

EZELSJACHT SITE SENSITIVITY VERIFICATION REPORT (SSVR) FOR THE FOLLOWING THEMES: RFI, DEFENCE AND GEOTECHNICAL

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ACRONYMS AND ABBREVIATIONS

Acronym / Abbreviation	Definition
BA	Basic Assessment
BESS	Battery Energy Storage System
CA	Competent Authority
DFFE	Department of Forestry, Fisheries and the Environment
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
ESA	Ecological Support Area
GN	Government Notice
MTS	Main Transmission Substation
MW	Megawatt
NEMA	National Environmental Management Act, 1998 (No. 107 of 1998)
O&M	Operations & Maintenance
kV	Kilovolt
SACAA	South African Civil Aviation Authority
SLR	SLR Consulting (South Africa) (Pty) Ltd
SSVR	Site Sensitivity verification Report
SoW	Scope of Works
WC DEADP	Western Cape Department of Environmental Affairs and Development Planning

Ezelsjacht Site Sensitivity Verification Report (SSVR) for the following Themes: RFI, Defence and Geotechnical

1. INTRODUCTION

South Africa Mainstream Renewable Power Developments (Pty) Ltd (“Mainstream”) is proposing the construction and operation of one (1) Solar photovoltaic (PV) Energy Facility (SEF), Battery Energy Storage System (BESS), and associated infrastructure with a generation capacity of up to 110 megawatts.

In order to evacuate the energy generated by the SEF to supplement the national grid, Mainstream is also proposing an electrical grid infrastructure/ grid connection project which will be assessed in a separate Basic Assessment Processes (i.e. EGI for SEF).

The proposed SEF site is located approximately 13 km south-east of the town De Doorns, within the Cape Winelands District Municipality of the Western Cape Province. The site proposed for the SEF component falls entirely within the Breede Valley Local Municipality.

Table 1-1: Summary Details for Ezelsjacht SEF

Applicant	Project Name	Capacity (MW)	Affected Property
South Africa Mainstream Renewable Power Developments (Pty) Ltd	Ezelsjacht Solar PV Energy Facility (SEF)	110 MW _{ac}	Portion 6 of the Farm Ratelbosch No. 149

The overall objective of the proposed development is to generate electricity by means of renewable energy technologies capturing solar energy to feed into the national grid.

The proposed SEF will consist of PV Panels, internal and access roads (with a width of up to 12 m during construction), a construction laydown area/camp, Operation and Maintenance (O&M) Building and and the Independent Power Producer (IPP) 33/132kV portion of the onsite substation, amongst other associated infrastructure. The solar PV energy facility will have a generation capacity of up to 110 MW. In addition to the infrastructure mentioned above, the SEF will also potentially include energy storage infrastructure if it is deemed economically feasible to do so. This will consist of an area for a Battery Energy Storage System (BESS) covering an extent of up to approximately 5 hectares (ha). Currently, the battery technologies being considered are either Solid State Batteries or Redox Flow Batteries.

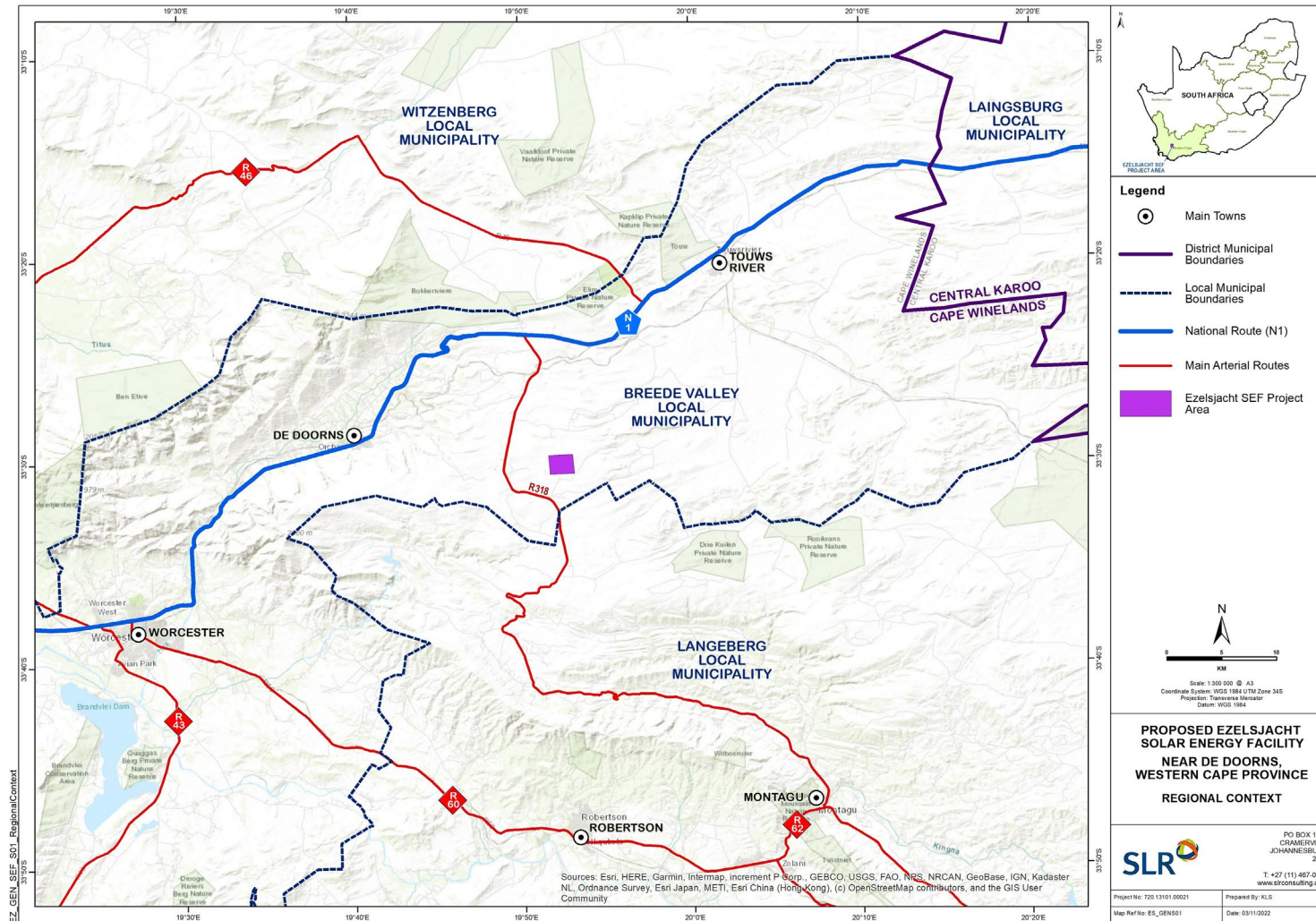


Figure 1-1: Regional Setting Map of the proposed Ezelsjacht SEF

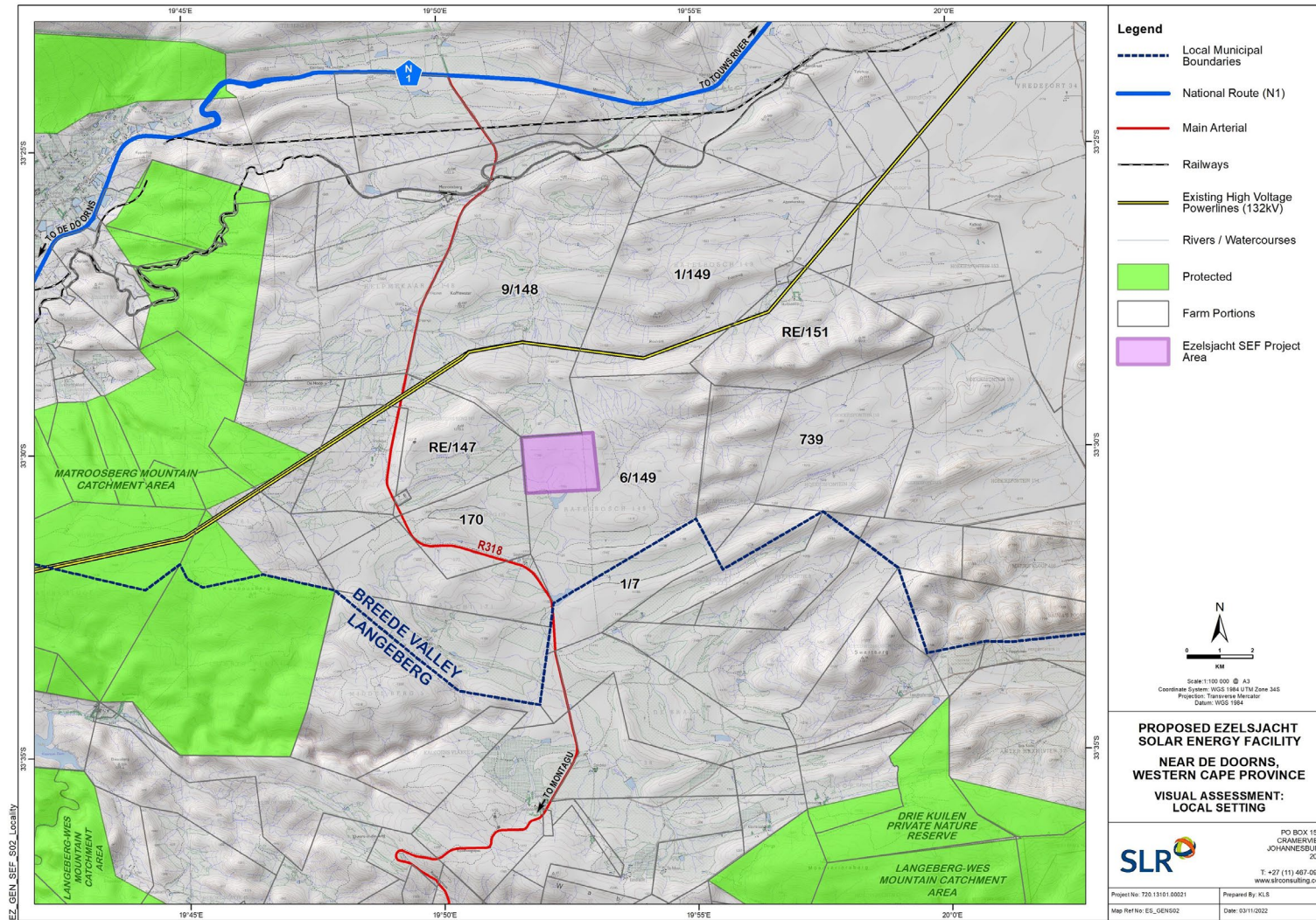


Figure 1-2: Locality Map of the proposed Ezelsjacht SEF

2. SITE SENSITIVITY VERIFICATION METHODOLOGY

In accordance with GN 320 and GN 1150 (20 March 2020)¹ of the NEMA EIA Regulations of 2014 (as amended), prior to commencing with a specialist assessment, a site sensitivity verification must be undertaken to confirm the current land use and environmental sensitivity of the proposed project area as identified by the Department of Forestry Fisheries and the Environment (DFFE) (DFFE) National Web-Based Environmental Screening Tool (i.e., Screening Tool).

According to the protocol:

“2.1. The site sensitivity verification must be undertaken by an environmental assessment practitioner or specialist with expertise in radar.

2.2. The site sensitivity verification must be undertaken through the use of:

- (a) a desk top analysis, using satellite imagery;*
- (b) a preliminary on-site inspection; and*
- (c) any other available and relevant information.*

2.3. The outcome of the site sensitivity verification must be recorded in the form of a report that:

- (a) confirms or disputes the current use of the land and environmental sensitivity as identified by the screening tool, such as new developments or infrastructure etc.;*
- (b) contains a motivation and evidence (e.g. photographs) of either the verified or different use of the land and environmental sensitivity; and*
- (c) is submitted together with the relevant assessment report prepared in accordance with the requirements of the Environmental Impact Assessment Regulations. “*

This Site Sensitivity Verification Report (SSVR) has essentially been compiled to provide a rationale for the specialist studies undertaken as part of the environmental process.

3. OUTCOME OF THE SITE SENSITIVITY VERIFICATION

This Site Sensitivity Verification Report has used the information collected from a desktop analysis and field investigation to confirm or dispute (as may be applicable) the environmental sensitivity ratings for Defence, RFI and Geotechnical identified by the DFFE National Screening Tool (see Table 3-1 below). A copy of the DFFE Screening Report is attached as Appendix 4 of the Draft Scoping Report. The specialist assessments/theme and sensitivity ratings identified by the Screening Tool are summarised in Table 4-1 below.

¹ GN 320 (20 March 2020): Procedures for The Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(A) and (H) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation

Table 3-1: Specialist Assessments/themes and Sensitivity Ratings identified by DFFE’s Web-based Screening Tool

Specialist Assessment / Theme	Sensitivity Rating as per Screening Report	Sensitivity Rating as per Specialist Verification	Response
Defence	LOW SENSITIVITY RATING - No negative impacts on the defence installation are expected in low sensitivity areas. It is unlikely for further assessment and mitigation measures to be required	Low	There are no military bases / facilities present within the vicinity of the project site. The EAP agrees with the low rating for Defence and thus, no further assessment is deemed necessary.
RFI	Low	Low	RFI for the SEF was a Low sensitivity in terms of the DFFE Screening Tool. The EAP agrees with the low rating for Defence and thus, no further assessment is deemed necessary. SARAO has been identified as a stakeholder on the project database and will be afforded with the opportunity to provide comments during the 30-day review and comment period of the Draft Scoping Report.
Geotechnical	-	-	No preliminary Geotechnical sensitivities or sensitivity rating was identified or provided based on the DFFE Screening Tool (i.e. a preliminary sensitivity rating was not provided that could then be confirmed or altered based on further assessment). Mainstream will undertake a detailed Geotechnical Assessment of the project site prior to the commencement of the construction phase. This is currently not part of this assessment.

4. CONCLUSION

The classification of Low Sensitivity for Defence and RFI is thus confirmed to be Low.

No preliminary Geotechnical sensitivities or sensitivity rating was identified or provided based on the DFFE Screening Tool (i.e. a preliminary sensitivity rating was not provided that could then be confirmed or altered based on further assessment).

According to Natura Viva cc, 2022: “The geology of the combined renewable energy facility project area is shown on the 1: 250 000 scale geology sheet 3319 Worcester (Council for Geoscience, Pretoria; Gresse & Theron 1992) (Figure 2). The area is underlain by several coastal to shallow marine formations of the Table Mountain and Bokkeveld Groups (Cape Supergroup) of Early to Middle Devonian age (c. 410 – 390 Ma) (Thamm & Johnson 2006). The sandstone-dominated units (Rietvlei, Gamka and Hexrivier Formations) tend to build rocky ridges and scarps while the intervening mudrock-dominated subunits (Gydo, Voorstehoek and Tra Tra Formations) underlie subdued, low-lying terrain and are generally poorly exposed at surface. The geology of these Devonian sedimentary bedrocks is outlined by Gresse and Theron (1992) and Penn-Clarke et al. (2018a) as well as several previous palaeontological impact assessments in the wider De Doorns – Touwsrivier – Montagu region (e.g. Almond 2011, 2015 and references therein). In this sector of the Cape Fold Belt – known as the Cape Syntaxis (De Beer 1992) – the Cape Supergroup bedrocks show a complex pattern of folding, often associated with a pervasive tectonic cleavage (especially within fine-grained facies), and are dissected by numerous faults, as is clear from the geological map (Figure 4-1).”

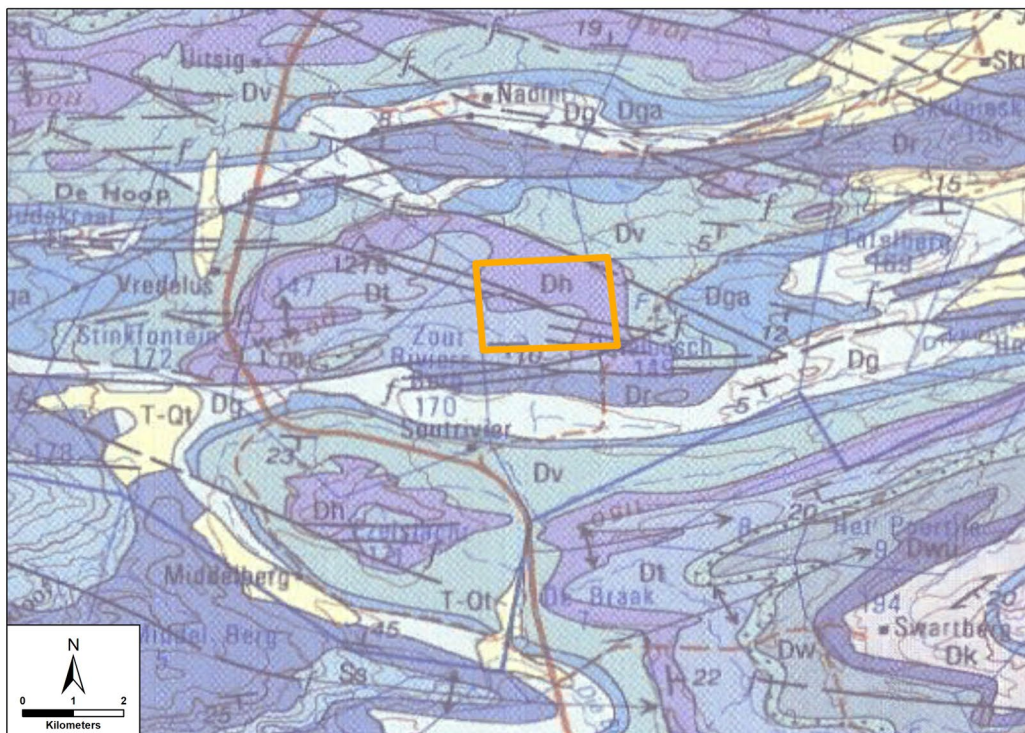


Figure 4-1: Extract from 1: 250 000 geology sheet 3319 Worcester (Council for Geoscience, Pretoria) showing the location (orange polygon) of the SEF project area between De Doorns and Touwsrivier, Western Cape Province. The area is underlain by several coastal to shallow marine formations of the Table Mountain and Bokkeveld Groups (Cape Supergroup) of Early to Middle Devonian age (c. 410 – 390 Ma)

KEY TO MAIN GEOLOGICAL UNITS:

Ceres Subgroup (= Lower Bokkeveld Group)

Dga (blue) = Gamka Formation (mainly sandstones / wackes)

Dv (blue-green) = Voorstehoek Formation (mudrock-dominated)


Dh (purple) = Hexrivier Formation (mainly sandstones / wackes)

Dt (blue) = Tra Tra Formation (mainly mudrocks with minor sandstones)

T-Qt (pale yellow) = Tertiary / Quaternary colluvium (scree gravels, sands).

***N.B.* Extensive cover of the Palaeozoic bedrocks by thin colluvial (slope) deposits and rocky soils is not depicted on the map.**

Mainstream will undertake a detailed Geotechnical Assessment of the project site prior to the commencement of the construction phase. This is currently not part of this assessment.



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