

SITE SENSITIVITY VERIFICATION (SSV) REPORT: THE PROPOSED DARLING SOLAR PV DEVELOPMENT, PORTION OF ERF 551, DARLING, WESTERN CAPE

INTRODUCTION:

This Site Sensitivity Verification (SSV) Report was undertaken in terms of the *Protocols for the Assessment and Minimum Criteria for Reporting on identified Environmental Themes* (referred to “the Protocols” hereafter) as per Government Notice No. 320 (published in Government Gazette No. 43110 on 20 March 2020)¹. These Protocols, effected as on the 9th May 2020, must be complied with for every new application submitted after the effective date. According to the Protocols, the EAP must verify the current use of the proposed site for development as well as the site’s environmental sensitivity, in accordance with the DFFE Screening Tool Report, to determine the need for specialist inputs in relation to the themes (and proposed specialist assessments) included in the Protocols.

METHODOLOGY:

The Site Sensitivity Verification (SSV) report was compiled based on desktop studies [including the SANBI BGIS Biodiversity Spatial Plan, vegetation maps (Vegetation map of SA (Mucina & Rutherford, 2006, as updated in the 2012 beta version and 2018 Final), NFEPA, land-use map, Google Earth imagery, CapeFarmMapper, historical imagery), specialist input in combination with a site visit (conducted on 04 October 2023) to investigate, identify, and evaluate potential impacts, associated with the proposed development, on the receiving environment (namely the proposed site for development). The SSV report was compiled by the EAP (Mr Clinton Geysler).

AIM OF THE SSV REPORT:

The aim of the SSV Report is to;

- Verify land use and theme sensitivities as identified by the DFFE Screening Tool;
- Confirm or motivate against or for the need for a particular specialist assessment(s) as indicated by the DFFE Screening Tool; and
- Should the need for a specialist assessment be refuted / challenged, provide a motivation as to why the proposed specialist assessment is not applicable to the proposed development.

¹ The Protocols are in line with Section 24(5)(a) and (h) and Section 44 of the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998).

SITE DESCRIPTION:

It is proposed that a solar photovoltaic (PV) facility including associated infrastructure be developed on Portion of Erf 551, Darling.

The proposed site is located on the western side, just outside, of Darling, at the corner of the R315 (road between Yzerfontein and Malmesbury) and on either side of the DR1156 (Burgerspan / Kraalbosdam Road).

Site co-ordinates (estimated central point): 33° 21' 52.20" S, 18° 22' 39.20" E.

The proposed development will cover an area of approximately 54ha. The solar PV array will cover an area of approximately 53.4ha, with a total generating capacity of approximately 19.9MW. The development will include a laydown area (2 000m²) and maintenance offices (5600m²).

This will be connected to the existing municipal substation located on the southern corner of the property.

In accordance with the 2018 Vegetation map of South Africa, Lesotho and Swaziland (Mucina & Rutherford, 2006), the proposed footprint(s) would historically have been covered in one broad vegetation type, namely **Swartland Granite Renosterveld**, a vegetation type classified as "Endangered" in terms of the NEM: BA "revised national list of ecosystems that are threatened and in need of protection" (GN 2747, November 2022)

A terrestrial CBA was identified on the property; however, the development footprint avoids the CBA.

According to the 2020, DEA Land Cover (9-class) map of South Africa, the study area is considered cultivated land used for the cultivation of commercial annual crops on drylands. This was confirmed by the site visit. It also confirmed that the study area (and its immediate surroundings) does not support any remaining natural veld of any consequence.

Historical Google images show that the site was already cultivated during 2003 (the earliest historical Google image covering the terrain) and were physically cultivated (ploughed) at least up to 2014. Since then, the site seems to have laid fallow, but was used for livestock grazing. At the time of the site visit the western portion of the site was used for grazing by livestock.

The site visit confirmed that the study area had been transformed as a result of historical cultivation practices over a long period of time. No remaining natural veld of any significance remains anywhere within the study area.

A non-perennial river runs west to north-east through the property. The drainage line is not identified on the DWS or NFEPA overlays, but is evident on Google Earth and from site visit. The drainage line is however, identified as both a Terrestrial and a Wetland CBA on the Western Cape Biodiversity Spatial Plan (BSP).

No other watercourses or wetlands were identified on the property.

The development footprint of the proposed development has taken the drainage line and the CBAs into consideration, and avoided these areas.

The topography is generally flat, with very little gradient.

Please see photographs taken on 04 October 2023 below:



Figure 1. Site overview photographs showing the eastern site portion. Taken from the middle of the eastern portion looking north to south-east.



Figure 2. Site overview photographs showing the existing condition of the western site portion. Taken from the eastern boundary below the existing powerlines, looking south to the north-west.



Figure 3. Site overview photographs of the western site portion. Taken from the eastern boundary along the DR1156 dirt road, looking south to the north.



Figure 4. Site overview photographs of the western site portion, towards the south of the site looking north to the south-east



Figure 5. Site overview photographs taken from the southern most boundary of the western portion, looking from the north-west to east towards the existing substation.

Table 1. Themes and associated sensitivity as per the DFFE Screening Tool.

No	Theme	DFFE Sensitivity	Agree / Disagree	Proposed Sensitivity	Motivation
1	Agriculture Theme	High Sensitivity	Disagree	Medium Sensitivity	<p>The property is currently zoned Agricultural and property is being used for grazing. There is evidence of past crop cultivation on site.</p> <p>An Agricultural statement will be compiled.</p>
2	Animal Species Theme	High Sensitivity	Disagree	Low Sensitivity	<p>The rating of High Sensitivity on the DFFE Screening Tool is due to the potential presence of several bird species (mostly vulnerable or endangered birds-of-prey), two butterfly species, one beetle and one grasshopper species. Unfortunately, because of the long history of agriculture and the transformed nature of the veld it is considered highly unlikely that the proposed development will result in any significant additional impact on any of these species. Realistically, only the Lanner Falcon might still hunt over this area, and the bladder grasshopper might still be found in the small reserve to the south of the property (it is unlikely to have survived the ongoing cultivation periods – even though its host plant was still encountered within the study area).</p> <p>This will be addressed in the Biodiversity Assessment.</p>
3	Aquatic Biodiversity Theme	Low Sensitivity	Agree	Low Sensitivity	<p>The site is within the Low Sensitivity range. The northern boundary of the western site is in very close proximity to a Very High Sensitivity area, which corresponds with the Aquatic CBA.</p> <p>The layout of the facility avoids this sensitive area altogether.</p> <p>There are no significant freshwater resources found on the site but there is a drainage line that runs through the property to the north of the development footprint.</p> <p>A Freshwater Impact Assessment will still be conducted.</p>

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4	Archaeological and Heritage Theme	Low Sensitivity	Agree		<p>A Heritage Notice of Intent to Develop was submitted to Heritage Western Cape. Final comment was received (dated 26 September 2023)(see Appendix E1). The Final comment states:</p> <p><i>“This matter was discussed at the Heritage Officers Meeting held on 26 September 2023.</i></p> <p><i>You are hereby notified that, since there is no reason to believe that the proposed solar facility on the remainder of Erf 551, off the R315 Road, Darling, will impact on heritage resources. No further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required.”</i></p>
5	Avian Theme	Low Sensitivity	Agree		No Avifauna Impact Assessment will be conducted, but avifauna will be addressed in the Biodiversity Assessment.
6	Civil Aviation Theme	Low Sensitivity	Agree		The proposed development is for a solar PV solar facility and will thus will not pose any threat to civil aviation within the area.
7	Defence Theme	Low Sensitivity	Agree		Due to the nature of the proposed project, it is not envisaged that the proposed expansion will impact any defence-related activities.
8	Landscape (solar) Theme	Very High Sensitivity	Disagree	High Sensitivity	<p>The rating of Very High Sensitivity on the DFFE Screening Tool is due The proposed PV solar facility being within 1.5km of a nature reserve.</p> <p>A Visual Impact Assessment will be conducted.</p>
9	Palaeontological Theme	Medium Sensitivity	Disagree	Low Sensitivity	See 4. Archaeological and Heritage motivation above.
10	Plant Species Theme	Medium Sensitivity	Disagree	Low Sensitivity	<p>The site has been impacted and transformed by cultivation over a long period of time.</p> <p>A Biodiversity Impact Assessment, including an assessment of the flora will be conducted.</p>
11	RFI Theme	Low Sensitivity	Agree		

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12	Terrestrial Biodiversity Theme	Very High Sensitivity	Disagree	Medium - low Sensitivity	A CBA is located within the property. However, the development footprint layout has been amended to avoid the CBA area. A Biodiversity Assessment will be conducted and will address the CBAs.
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Table 2. Specialist assessments identified as per the DFFE Screening Tool.

No	Proposed Specialist Assessment	Protocol Required	Verification of Site Sensitivity And Motivation On The Need For Specialist Investigation
1	Agricultural Impact Assessment	Protocol for the specialist assessment and minimum report content requirements for environmental impacts on agricultural resources. By onshore wind and/or solar PV energy generation facilities where the electricity output is 20MW or more.	The property is currently zoned Agricultural, however, the site is only used for very small scale grazing. The sensitivity was verified as Medium by Mr Johann Lanz, and therefore an Agricultural Statement was conducted.
2	Landscape/ Visual Impact Assessment	No Specific Protocol has been prescribed	A Visual Impact Assessment will be conducted
3	Archaeological and Cultural Heritage Impact Assessment (HIA)	No Specific Protocol has been prescribed	No Heritage Impact Assessment (including an assessment of Archaeological resources) will be conducted, as confirmed by HWC.
4	Palaeontological Impact Assessment	No Specific Protocol has been prescribed	No Heritage Impact Assessment (including an assessment of Palaeontological resources) will be conducted.
5	Terrestrial Biodiversity Assessment	Protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial biodiversity.	The Biodiversity Assessment has been conducted by Mr Peet Botes.
6	Aquatic Biodiversity Impact Assessment	Protocol for the specialist assessment and minimum report content requirements for environmental impacts on aquatic biodiversity.	A Freshwater Impact Assessment was conducted by Dr Dirk van Driel.
7	Civil Aviation Assessment	Protocol for the specialist assessment and minimum report content requirements for environmental impacts on civil aviation installations	Due to the nature of the development, a Civil Aviation Assessment is not considered necessary.
8	Defense Assessment	Protocol for the specialist assessment and minimum report content requirements for environmental impacts on defence installations	Due to the nature of the development, a Defense Assessment is not considered necessary.

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9	RFI Assessment	No Specific Protocol has been prescribed	Due to the nature of the development, a RFI Assessment is not considered necessary.
10	Geotechnical Assessment	No Specific Protocol has been prescribed	No Geotechnical Assessment will be conducted
11	Socio-economic Impact Assessment	No Specific Protocol has been prescribed	A Socio-economic Statement has been conducted by Leap Sustainable Development.
12	Plant Species Assessment	Protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial plant species	A Botanical Assessment was conducted as part of the Biodiversity Assessment by Mr Peet Botes.
13	Animal Species Assessment	Protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial animalspecies	No Faunal Assessment will be conducted, but fauna is addressed in the Biodiversity Assessment.