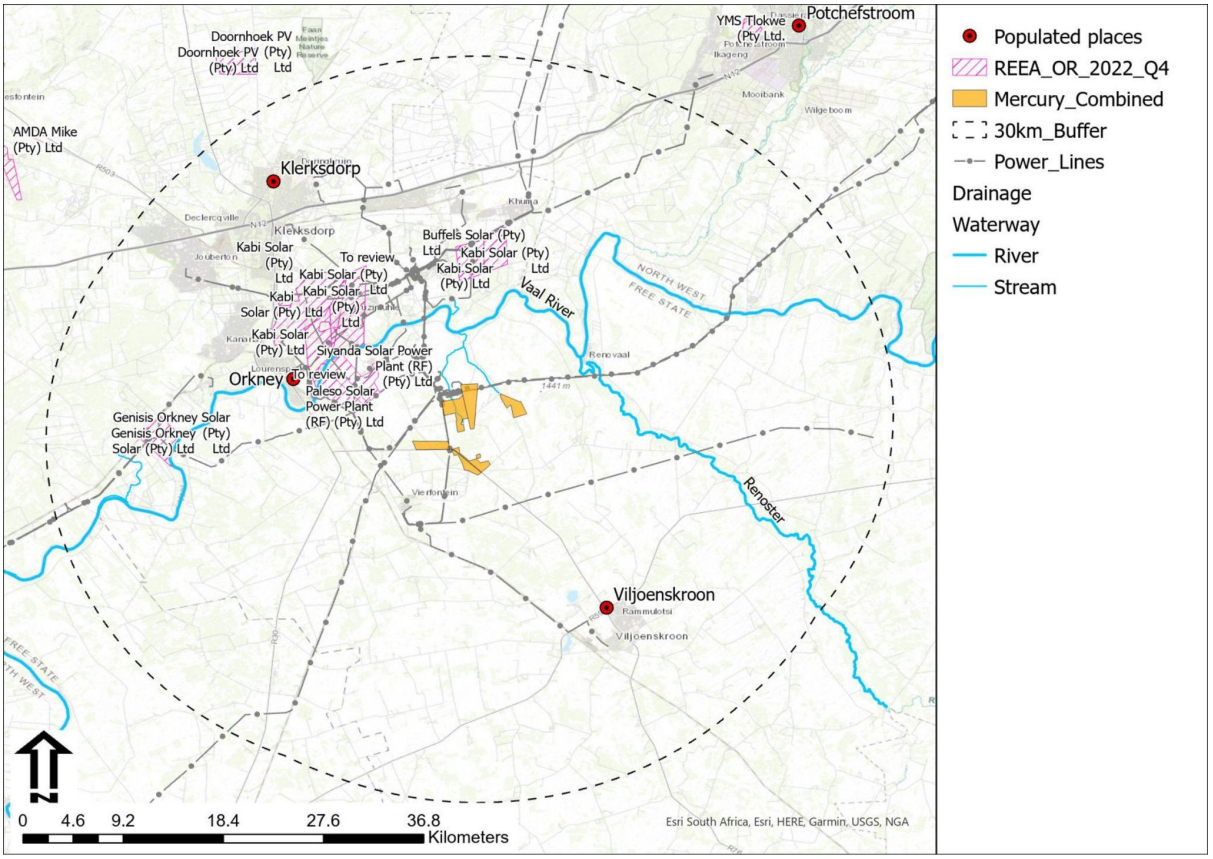
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Kilometers
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