SITE SENSITIVITY VERIFICATION REPORT FOR THE PROPOSED KIARA PV4 FACILITY ON PORTION 2 OF THE FARM HOLLAAGTE NO. 8, DITSOBOTLA LOCAL MUNICIPALITY, NORTH WEST PROVINCE (DFFE REFERENCE: 14/12/16/3/3/2/2174)

Voltalia South Africa (Pty) Ltd is proposing the development of a commercial photovoltaic (PV) solar energy facility and associated infrastructure on Portion 2 of the Farm Hollaagte No. 8 located approximately 16km north-east of the town of Lichtenburg, within the Ditsobotla Local Municipality and the Ngaka Modiri Molema District Municipality in the North West Province (refer to Figure 1). The facility will have a contracted capacity of up to 120MW and will be known as the Kiara PV4 Facility. The project is planned as part of a larger cluster of renewable energy projects, which include six (6) additional PV facilities, each up to 130MW (known as the Kiara PV1, Kiara PV2, Kiara PV3, Kiara PV5, Kiara PV6, and Kiara PV7) and grid connection infrastructure connecting the facilities to the existing Watershed Substation.

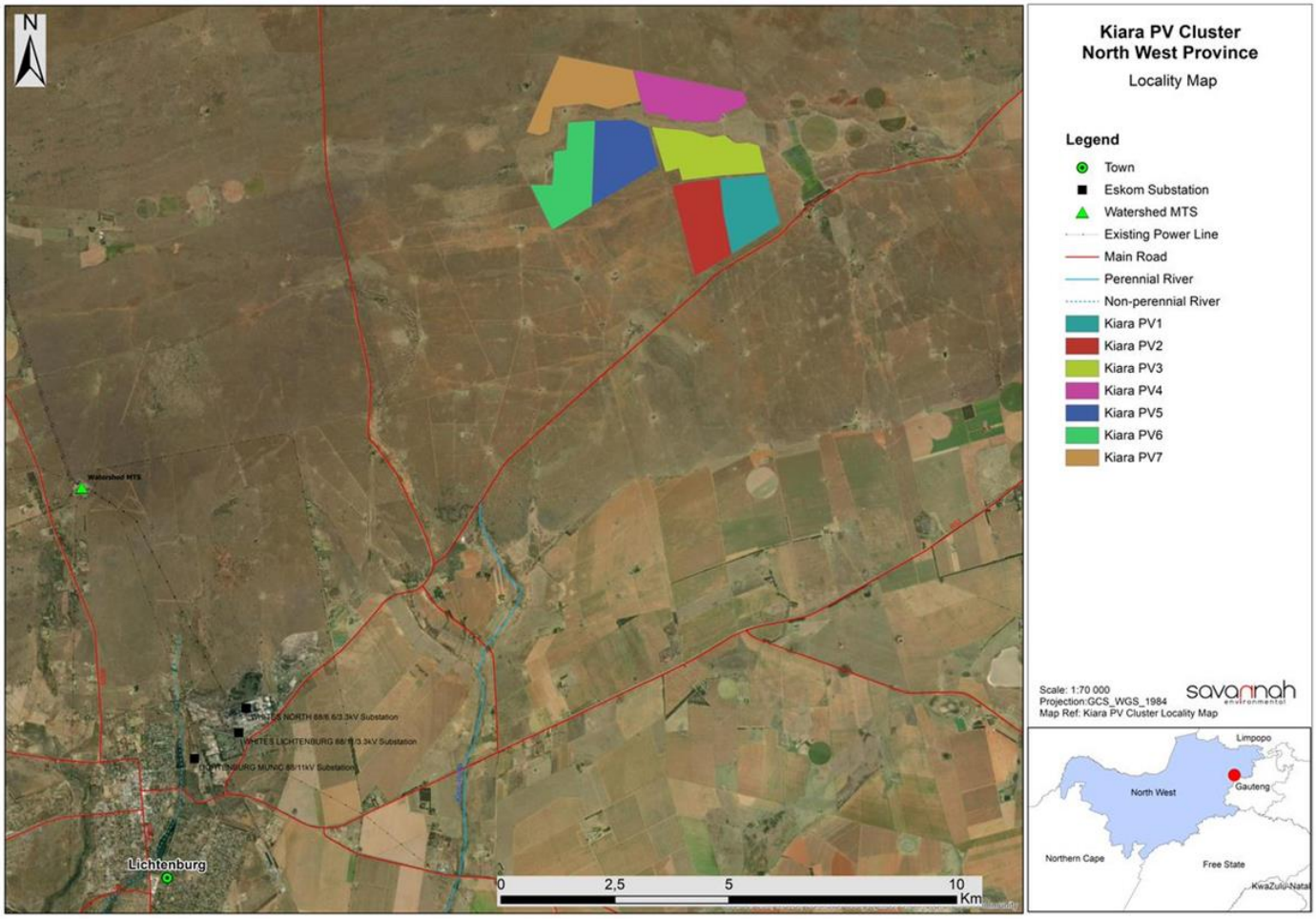

Figure 1: Locality map illustrating the cluster of proposed renewable energy facilities that the Kiara PV4 Facility forms part of

The project site (~856.5ha in extent) has been identified by the applicant as a technically feasible site which has the potential for the development of the Kiara PV4 Facility, including a Battery Energy Storage System (BESS).

Infrastructure associated with the solar PV facility will include:

- Solar PV array comprising PV modules and mounting structures
- Inverters and transformers
- Cabling between the panels
- 132kV onsite facility substation/ 132kV powerline from the onsite substation to the switching collector substation
- Cabling from the onsite substation to the collector substation (either underground or overhead).
- Electrical and auxiliary equipment required at the collector substation that serves the solar energy facility, including switchyard/bay, control building, fences, etc.
- Battery Energy Storage System (BESS)
- Site and internal access roads (up to 8m wide)
- Site offices and maintenance buildings, including workshop areas for maintenance and storage.
- Temporary and permanent laydown area

SENSITIVITY VERIFICATION METHODOLOGY:

The site sensitivity verification report was compiled by the EAP and is based on specialist desktop information and field work undertaken as part of the S&EIA process. This report forms part of the Scoping and Environmental Impact Assessment (S&EIA) process being undertaken for the proposed Kiara PV4 Facility on Portion 2 of the Farm Hollaagte No. 8, Ditsobotla Local Municipality, North West Province.

SITE SENSITIVITY VERIFICATION:

The table below and reference to specialist assessments serve to:
- Verify land use and sensitivities identified in the screening report; and
- Confirm / contest the need for the various specialist inputs called for in terms of the screening tool report.

Specialist Assessment	Sensitivity Rating as per the Screening Tool (relating to the need for the study)	Project Team Response
Agricultural Impact Assessment	High	Following the consideration of all the desktop and gathered baseline data above, the findings of the report are not the same as the Environmental Screening Tool. The area is currently used for livestock farming. The proposed Kiara PV 4 development area can support 22 head of cattle at the long-term grazing capacity of 8ha/LSU (DALRRD, 2018). Considering the soil properties, land capability and agricultural potential of the development area, most of the area has **Low Agricultural Sensitivity**. Only the small area of 4ha where the Hutton soils are present, has **Medium Agricultural Sensitivity**. Soil in the project area will have **Low sensitivity**,

Specialist Assessment	Sensitivity Rating as per the Screening Tool (relating to the need for the study)	Project Team Response
		depending on the successful implementation of mitigation measures to prevent soil erosion, compaction, and pollution. A Soils and Agricultural Potential Impact Assessment is included in this EIA Report as **Appendix F**.
Landscape/Visual Impact Assessment	Very high	A number of sensitive visual receptors were identified within the region, including residents, tourists and road users. Potentially sensitive visual receptors within a 1km radius of the PV facility may experience a very high visual impact. The magnitude of visual impact on sensitive visual receptors subsequently subsides with distance to; high within a 1–3km radius (where/if sensitive receptors are present) and moderate within a 3–6km radius (where/if sensitive receptors are present). Receptors beyond 6km are expected to have a low potential visual impact. Identified visual receptors include: **0 – 1km** The majority of the exposed areas in this zone fall within vacant open space, generally devoid of observers or potential sensitive visual receptors that would experience visual impacts of a **high** magnitude. **1 – 3km** The majority of the exposed areas in this zone fall within natural open space with limited homesteads. The homestead of Witstinkhoutboom 4 (east of the site) may experience visual impacts of **high** magnitude, while Hollaagte 4, situated west of the PV4 Facility will experience visual impacts of a **moderate to high** magnitude. North of the PV4 Facility is an unnamed homestead. This too, will have a visual impact of a high magnitude. Moreover, the Manana secondary road towards the south of the PV4 Facility may experience visual impacts of a **high** magnitude in sporadic patches, and more so towards its eastern end within this zone. **3 – 6km** Potential sensitive receptors within this zone include Witstinkhoutboom 1, 3, 4 and 5 (east of the PV4 facility) with a **moderate** visual impact. South west of PV4 lies Hollaagte 1 and 2, also with **moderate** visual impacts. Towards the north west of PV4 within this zone lies homestead Welverdiend 1, as well as the southern half of the Rall Broers Private Nature Reserve- both indicating **moderate** visual impacts in areas that have been influenced by the nature of the topography. Finally, the Manana secondary road within this zone towards the east of the PV4 Facility shows a **moderate** visual impact in sporadic patches, once again depending on the nature of the topography. **>6 km** Residences of Welverdiend 2 (north west of the site), Rooipan 3 (south east of the site), as well as Vlakpan 1 and 2 (south of the site) show a **very low** visual impact.

Specialist Assessment	Sensitivity Rating as per the Screening Tool (relating to the need for the study)	Project Team Response
		A Visual Impact Assessment has been undertaken for the Kiara PV4 Facility and is included in this EIA Report as **Appendix H.**
Archaeological and Cultural Heritage Impact Assessment	Very High	A full Heritage Impact Assessment (including an assessment of archaeological heritage resources and the cultural landscape) has been undertaken for the Kiara PV4 Facility and is included in this EIA Report as **Appendix G**. No archaeological resources of significance were identified within the area proposed for the development of Kiara PV4 and therefore the sensitivity of the site is considered to be **low**. Where there is a clear spatial relationship between the kraals, ruins and graves, these have been mapped as clusters of **high sensitivity**.
Palaeontology Impact Assessment	Very High	Following observations during the field investigation as well as data obtained from previous palaeontological impact assessments in this region, it is the specialist's professional opinion that significant stromatolites from the Malmani Subgroup are abundantly present in this area. The excavations for the construction of the proposed Kiara PV4 Facility will most probably expose some sediments that are very highly sensitive geological formations and some sites revealed evidence of very highly significant remains of fossils. A significant part of the excavation project will cut into rocks of the Malmani Subgroup, Chuniespoort Group of the Transvaal Supergroup. This unit has a **very high sensitivity** for palaeontological heritage. A full Heritage Impact Assessment (including an assessment of archaeological heritage resources and the cultural landscape) has been undertaken for the Kiara PV4 Facility and is included in this EIA Report as **Appendix G**.
Terrestrial Biodiversity Impact Assessment	Very high	The description of the proposed development area indicates a relatively uniform habitat, with moderate species diversity and largely without any unique habitats or areas of high diversity. Furthermore, the vegetation consists of Carletonville Dolomite Grassland, which although it has a significant species diversity, is currently listed as being of Least Concern (LC) which also does not contribute toward its conservation value. Overall, the vegetation in the study area can therefore not be regarded as exceeding a **Moderate level of sensitivity**. Areas of localised high conservation value may however still be present. The Kiara PV4 site contains a few such rocky areas containing a notably higher species diversity with less common and protected plant also being present. They have a significant conservation value and are considered to be of **very high sensitivity**. A Terrestrial Ecology Impact Assessment has been undertaken for the Kiara PV4 Facility and is included as **Appendix D** of the EIA Report.
Aquatic Biodiversity Impact Assessment	Very high	The area is largely devoid of surface drainage lines, watercourses and wetlands; however, a large drainage area is situated in the central portion of the study area. The drainage area is the main, and only, surface water feature in the study area. It does not form a defined watercourse though

<table>
<tr><th>Specialist Assessment</th><th>Sensitivity Rating as per the Screening Tool (relating to the need for the study)</th><th>Project Team Response</th></tr>
<tr><td></td><td></td><td>scattered wetland depressions become evident towards the eastern end of the study area which also confirms a shallow groundwater table along this drainage area. The lower lying drainage area which is considered to have a high conservation value is located adjacent to the Kiara PV4 Facility site.

A Freshwater Impact Assessment has been undertaken for the Kiara PV4 Facility and is included as Appendix D of the EIA Report.</td></tr>
<tr><td>Avian Impact Assessment</td><td>High</td><td>Four (4) habitats were delineated within the site and surrounds. Site Ecological Importance (SEI) was determined for each of the habitats.

Summary of habitat types delineated within the field assessment area of the project
<table>
<tr><th>Habitat</th><th>Conservation Importance</th><th>Functional Integrity</th><th>Biodiversity Importance</th><th>Receptor Resilience</th><th>Site Ecological Importance</th></tr>
<tr><td>Transformed</td><td>Very Low
No natural habitat remaining.</td><td>Very Low
Several major current negative ecological impacts.</td><td>Very Low</td><td>Very High</td><td>Very Low</td></tr>
<tr><td>Degraded Grassland</td><td>Very Low
No confirmed and highly unlikely populations of SCC.</td><td>Low
Several minor and major current negative ecological impacts.</td><td>Very Low</td><td>High
Habitat that can recover relatively quickly (~ 5–10 years) to restore > 75% of the original species composition and functionality of the receptor</td><td>Very Low</td></tr>
<tr><td>Grassland</td><td>Medium
> 50% of receptor contains</td><td>Medium
Mostly minor current</td><td>Medium</td><td>Medium
Will recover slowly (~</td><td>Medium</td></tr>
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Specialist Assessment	Sensitivity Rating as per the Screening Tool (relating to the need for the study)	Project Team Response
		natural habitat with potential to support SCC. / negative ecological impacts with some major impacts and a few signs of minor past disturbance. Moderate rehabilitation potential. / more than 10 years) to restore > 75% of the original species composition and functionality of the receptor
		Bushclumps | Low | Low | **Low** | Medium | **Low**
		An Avifauna Impact Assessment has been undertaken for the Kiara PV4 Facility and included as **Appendix E** of the EIA Report.
Civil Aviation Assessment	Low	A Civil Aviation Compliance Statement has been compiled by the EAP (refer to **Appendix N**) confirming the low sensitivity of the site. The Civil Aviation Authority will be consulted throughout the EIA process to obtain any relevant comments regarding the proposed project.
Defence Assessment	Low	A defence or military base is not located within close proximity to the PV facility site.
RFI Assessment	Low	The project site under consideration is not located near a telecommunications tower.
Plant Species Assessment	Medium	The description of the proposed development area indicates a relatively uniform habitat, with moderate species diversity and largely without any unique habitats or areas of high diversity. Furthermore, the vegetation consists of Carletonville Dolomite Grassland, which although it has a significant species diversity, is currently listed as being of Least Concern (LC) which also does not contribute toward its conservation value. Overall, the vegetation in the study area can therefore not be regarded as exceeding a **Moderate level of sensitivity**. The Kiara PV4 site contains a few such rocky areas containing a notably higher species diversity with less common and protected plant also being present. They have a significant conservation value and are considered to be of **very high sensitivity**. A Terrestrial Ecology Impact Assessment (including flora) has been undertaken for Kiara Solar PV4 and is included as **Appendix D** of the EIA Report.
Animal Species Assessment	Low	

Based on the outcomes of the Scoping Phase evaluation of the project and the outcomes of the Site Sensitivity Verification, the following studies were identified as being required:

- Terrestrial and Aquatic Ecology Impact Assessment
- Avifauna Impact Assessment
- Soils and Agricultural Potential Impact Assessment
- Heritage Impact Assessment (including archaeology and palaeontology)
- Visual Impact Assessment
- Social Impact Assessment

The specialist studies undertaken for this project are required to comply with either the above Protocols or, alternatively, with the requirements of Appendix 6 of the NEMA EIA Regulations of 2014 (as amended 2017 & 2021).