

SITE SENSITIVITY VERIFICATION REPORT FOR THE PROPOSED KTE PV3 SOLAR ENERGY FACILITY AND ASSOCIATED INFRASTRUCTURE ON PORTION 2 OF THE FARM STYNS VLEY 280, NAMAKWA DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE (DFFE REFERENCE: 14/12/16/3/3/2/2223)

The Applicant, Kotulo Tsatsi Energy (Pty) Ltd, is proposing the construction of a photovoltaic (PV) solar energy facility (known as the Kotulo Tsatsi Energy PV3) located on a site located approximately 70km south-west of the town of Kenhardt and 60km north-east of Brandvlei in the Northern Cape Province (**Refer to Figure 1**). The solar energy facility will comprise several arrays of PV panels and associated infrastructure and will have a contracted capacity of up to 480MW. The facility will be located within the farm Portion 2 of Farm Styns Vley 280. The PV facility is planned to be located within an area previously authorised for CSP project infrastructure, which is adjacent to the authorised Kotulo Tsatsi Energy PV1 and PV2 Facilities as well as the authorised CSP3 facility and associated infrastructure. The project site falls under the Hantam Local Municipality which is part of Namakwa District Municipality. The site is accessible via an existing gravel farm road (known as Soafskolk Road) which provides access to the farm off of the R27 which is located east of the project site.

The PV infrastructure assessed in this application is in response to the Applicant's need to change the authorised generation technology for the facility located on the farm Portion 2 of Farm Styns Vley 280. That is, a technology change from the previously authorised CSP project infrastructure to PV project infrastructure. In this regard, the solar PV facility will be connected to the grid via a 132kV grid connection solution to the authorised 400kV collector substation located on Portion 2 of Farm Styns Vley 280, and will comprise on-site switching substations, facility substations and a 132kV power line within a 300m wide corridor.

A development area¹ of ~ 1888ha was defined through the Scoping evaluation of the site and has now been assessed for the facility footprint. The development footprint² has an extent of ~1350ha.

¹ The development area is that identified area (located within the project site) where the Kotulo Tsatsi Energy PV3 facility is planned to be located. This area has been selected as a practicable option for the facility, considering technical preference and constraints. The development area is ~1888ha in extent.

² The development footprint is the defined area (located within the development area) where the PV panel array and other associated infrastructure for Kotulo Tsatsi Energy PV3 is planned to be constructed. This is the actual footprint of the facility, and the area which would be disturbed.

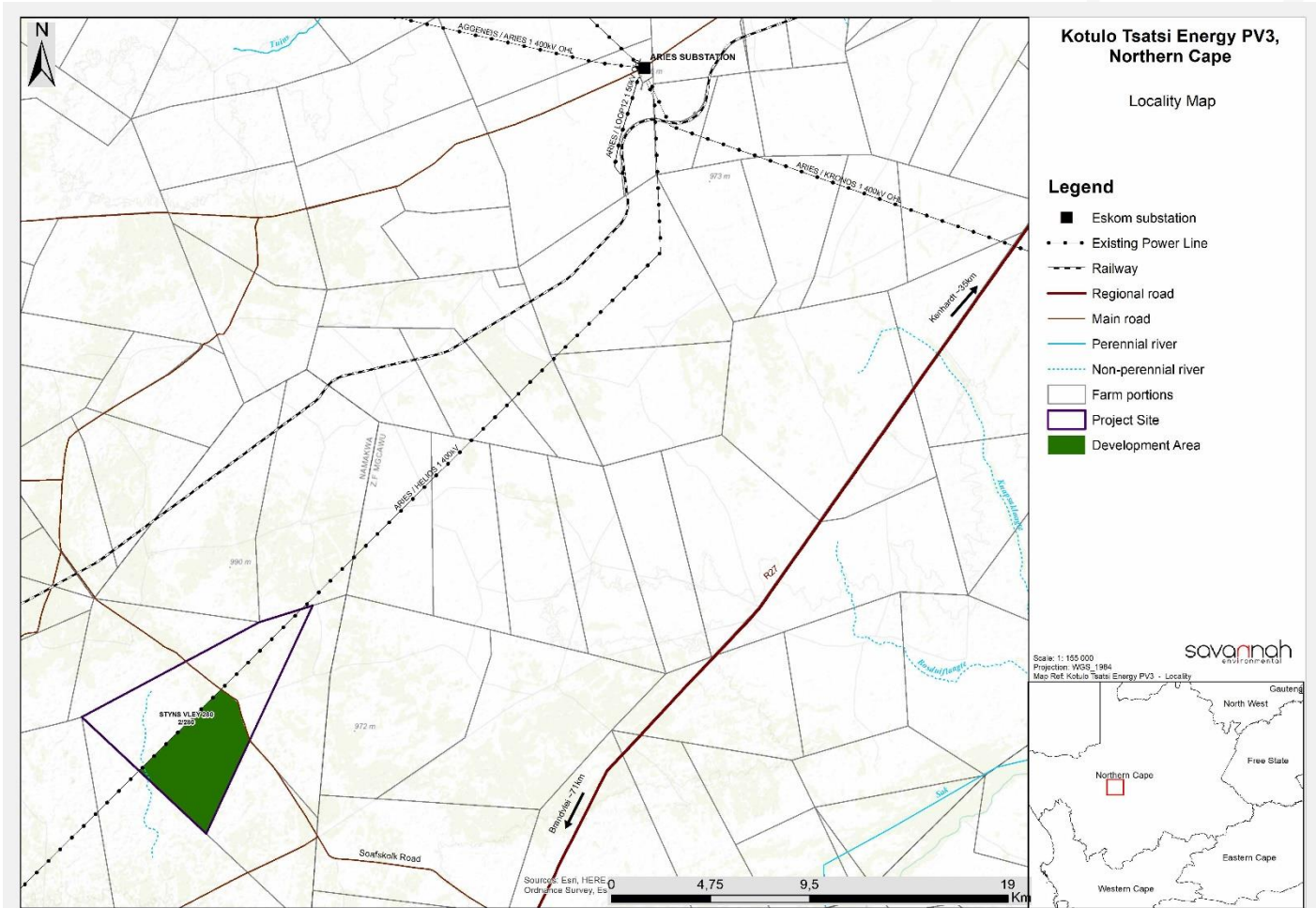


Figure 1: Locality map illustrating the location of the KTE PV3 Energy Facility and associated infrastructure

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 Kotulo Tsatsi Energy PV3 Facility and associated infrastructure on Portion 2 of the Farm Farm Styns Vley 280, Namakwa District Municipality, Northern Cape 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.

Environmental Theme/Specialist Assessment	Sensitivity Rating as per the Screening Tool (relating to the need for the study)	Verification of Site Sensitivity
Agriculture	Medium	<p>The land capabilities identified on site are of low to medium sensitivity. No high land capability sensitivities were identified within the development area. Considering the relatively low sensitivities, it is the specialist's opinion that the proposed Kotulo Tsatsi Energy PV3 Facility may proceed as planned without the concern of loss of high sensitivity land capabilities or agricultural productivity.</p> <p>A Soils and Agricultural Potential Compliance Statement is included in this EIA Report as Appendix G of the EIA Report.</p>
Animal Species	High	<p>The DFFE screening tool identified no terrestrial fauna of concern present in the area. No fauna species of concern were observed within the development area during the site assessment, confirming the low sensitivity of the development area.</p> <p>An Ecology Assessment and Avifauna Assessment has been undertaken for the proposed project that includes the assessment of fauna (Appendix D and Appendix E).</p>
Landscape (Solar)	Very High	<p>The proposed Kotulo Tsatsi Energy PV3 Facility is located in a remote and arid part of the Northern Cape, with no particular visual or scenic features. The only potential receptors are users of the Gravel Route and several surrounding farmsteads, all more than 6km away, some of which are in a view shadow.</p>

Environmental Theme/Specialist Assessment	Sensitivity Rating as per the Screening Tool (relating to the need for the study)	Verification of Site Sensitivity
		<p>It is the specialist opinion that the proposed Kotulo Tsatsi Energy PV3 would therefore have very low visibility and there are no fatal flaws from a visual perspective arising from the proposed project.</p> <p>A Visual Impact Assessment has been undertaken for the proposed project. (Appendix I)</p>
Archaeological and Cultural Heritage	High	<p>According to the DFFE Screening Tool analysis, the development area has High levels of sensitivity for impacts to archaeological and cultural heritage resources.</p> <p>The field assessment conducted found no significant archaeological or other heritage resources of cultural significance located within the proposed development footprints, which corroborates the findings of previous assessments conducted in this area. Furthermore, the dolerite outcrops evident in the geology map located to the east of the study area do not form hills or koppies and are therefore unlikely to have been used in rain-making activities. As such, it is unlikely that the proposed development will negatively impact on significant archaeological heritage resources and as such, there is no objection to the proposed development.</p> <p>A Heritage Impact Assessment including an Archaeological assessment has been undertaken for the proposed project (Appendix H)</p>
Palaeontology	High	<p>Although the geology of the proposed development area is highly sensitive for impacts to palaeontology, the conditions on the ground are such that the actual palaeontological sensitivity is low, thus the High Sensitivity rating of the DFFE Screening Tool is disputed. As such, it is unlikely that the proposed development will negatively impact on significant palaeontological heritage.</p> <p>A Heritage Impact Assessment including a Palaeontological assessment has been undertaken for the proposed project (Appendix H)</p>
Terrestrial Biodiversity	Very High	<p>The DFFE Screening Tool indicates that the Kotulo Tsatsi Energy PV3 project site has a low sensitivity for Terrestrial Biodiversity Theme apart from some pan features present which are mapped as CBA1. Under the mitigated layout, these features have been avoided and the Kotulo Tsatsi Energy PV3 project is restricted to lower sensitivity areas. In addition, the field assessment was able</p>

Environmental Theme/Specialist Assessment	Sensitivity Rating as per the Screening Tool (relating to the need for the study)	Verification of Site Sensitivity
		<p>to confirm the low sensitivity of the site and there are no significant vegetation or faunal features within the development footprint. The site does not lie within a NPAES Focus Area or a Strategic Water Resource Area (SWSA). As such, from a terrestrial ecology perspective there are no reasons to oppose the Kotulo Tsatsi Energy PV3 Facility.</p> <p>An Ecology Compliance Statement has been undertaken for the proposed project. (Appendix D)</p>
Aquatic Biodiversity	Very High	<p>According to the DFFE Screening Tool the aquatic theme has a very high sensitivity rating. This is based on the identification and delineation of a total of 134 freshwater resource features, which include:</p> <ul style="list-style-type: none"> » Seven (7) Depression Wetland (located outside of the proposed development footprint); » Three (3) large primary/major ephemeral washes; » Thirty-eight (38) minor ephemeral washes; » one hundred and seven (107) drainage channels. <p>Based on the optimised layout for Kotulo Tsatsi Energy PV3 and the avoidance of high risk areas, it is the specialists opinion that there are no fatal flaws from a freshwater resource perspective which should prevent the Kotulo Tsatsi Energy PV3 from receiving Environmental Authorisation (EA).</p> <p>A freshwater assessment has been undertaken for the proposed project (Appendix F)</p>
Avian	Low	<p>Based on the site assessment the Martial Eagles are the only avian species that may potentially be negatively influenced by the development of the Kotulo Tsatsi Energy PV3 site. Given that all structures related to the PV3 Facility lies outside the 3-km buffer of the Martial Eagle nests, the specialist does not anticipate any additional negative influence from either habitat loss, or construction, on the eagles or vultures.</p> <p>It is the specialist's opinion that the significance of the impacts assessed for the avifaunal sensitivity would be Low. Thus, based on the findings of this study no objections to the Authorisation of the Kotulo Tsatsi Energy PV3 Facility.</p>

Environmental Theme/Specialist Assessment	Sensitivity Rating as per the Screening Tool (relating to the need for the study)	Verification of Site Sensitivity
		An Avifauna Assessment has been undertaken for the proposed project that includes the assessment of avifauna (Appendix E)
Civil Aviation (Solar PV)	Low	The project is not located in close proximity of any airports or aerodromes.
Defence	Low	The project site is not located within close proximity of any military base infrastructure.
RFI	Very High	The screening report indicates that there is a telecommunication facility within 1km of the proposed development, but this has not been identified as being of significant sensitivity during the assessment. No comments or objections in this regard have been received during the S&EIA process.
Plant Species	Low	<p>The DFFE Screening Tool indicates that the site has a low sensitivity for the Plant Species Theme and no species of concern are known from the area. The site verification was able to confirm that there are no significant vegetation features or other plant SCC within the development footprint. The vegetation within the footprint is typical for the area and consists of low shrubland on open plains representative of the Bushmanland Basin Shrubland vegetation type, with some areas of Bushmanland Vloere near the development. Based on the results of the field assessment, the site is therefore confirmed to be low sensitivity from a Plant Species Theme perspective.</p> <p>An Ecology Assessment has been undertaken for the proposed project that includes the assessment of flora (Appendix D)</p>
Socio-Economic Assessment	The screening report does not indicate a rating for this theme.	The overall conclusion that “the findings of this Social Impact Assessment (SIA) conducted for the proposed Kotulo Tsatsi Energy PV3 indicate that various employment opportunities with varying levels of skill will be created during the construction and operational phases of the proposed project. Furthermore, this will create local business opportunities that will benefit the socioeconomic development of the local community. Investment in renewable energy facilities, such as the proposed Kotulo Tsatsi Energy PV3, will address the challenges posed by climate change and global warming. The findings of this Social Impact Assessment (SIA) completed for the proposed Kotulo Tsatsi Energy PV3 show that numerous employment possibilities with varying skill levels will be created during the construction and operational phase of the proposed development project. Additionally, this will open up

Environmental Theme/Specialist Assessment	Sensitivity Rating as per the Screening Tool (relating to the need for the study)	Verification of Site Sensitivity
		<p>prospects for small businesses in the area, which will help the Kenhardt and Brandvlei communities' socioeconomic development.</p> <p>A Socio-Economic Impact Assessment has been undertaken and is included in the EIA Report as Appendix J.</p>

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 Ecology Impact Assessment
- » Avifauna Impact Assessment
- » Soils and Agricultural Potential Compliance Statement
- » Freshwater Assessment
- » Heritage Impact Assessment
- » 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).