Ukuqala Solar PV - Portion E Project

Remaining Extent of the Farm Vetlaagte No 4, De Aar, Northern Cape Province

Application for extension of the EA validity period

and

Update of the project description and authorised layout plan

Part 1 EA Amendment Application

DFFE Reference Number: 14/12/16/3/3/2/382/4

Draft Motivation Report

July 2023

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Project Detail

Project Name	Ukuqala Solar PV Portion E: Application for extension of the EA validity period and Update of the project description and authorised layout plan
DFFE Reference Number	14/12/16/3/3/2/382/4
Report Status	Draft Motivation Report
Date of Report	July 2023
Purpose of Report	Distribution of the Draft Motivation Report for public comment

Contact

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List of Abbreviations

BAR Basic Assessment Report
BESS Battery Energy Storage System
BID Background Information Document
CBA Critical Biodiversity Area
dBAR Draft Basic Assessment Report
DFFE National Department of Forestry, Fisheries & the Environment
DSR Draft Scoping Report
DWS Department of Water & Sanitation
DMR Department of Mineral Resources
EA Environmental Authorisation
EAP Environmental Assessment Practitioner
ECO Environmental Control Officer
EIA Environmental Impact Assessment
EIR Environmental Impact Report
EMF Environmental Management Framework
EMPr Environmental Management Programme
ESA Ecological Support Area
Eskom SOC South Africa's Electricity Supply Commission (State Owned Company)
EWT Endangered Wildlife Trust
fBAR Final Basic Assessment Report
GNR Government Notice Regulation
ha Hectare(s)
HIA Heritage Impact Assessment
IAPs Interested and Affected Parties
ICNIRP International Commission for Non-Ionising Radiation Protection
IDP Integrated Development Plan
IPPPP Independent Power Producer Procurement Programme
IEM Integrated Environmental Management
IEP Integrated Energy Plan
IPP Independent Power Producer
ISEP Integrated Strategic Electricity Planning
kW Kilowatt (1kW= 1 000W)
m^3 Cubic metres
Mamsl Metres above mean sea level
MTS Main Transmission Substation
MVA Mega Volt Ampére
MW Megawatt (1MW=1 000kW)
NERSA National Energy Regulator of South Africa
NDP Network Development Plan
PIA Palaeontological Impact Assessment
PPP Public Participation Process/Programme
PV Photovoltaic (solar panels)
REIPPPP Renewable Energy Independent Power Producer Procurement Programme
SAHRA South African Heritage Resources Agency
SANBI South African National Biodiversity Institute
SR Scoping Report
PHRA Provincial Heritage Resources Authority
PoS Plan of Study
SIP Strategic Infrastructure Project
SDF Spatial Development Framework
SS Substation
ToR Terms of Reference
TRF Transnet Freight Rail
TS Traction Station / Traction Substation
WULA Water Use License Application

LEGISLATION

NEMA National Environmental Management Act, 1998 (Act 107 of 1998)
NEMAQA National Environmental Management Air Quality Act, 2004 (Act 39 of 2004)
NEMPAA National Environmental Management: Protected Areas Act, 2003 (Act No 57 of 2003)
NEMWA National Environmental Management Waste Act, 2008 (Act 59 of 2008)
NWA National Water Act, 1998 (Act 36 of 1998)

CHAPTER 1: INTRODUCTION

1.1 Background

1.1.1 Part 1 EA Amendment Application

Extension of the validity of the Environmental Authorisation

The original Environmental Authorisation (EA) for the Ukuqala Solar Energy Facility (SEF) Portion E was issued on 19 July 2013 with a validity period of 3 years. Subsequent amendments to the validity period was made and the latest EA, issued on 28 June 2018, extended the validity period of the EA to 19 July 2023.

A Part 1 EA Amendment Application for the extension of the validity period was therefore submitted to the Department of Forestry, Fisheries & the Environment (DFFE), which is the Competent Authority for this project.

The major concern with the extension of the EA validity for a period longer than 10 years is that the environment could have changed and needs to be re-assessed. It is therefore required that additional information in terms of Regulation 30(1)(a) of the EIA Regulations, 2014 as amended, must be submitted to the DFFE in order to be able to process the EA Amendment Application. This Motivation Report contains the required information and is distributed for public participation as per the DFFE's stipulations.

The existing EA lapses on 19 July 2023 and the following needs to be done:

- Conduct public participation as per the NEMA EIA Regulations 2014, as amended;
- Compile the Draft Motivation Report (inclusive of specialist studies);
- Distributed the Draft Motivation Report for a 30-day commenting period;
- Compile the Final Motivation Report; and
- Submit the Final Motivation Report to DFFE on/before 19 July 2023.

Failure to conduct the above-mentioned actions within the stipulated timeframe will cause the current application to lapse and application for a new EA will have to be made to the DFFE.

No new components that trigger NEMA listed activities, or new components that will change the scope of the EA, or new components that will change the nature of impact that wasn't originally assessed were added to the project description. Note that the Environmental Authorisations with reference numbers as listed in Paragraph 1.1.2 below dealt effectively with the inclusions of relevant listed activities.

1.1.2 Existing Environmental Authorisations and Amendments

Table 1: Existing Environmental Authorisations and Amendments

Nr	EA Reference Number	Date EA was issued
1	14/12/16/3/3/2/382/4	19 July 2013
2	14/12/16/3/3/2/382/4/A1	8 July 2014
3	14/12/16/3/3/2/382/4/A3	31 July 2014
4	14/12/16/3/3/2/382/4/AM3	25 September 2014
5	14/12/16/3/3/2/382/4/AM3	6 November 2015
6	14/12/16/3/3/2/382/4/AM4	28 June 2018 **This EA is valid until 19 July 2023**

1.1.3 Locality

The Ukuqala Solar Energy Facility (SEF) is situated on the Remaining Extent of the Farm Vetlaagte No 4, De Aar and is situated approximately 5km to the east of De Aar in the Emthanjeni Local Municipality, Pixley Ka Seme District Municipality, Northern Cape Province.

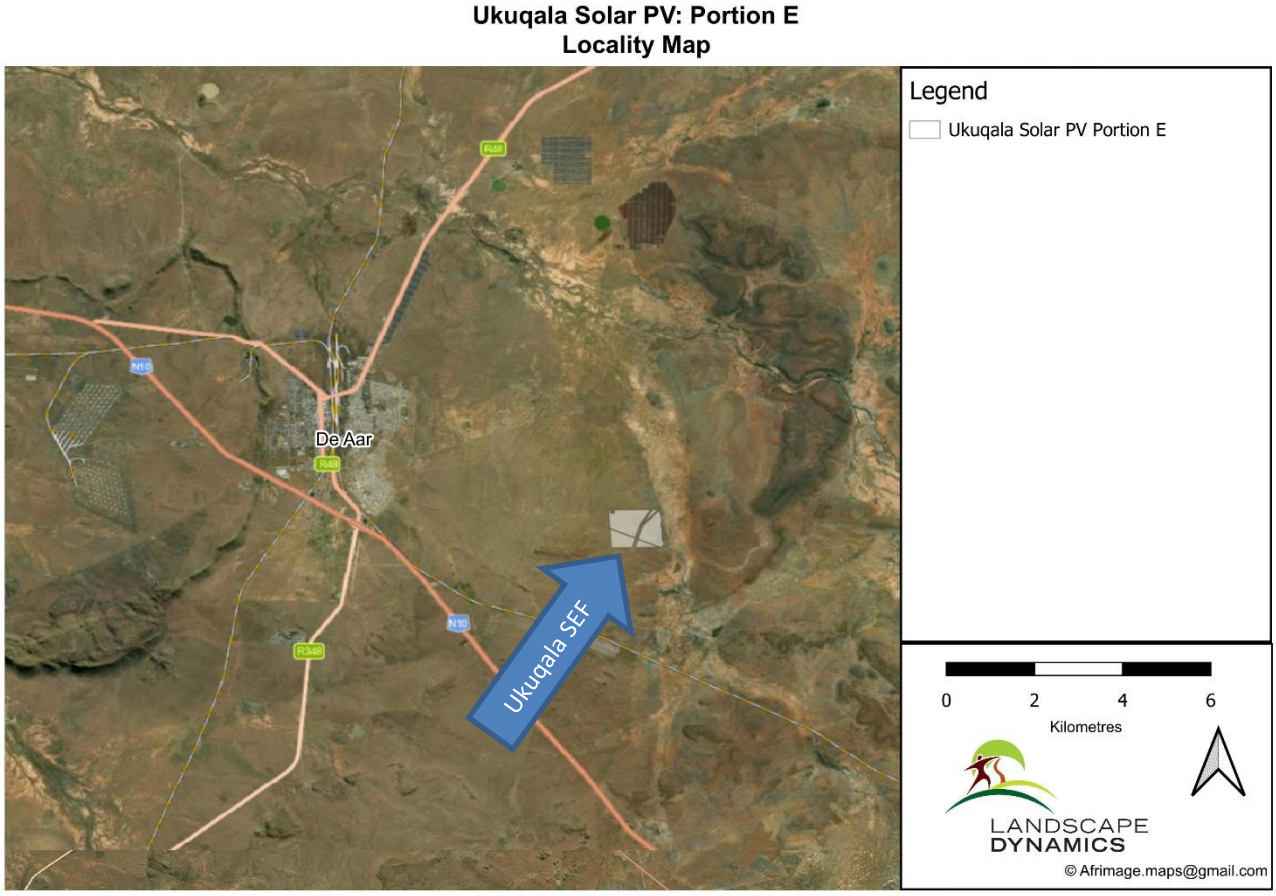


Figure 1: Locality Map

1.1.4 The Ukuqala Solar PV Portion D and Portion E

The Ukuqala Solar PV project consists of two authorised SEFs. These two SEFs are situated directly adjacent to each other on Portion D and Portion E respectively on the Vetlaagte farm. The SEFs on Portion D and Portion E will be known as the **Ukuqala Solar PV** facility and will be developed and operated as one SEF. This Motivation Report focusses on the SEF on Portion E.

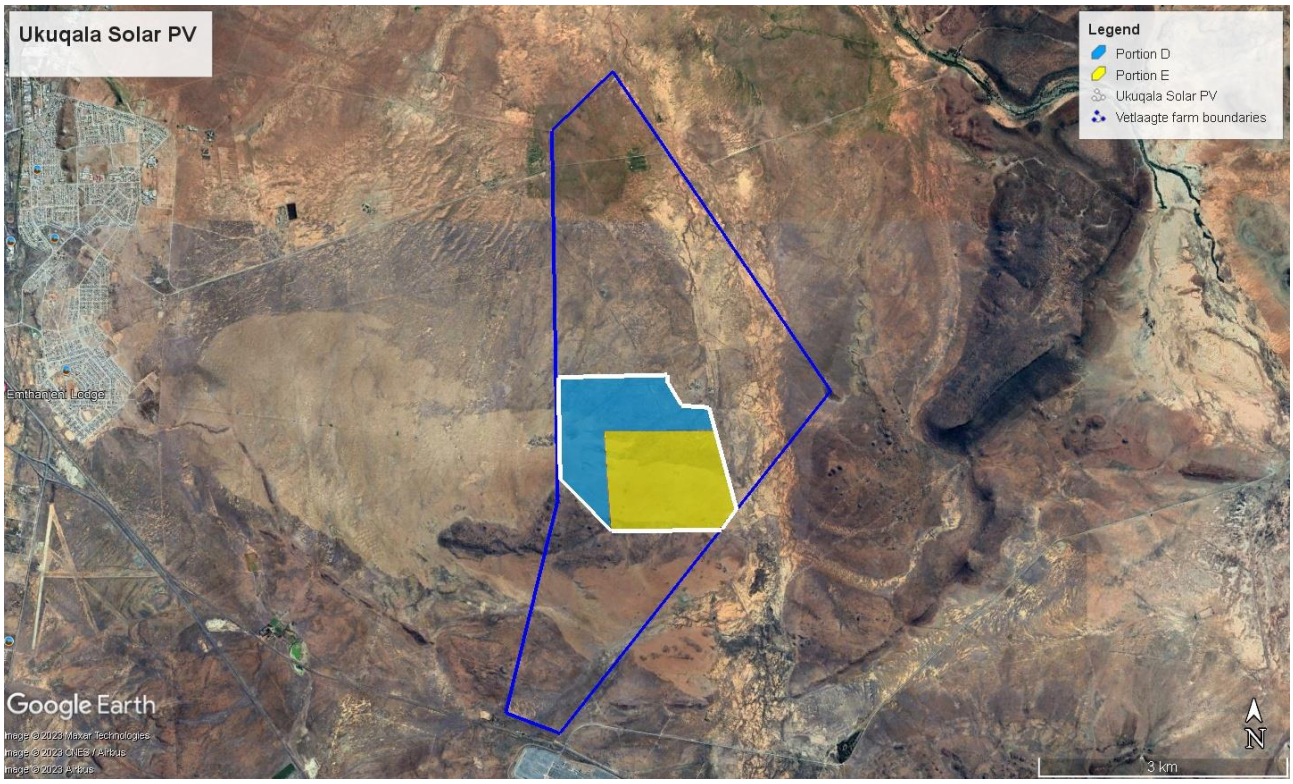


Figure 2: Ukuqala Solar PV Portion D and Portion E

1.2 Details and Expertise of the Environmental Assessment Practitioners

Landscape Dynamics Environmental Consultants (Pty) Ltd ("Landscape Dynamics") is the environmental consultancy appointed for this project as independent Environmental Assessment Practitioners (EAPs) for this application. Landscape Dynamics was established in May 1997 and has a broad client base from both the private and government sectors which has developed over the past 26 years of professional services supplied.

The operating base for Landscape Dynamics is the entire South Africa; with offices in Gauteng and the Western Cape and local representation in the North West Province, Mpumalanga, Northern Cape and Limpopo.

The Environmental Assessment Practitioners (EAPs) for this project are Ms Susanna Nel and Ms Annelize Erasmus. Both EAPs are registered with EAPASA. The Landscape Dynamics Company Profile with the relevant condensed Curriculum Vitae is attached under Appendix F.

1.3 Project Team

The impact that this project might have on the environment can only be effectively assessed if all the environmental project components are satisfactorily identified and considered. A multi-disciplinary approach is therefore required for this EA amendment application.

The EIA Project Team members are the following (Declaration of Interest of the specialists are attached in Appendix F):

Table 2: Project Team

Environmental Assessment Practitioners

Company name	Contact person(s)	Responsibility
Landscape Dynamics Environmental Consultants	Ms Susanna Nel Ms Annelize Erasmus	○ EIA process and Project Management ○ EA amendment application ○ EAPs ○ Public Participation Programme

Specialists

Company name	Contact person(s)	Specialist field of study
David Hoare Consulting	Mr David Hoare	Fauna & Flora
BlueScience	Ms Toni Belcher	Aquatic
Inkululeko Wildlife Services	Ms Caroline Lötter	Bats
CTS Heritage	Ms Jenna Lavin	Heritage & Palaeontology
Arcus Consultancy Services SA	Mr Owen Davies	Avifauna
VRM Afrika	Mr Steve Stead	Visual
Johann Lanz Soil Scientist	Mr Johann Lanz	Agricultural
Tony Barbour Environmental Consulting	Mr Tony Barbour	Social
Afrimage Photography	Mr Albert Froneman	Mapping and GIS support

Engineers (technical input)

Company Name	Contact person	Engineering field of study
Interference Testing And Consultancy Services	Mr Callie Fouché	RFI Impact Assessment
Corli Havenga Transportation Engineers	Mr Cobus Havenga	Traffic

Applicant

The EIA Project Team is supported by the following team members from within Mulilo Renewable Project Developments (Pty) Ltd, on behalf of the applicant, Ukuqala Solar PV (Pty) Ltd:

Contact Person	Responsibility
Mr Warren Morse	Director: Solar & Energy Storage
Mr Andrew Pearson	Environmental Manager
Mr Lloyd Barnes	Project Manager: Permitting and Environmental Manager
Mr Johan Janse van Rensburg	Project Engineer

CHAPTER 2: MOTIVATION FOR EXTENSION OF THE VALIDITY PERIOD

A motivation as to why the DFFE should extend the validity period of the EA, and thereby the commencement period of the authorised development, is provided below. The advantages and disadvantages associated with the approval or refusal to the request for extension are also provided.

2.1 Motivation to extend the validity period

The extension of the validity of the EA is required, because the Ukuqala Solar PV project has been jointly developed by Air Products South Africa and Mulilo Renewable Project Developments, to supply power to Air Products production facilities. The project is currently nearing financial close and construction in anticipated to take place after the current validity period of the EA. If the EA is not extended the EA will lapse and a new application for Environmental Authorisation will have to be made. This will have severe time and cost implications and none of the positive impacts of evacuating renewable energy into the national grid will be realised.

Specialist and Engineering Studies

Generally, the major concern with the extension of validity for a period longer than 10 years is that the environment (biophysical and social) could have changed and needs to be re-assessed. This concern is addressed in the specialist and engineering studies as summarised under Chapter 4 and Chapter 5 of this report. ***They all confirmed that changes to the environment are insignificant, and that the impact assessments and recommended mitigation as provided in the original EIA are still valid.***

The relevant specialists confirmed the existing environmental constraints and ensured that it is appropriately addressed in the amended layout which is being distributed with this report.

2.2 Advantages of granting/refusal of the extension

If this extension is granted, the implementation of the construction of the Ukuqala Solar PV facility can take place. The Ukuqala Solar PV facility will have the following advantages:

- The establishment of renewable energy infrastructure should be viewed, firstly within the context of the South Africa's current reliance on coal powered energy to meet the majority of its energy needs, and secondly, within the context of the success of the renewable energy roll-out in the country to date. South Africa has one of the most carbon-intensive economies in the world, thus making the greening of the electricity mix a national imperative. Renewable energy roll-out, especially through the REIPPPP has contributed significantly

towards meeting South Africa's emission targets and, at the same time, supporting energy security, economic stability, and environmental sustainability.

- The proposed Ukuqala solar PV facility will be able to evacuate the solar generated electricity and all the advantages of additional, clean, renewable electrical supply to the national Eskom grid will be realised.
- The proposed Ukuqala solar PV facility will be able to evacuate the solar generated electricity which will contribute towards improving South Africa's energy security and assist in alleviating load shedding.
- Creation of employment and business opportunities and the opportunity for skills development and on-site training during the construction and operational phases.
- The majority of the employment opportunities during the construction phase, specifically the low and semi-skilled opportunities, are likely to be available to local residents and the majority of the beneficiaries are likely to be historically disadvantaged (HD) members of the community. This would represent a significant positive social benefit in an area with limited employment opportunities.
- Procurement during the operational phase will also create opportunities for the local economy and businesses.
- The income from the PV facility received by the landowner reduces the risks to the farmer's livelihood posed by droughts and fluctuating market prices for farming outputs and inputs, such as fuel, feed etc. The additional income would therefore improve economic security of farming operations, which in turn would improve job security for farm workers and benefit the local economy.
- The provision of security for the proposed PV facility can create an opportunity to improve security for local landowners in the area.

2.3 Disadvantages of granting/refusal of the extension

If the extension is not granted, a new application for Environmental Authorisation will have to be initiated. This will result in a severe delay in the commencement date for construction and may result in this project having its preferred bidder status revoked and ultimately abandoned as it will not be able to meet its financial close commitments with the resultant negative consequences.

Refusal of this amendment application will thus result in an unnecessary delay in addressing the serious need for additional renewable energy resources in South Africa as well as the loss of numerous potential positive socio-economic benefits, as described in paragraph 2.2 above.

There are no disadvantages if the extension of the validity period of the EA is granted.

CHAPTER 3: UPDATED PROJECT DESCRIPTION AND LAYOUT PLAN

3.1 Project Description

The project description as authorised in the original EA is provided below:

"The infrastructure associated with this facility includes:

- A new power line with a capacity of 132kV, linking the solar power generation facilities to the existing Eskom Hydra Substation.
- A new short 132kV power line linking the power generation facilities on Portions F and G to the proposed new 132kV line.
- Substations on Portions E, which will connect to either the existing 132kV power lines or the proposed new 132kV power line.
- Switching stations (SS) with transformers next to the substations, which will connect the solar facilities to the different substations.
- Cabling between the PV/TPV panels and/or CPV panels and/or dish Stirling units and switching station.
- Foundations to support the PV/TPV panels and/or CPV panels and/or dish Stirling units infrastructure.
- Internal access roads.
- Maintenance building and site offices."

This project description is outdated, lack details and needs to be updated. The new project description reads as follows:

Table 3: Project Components for the Ukuqala SEF: Portion E

Infrastructure	Footprint and dimensions
Lease area	1 686 342 m^2 / 168.63 hectares
Solar array	1 494 028 m^2 / 149.40 hectares
Total footprint	1 494 028 m^2 / 149.40 hectares
Temporary Services	During the construction phase, temporary sanitation facilities will be provided (i.e. chemical toilets / conservancy tanks) and effluent will be regularly serviced by a licensed company / disposed of at a registered sewage waste disposal site.

Note to the DFFE

The Ukuqala Solar PV project consists of two authorised Solar Energy Facilities (SEFs). These two SEFs are situated directly adjacent to each other on Portion D and Portion E respectively on the Vetlaagte farm. The SEFs on Portion D and Portion E will be known as the Ukuqala Solar PV facility and will be developed and operated as one SEF. This Application is for the SEF on **Portion E**.

The following project components are authorised under EA Ref Nr 14/12/16/3/3/2/382/3 (Ukuqala Solar PV Portion D project):

- Solar Array on 122.55 hectares
- IPP Substation
- Associated infrastructure at the IPP substation
- Internal roads (IPP substation)
- Temporary sanitation services
- Storage of dangerous substances

The following project components are authorised under EA Ref Nr 14/12/16/3/3/1/2611 (Ukuqala Solar GRID CONNECTION project):

- Laydown Area
- Operations & Maintenance (O&M) Buildings
- Eskom Switching Station
- Ukuqala Grid Connection (132kV power line)
- Access Road

No new components that trigger NEMA listed activities, or new components that will change the scope of the EAs, or new components that will change the nature of impact that wasn't originally assessed were added to the project description.

3.2 Updated Layout Plan

The solar PV layout plan for Portion E was authorised in the original EA in 2013, and an update to this layout is required as the approved layout lacks details, project specific components and alignment with the refined project description.

3.2.1 2013 Authorised Layout Plan

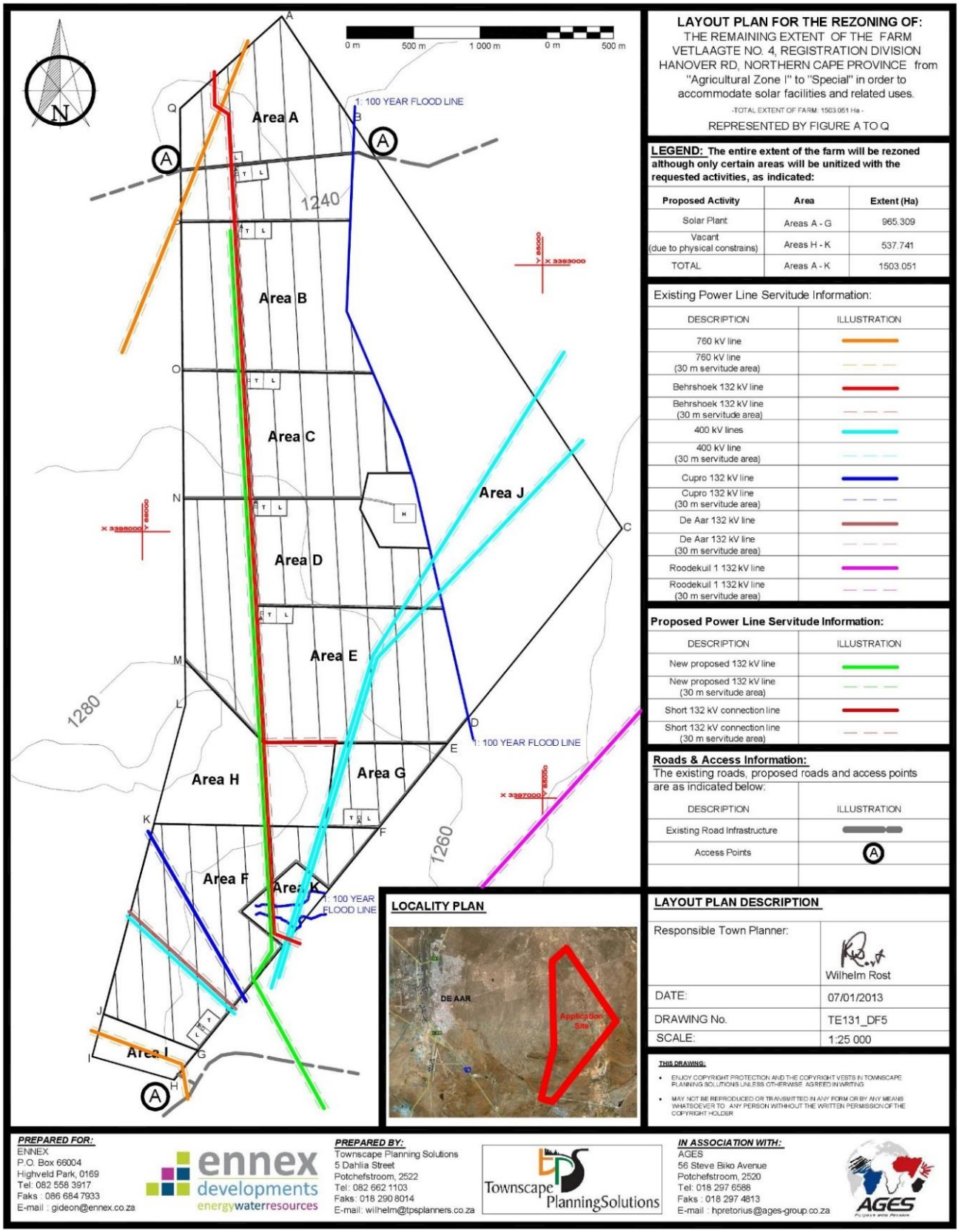


Figure 3: Layout plan for seven solar PV facilities authorised in 2013

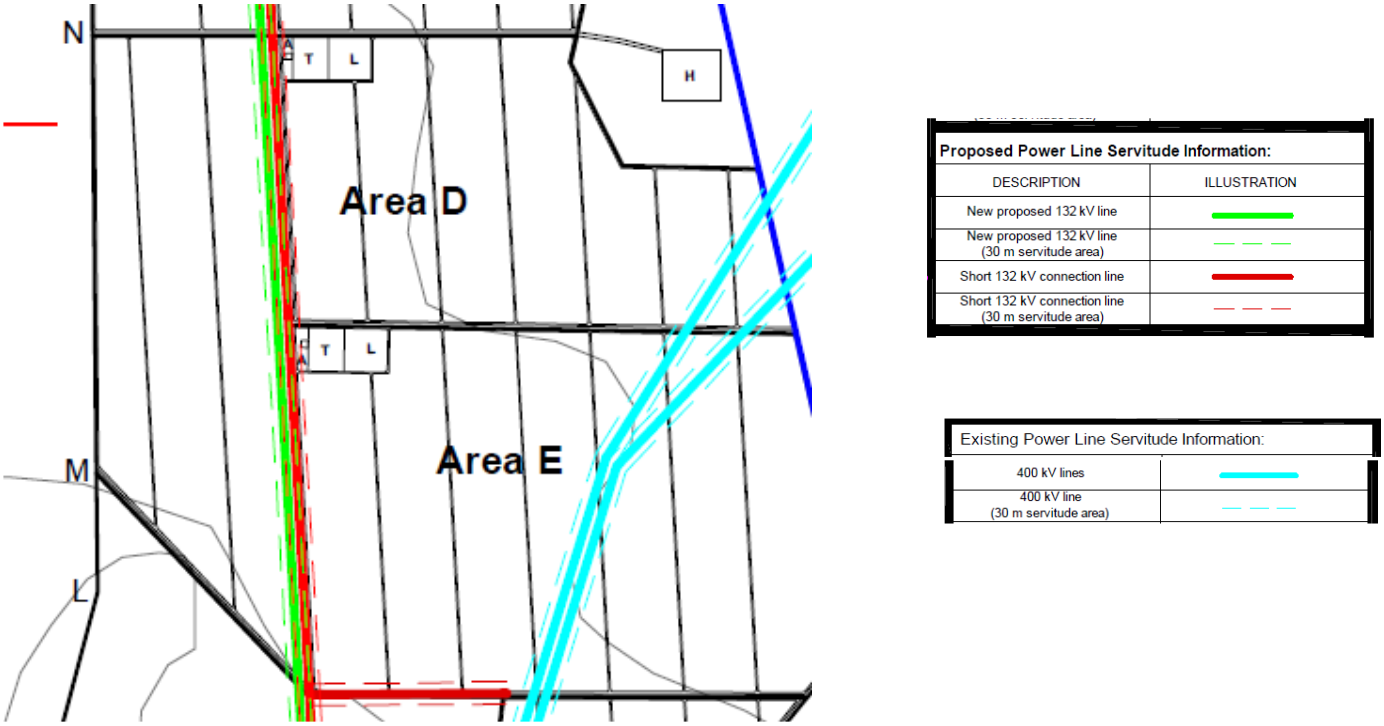


Figure 4: 2013 Layout plan for Portion (Area) E

3.2.2 2023 Updated Site Layout Plan

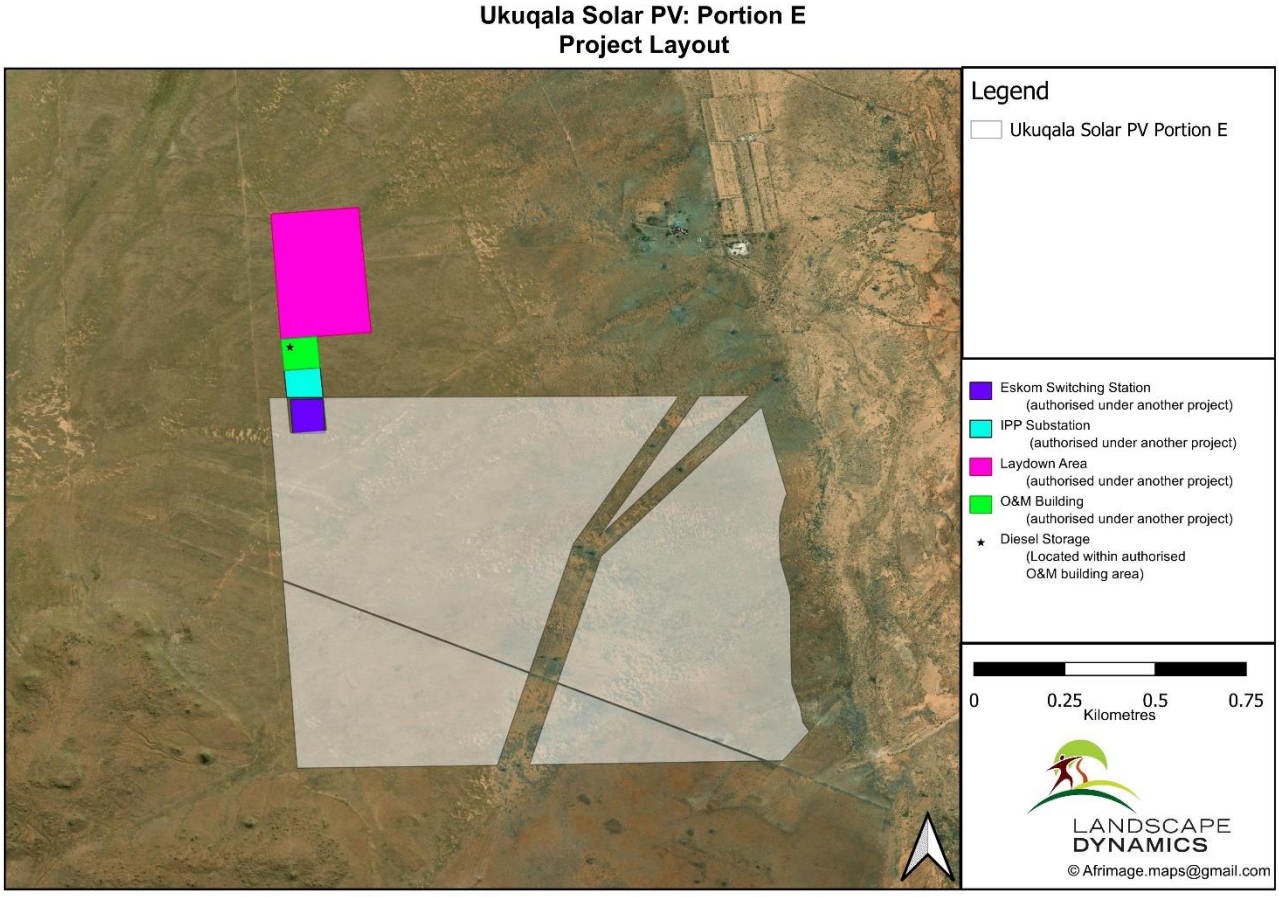


Figure 5: 2023 Updated Site Layout Plan

CHAPTER 4: DFFE SCREENING TOOL

The DFFE Screening Tool is a new guideline that needs to be taken into consideration during the environmental processes for all new developments. The Screening Tool wasn't available during the EIA process undertaken in 2013 for the Ukuqala SEF and has to be considered in this EA amendment application.

The DFFE Screening Tool Report was compiled on 21 February 2023 and is attached under Addendum B.

4.1 Environmental Sensitivities

The Screening Tool Report identified certain Environmental Sensitivities within the proposed development area and, based on these results recommend specialist studies that need to be undertaken.

These identified sensitivities are indicative only and must be verified on site by a suitably qualified person (the EAP or a specialist) before the need of the recommended specialist assessments can be confirmed. The following table is applicable to the Ukuqala Portion E SEF:

Sensitivities identified in the Screening Tool

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme			X	
Animal Species Theme			X	
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme		X		
Avian Theme				X
Civil Aviation (Solar PV) Theme			X	
Defence Theme				X
Palaeontology Theme	X			
Plant Species Theme				X
RFI Theme	X			
Terrestrial Biodiversity Theme	X			

4.2 Specialist assessments identified

Based on the selected classification and the environmental sensitivities of the proposed development footprint, a list of specialist assessments have been identified by the Screening Tool for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate the reason for not including any of the identified specialist studies where applicable.

The 13x Impact Assessments as mentioned below were identified in the Screening Tool Report. A motivation is provided, where applicable, next to each study as to why the recommendation is not required.

Note
Full impact assessments are not required for this EA Amendment Application (also refer to the Specialists' Terms of Reference in Chapter 4). The Screening Tool was used to determine whether any new specialist assessments are required which was not done during the 2013 EIA process.

Specialist assessments identified in the Screening Tool

Impact Assessment	Motivation
Agricultural Impact Assessment	An *Agricultural Statement Letter* was compiled and is summarised in Chapter 5 and included under Appendix C.
Landscape / Visual Impact Assessment	A *Visual Statement* was compiled and is summarised in Chapter 5 and included under Appendix C.
Archaeological and Cultural Heritage Impact Assessment	An *Archaeological Statement Letter* was compiled and is summarised in Chapter 5 and included under Appendix C.
Palaeontology Impact Assessment	A *Palaeontological Statement Letter* was compiled and is summarised in Chapter 5 and included under Appendix C.
Terrestrial Biodiversity Impact Assessment	A *Terrestrial Ecological Statement Letter* was compiled and is summarised in Chapter 5 and included under Appendix C.
Aquatic Biodiversity Impact Assessment	An *Aquatic Statement Letter* was done and is summarised in Chapter 5 and included under Appendix C.
Civil Aviation Assessment	The SA Civil Aviation Authority was contacted for comment and there requirement (if any) will be included and addressed in the Final Motivation Report.

Defence Assessment	The Defence Theme was rated as having a Low sensitivity, which indicates that further studies are not required. The SA Defence Force was however contacted for comment and there requirement (if any) will be included and addressed in the Final Motivation Report.
RFI Assessment	An *RFI Assessment* was compiled and is summarised in Chapter 6 and included under Appendix D.
Geotechnical Assessment	The applicant will undertake site-specific geotechnical investigations during the design phase of the project, in other words after the EA has been extended. The final design of the foundations is done by engineers strictly according to generally acceptable engineering standards and norms, taking the site-specific geotechnical constraints and recommendations into account. The EAP can therefore with confidence state that a geotechnical study at this point will not impact on the viability of the project and is therefore not required as part of the studies for the extension of the validity period of the Environmental Authorisation.
Plant Species Assessment	This component is addressed under the *Terrestrial Ecological Statement Letter* as mentioned above.
Animal Species Assessment	This component is addressed under the *Terrestrial Ecological Statement Letter* as mentioned above.
Socio-economic Impact Assessment	A *Social Statement* was done and is summarised in Chapter 5 and included under Appendix C.

The specialist and engineering studies as mentioned in the table above are summarised in Chapter 5 and 6 of this report.

SITE VERIFICATION TABLE

Table 4: Site Verification of the DFFE Screening Tool Report

Environmental Theme	Confirmation if Statement Letter was done or excluded	DFFE Screening Tool Sensitivity	EAP / Specialist Rating: Confirm or dispute the DFFE Screening Tool
Agriculture Theme	An Agricultural Specialist Statement is summarised in Chapter 4 and is included under Appendix C of the Motivational Report.	MEDIUM	**Specialist <u>disputes</u> the DFFE Screening Tool Rating** The specialist rates the agricultural potential of the site as being **VERY LOW**. This is because the site was found to have a low agricultural production potential due to the arid climate as well as restrictive soil characteristics.
Animal Species Theme	This component is addressed under the Avifaunal Impact Statement. The DFFE sensitivity classification for the animal theme is linked to avifauna, even though the separate avian sensitivity is rated as LOW sensitivity.	MEDIUM	**Specialist <u>disputes</u> the DFFE Screening Tool Rating** Relatively low avifaunal abundance and diversity were recorded across the site and the avifaunal specialist therefore is rated the sensitivity as being of **LOW** significance. The ecologist also rated the animal sensitivity as being of **LOW** significance.

Environmental Theme	Confirmation if Statement Letter was done or excluded	DFFE Screening Tool Sensitivity	EAP / Specialist Rating: Confirm or dispute the DFFE Screening Tool
Aquatic Biodiversity Theme	An Aquatic Biodiversity Impact Assessment Comment is summarised in Chapter 4 and is included under Appendix C of the Motivational Report.	VERY HIGH	**Specialist <u>disputes</u> the DFFE Screening Tool Rating** The very high sensitivity rating as per the Screening Tool is linked to the Strategic Water Source Area for groundwater that has been identified in the wider area. The proposed project is unlikely to impact the Strategic Water Source Area. Given the fact that the approved PV site is located outside of the mapped aquatic features, the assessed aquatic rating is **LOW**.
Archaeological and Cultural Heritage Theme	A Heritage Impact Statement is summarised in Chapter 4 and is included under Appendix C of the Motivational Report.	HIGH	**Specialist <u>disputes</u> the DFFE Screening Tool Rating** The site that the Screening Tool refer to was studied in a different project (Site Vetlaagte 03 - SAHRIS ID 34471) and had to be recorded. The recording was done by CTS Heritage and concluded that no further studies or actions are recommended in relation to Site 03. The sensitivity rating for the Ukuqala SEF Portion E is therefore **LOW**.

Environmental Theme	Confirmation if Statement Letter was done or excluded	DFFE Screening Tool Sensitivity	EAP / Specialist Rating: Confirm or dispute the DFFE Screening Tool
Avian Theme	An Avifauna Specialist Input Letter is summarised in Chapter 4 and is included under Appendix C of the Motivational Report.	LOW	**Specialist <u>agrees</u> the DFFE Screening Tool Rating** Relatively low avifaunal abundance and diversity were recorded across the site and the specialist therefore is in agreement with the sensitivity rating of **LOW**.
Civil Aviation (Solar PV) Theme	Specialist input is not deemed necessary. The SA Civil Aviation Authority (SACAA) was however approached for comment on the Motivational Report.	MEDIUM	**The EAP <u>disputes</u> the sensitivity rating** The Screening Tool rated the site as having a medium sensitivity due to a civil aviation aerodrome being within 8km from the site. The airfield positions as obtained from www.atns.com: *Air Traffic and Navigation Services (ATNS): Aeronautical Information Management* confirms the positions of nearby airfields: • One airfield is approximately 6km west of the proposed SEF. Even though the relevant distances were determined as qualifying for Medium Sensitivity, due to the presence of other authorised <u>and</u> completed solar PV facilities within the

Environmental Theme	Confirmation if Statement Letter was done or excluded	DFFE Screening Tool Sensitivity	EAP / Specialist Rating: Confirm or dispute the DFFE Screening Tool
			area as well as of numerous power lines (both distribution and transmission) within the direct vicinity of the proposed project, it is not expected that significant additional impact on the civil aviation component in the macro area will occur resulting from the construction of the proposed SEF. The civil aviation sensitivity is therefore rated as **LOW**. The CAA will however be approached for comment during the distribution of this Motivation Report and their comment, if any, will be included in the Final Motivation Report.
Defence Theme	The Defence Theme was rated as having a Low sensitivity, and therefore no specialist input is required.	LOW	**EAP <u>confirms</u> the sensitivity rating** The closest defence facility to the site is the South African Defence Department Ammunition Depot and School of Munitions, which is situated 3,8km west of De Aar. The De Aar Military Airport is located approximately 8,6km west of De Aar. The SEF project area is situated approximately 5km *east* of the De Aar The EAP is confident that the PV solar farm will not impact negatively on any defence activity and/or infrastructure.

Environmental Theme	Confirmation if Statement Letter was done or excluded	DFFE Screening Tool Sensitivity	EAP / Specialist Rating: Confirm or dispute the DFFE Screening Tool
			There is therefore no reason to dispute the rating of **LOW**.
Palaeontology Theme	A Palaeontological Impact Statement is summarised in Chapter 4 and is included under Appendix C of the Motivational Report.	VERY HIGH	**Specialist <u>disputes</u> the DFFE Screening Tool Rating** The palaeontological sensitivity for the development area was ground-truthed 2012 and it was ultimately concluded that the palaeontological sensitivity of this area is **LOW**.
Plant Species Theme	This component is addressed under the Terrestrial Biodiversity Impact Statement is summarised in Chapter 4 and is included under Appendix C of the Motivational Report	LOW	**Specialist <u>agrees</u> the DFFE Screening Tool Rating** The specialist confirmed that the plant species theme is rated as **LOW**
RFI Theme	An RFI Assessment was done and is summarised in Chapter 5 and is included under Appendix D of this report.	VERY HIGH	**Specialist <u>disputes</u> the DFFE Screening Tool Rating** The Screening Tool rated the area as Very High because the site is situated less than 18 km form a Weather Radar installation. However, according to the Radio Mobile data, the proposed Ukuqala SEF will have no RFI influence on the Weather Radar Installation. The Ukuqala SEF is also situated

Environmental Theme	Confirmation if Statement Letter was done or excluded	DFFE Screening Tool Sensitivity	EAP / Specialist Rating: Confirm or dispute the DFFE Screening Tool
			outside the exclusion zones as per the Clearance Zone Distance table and will not cause unintentional RFI to surrounding electrical/electronic equipment. The RFI sensitivity is therefore rated as **LOW**.
Terrestrial Biodiversity Theme	A Terrestrial Biodiversity Impact Statement is summarised in Chapter 4 and is included under Appendix C of the Motivational Report.	VERY HIGH	**Specialist <u>disputes</u> the DFFE Screening Tool Rating** Due to the presence of the Ecological Support Area the Terrestrial Biodiversity Theme in the Screening Tool was rated as Very High. A Terrestrial Biodiversity Theme assessment was therefore undertaken, which assessed Loss of Habitat as having **Medium** significance.

CHAPTER 5: SPECIALIST STUDIES

5.1 Terms of Reference for the Specialists' Reports / Statement Letters

The specialists and engineers received the following Terms of Reference:

- Do a desktop study of studies undertaken during the initial baseline study undertaken in 2012/2013.
- Describe the status (baseline) of the environment that was assessed during the initial assessment.
- Confirm the current status of the assessed environment and highlight any changes when comparing to the initial assessment – if any.
- Undertake Site Verification if needed, or refer to recent site visits undertaken within this area / knowledge of the area if a site investigation is not required.
- Confirm it there are new assessments and/or guidelines which are now relevant which were not undertaken during the initial assessment. If so, address this appropriately in the report.
- Confirm if cumulative impact due to the extension will occur - if no cumulative impact, make a statement, or else provide a description and an assessment of the surrounding environment in relation to new developments or changes in land use which might impact on the Ukuqala SEF project. The assessment must consider the following:
    - Similar developments within a 30km radius (info to be obtained from the DFFE Screening Tool);
    - Identified cumulative impacts must be clearly defined, and where possible the size of the identified impact must be quantified and indicated, i.e., hectares of cumulatively transformed land;
    - Detailed process flow and proof must be provided, to indicate how the specialist's recommendations, mitigation measures and conclusions from the various similar developments in the area were taken into consideration in the assessment of cumulative impacts and when the conclusion and mitigation measures were drafted for this project;
    - The cumulative impacts significance rating must also inform the need and desirability of the proposed development;
    - A cumulative impact environmental statement on whether the proposed development must proceed.
- The study must conclude the following:
    - Has the baseline status of the environment changed since the initial EIA was done in 2012/2013?
    - Is the initial impact rating undertaken during the initial assessment still valid?
    - Are the mitigation measures provided in the initial assessment still applicable?

    - Are there any new mitigation measures that should be added to the Environmental Authorisation if the DFFE decides to extent the commencement period as per this application?
- A summary, description and assessment of any changes to the environment (if any) since the initial EA was issued.
- Confirmation that the amended layout plan has taken all environmental sensitivities into account.
- Final recommendation:
    - The environment in terms of the specific specialist field has not changed significantly since 2012/2013; therefore, there is no objection to the extension of the validity of the Environmental Authorisation

      Or
    - Significant change in terms of the specific specialist field since 2012/2013 is evident; therefore the extension of the validity of the Environmental Authorisation cannot be supported.

5.2 Previous specialist studies conducted vs studies in this Motivation Report

Specialist studies undertaken for the Ukuqala SEF in 2012/2013

- Ecological (Fauna, Flora and Aquatic) Impact Assessment as well as
    - Plant Rescue Plan
    - Plant Revegetation and Rehabilitation Plan
    - Plant Alien Invasive Management Plan
    - Erosion Management Plan
- Avifauna Impact Assessment
- Bat Impact Assessment
- Archaeological and Palaeontological Impact Assessments
- Soils Impact Assessment (Agriculture)
- Social Impact Assessment
- Visual Impact Assessment
- Traffic Management Plan
- Storm Water Management Plan
- Flood Line Assessment

Specialist studies undertaken for other projects on the Vetlaagte farm during the past two years are as follows:

Table 5: Previous specialist studies undertaken on the Vetlaagte farm

	Vetlaagte MTS	Ukuqala Grid Connection	Ennex Grid Connection	Lehlasedi Grid Connection
DATE EA WAS RECEIVED	22 July 2022	Received 23 May 2023	13 September 2022	Received 4 April 2023

Specialist field	Vetlaagte MTS	Ukuqala Grid Connection	Ennex Grid Connection	Lehlasedi Grid Connection
Ecology (fauna & flora)	X	X	X	X
Avifauna	X	X	X	X
Aquatic	X	X	X	X
Heritage/Cultural and Palaeontology	X	X	X	X
Agriculture Compliance Statement	X	X	X	X
Hydrology and Storm Water Management Plan	X			

The EAPs are confident that the specialist studies as put forward in this report are sufficient to cover all aspects that could possibly impact on the biophysical and social environment and that an informed decision can be taken by the DFFE.

Summary of Specialist Studies

5.3 Biodiversity Statement Letter

A Biodiversity Statement Letter was compiled by Mr David Hoare (attached under Appendix C) and is summarised below.

Findings of the original assessment

The original ecological assessment for the project was undertaken in 2011 and an ecological report was submitted, dated 29 August 2012. Recent site visits were undertaken on 18 March 2021, 25 November 2021 and 4 March 2022 at which time a walk-through of the area was undertaken. It was found that conditions on site were the same as when the original survey was undertaken. Therefore, the original assessment of the site is valid.

This original (2012) assessment identified three impacts for the project area, as follows:

- Loss or fragmentation of indigenous natural vegetation (Medium significance)
- Loss of habitat for threatened animals (Low significance)

- Damage to watercourses (Low significance)
- Establishment and spread of declared weeds and alien invader plants (Low significance)

Based on the re-visit to the site and a review of the original report, these assessments are valid.

Omissions from the original assessment

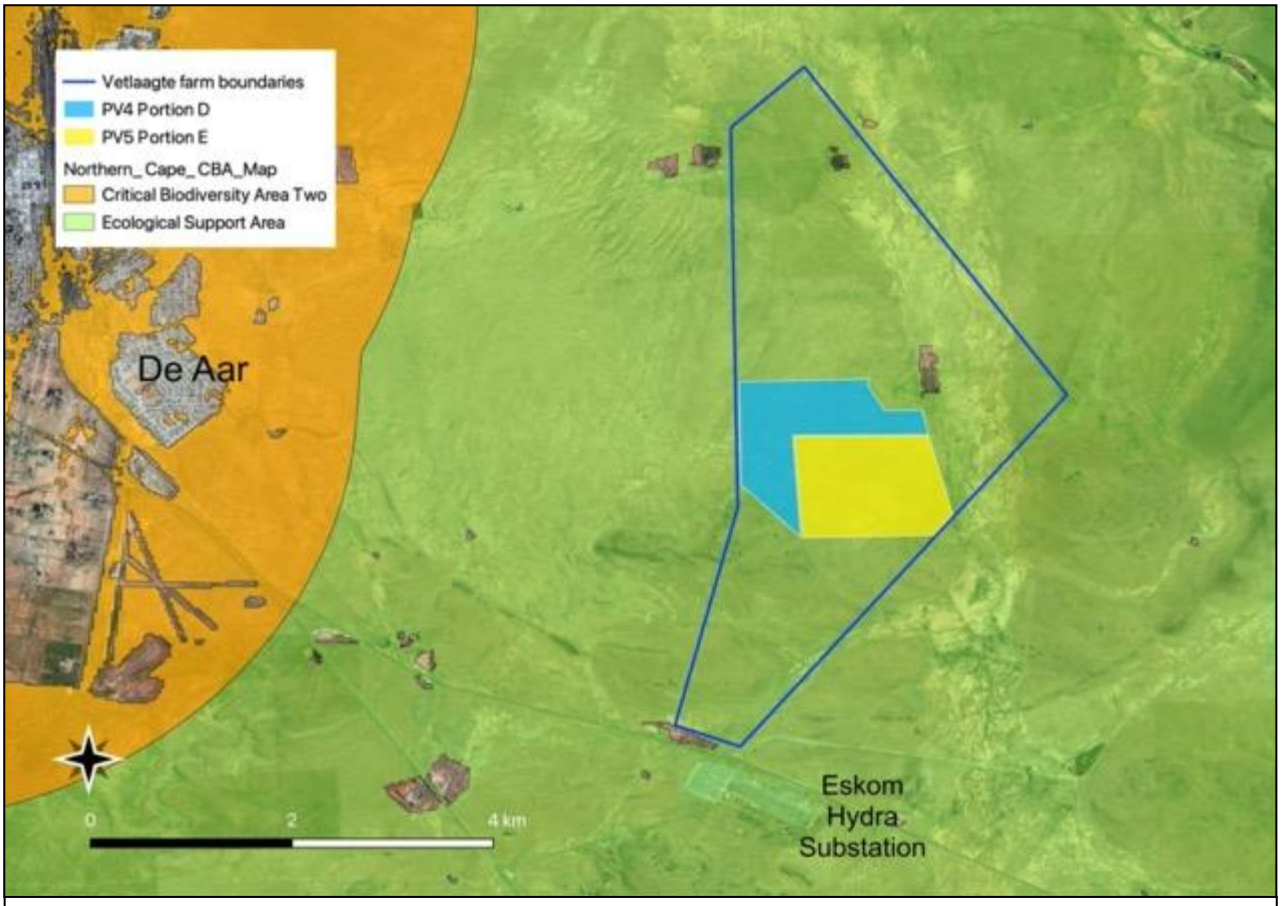


Figure 6**: Northern Cape CBA map in relation to the project.**

Critical Biodiversity Areas

At the time of the original assessment, no Northern Cape Critical Biodiversity Area map existed. Impacts on CBAs were therefore not undertaken.

The entire project falls within an Ecological Support Area (ESA), which extends across vast distances in all areas close to De Aar. There are therefore no options outside of this ESA for the project. All the recently assessed renewable energy projects directly to the east of De Aar are within this ESA.

De Aar Nature Reserve

At the time of the original assessment, the presence of the De Aar Nature Reserve was not considered because it did not appear on any online database at the time and the existence of the reserve was therefore unknown.

The De Aar Nature Reserve is approximately 8.8km to the west of the proposed Ukuqala Solar PV facility. During the site visit on 4 March 2022, the possible effect on this nature reserve was specifically considered. This assessment concluded that the proposed project is not considered to have an effect on the nature reserve.

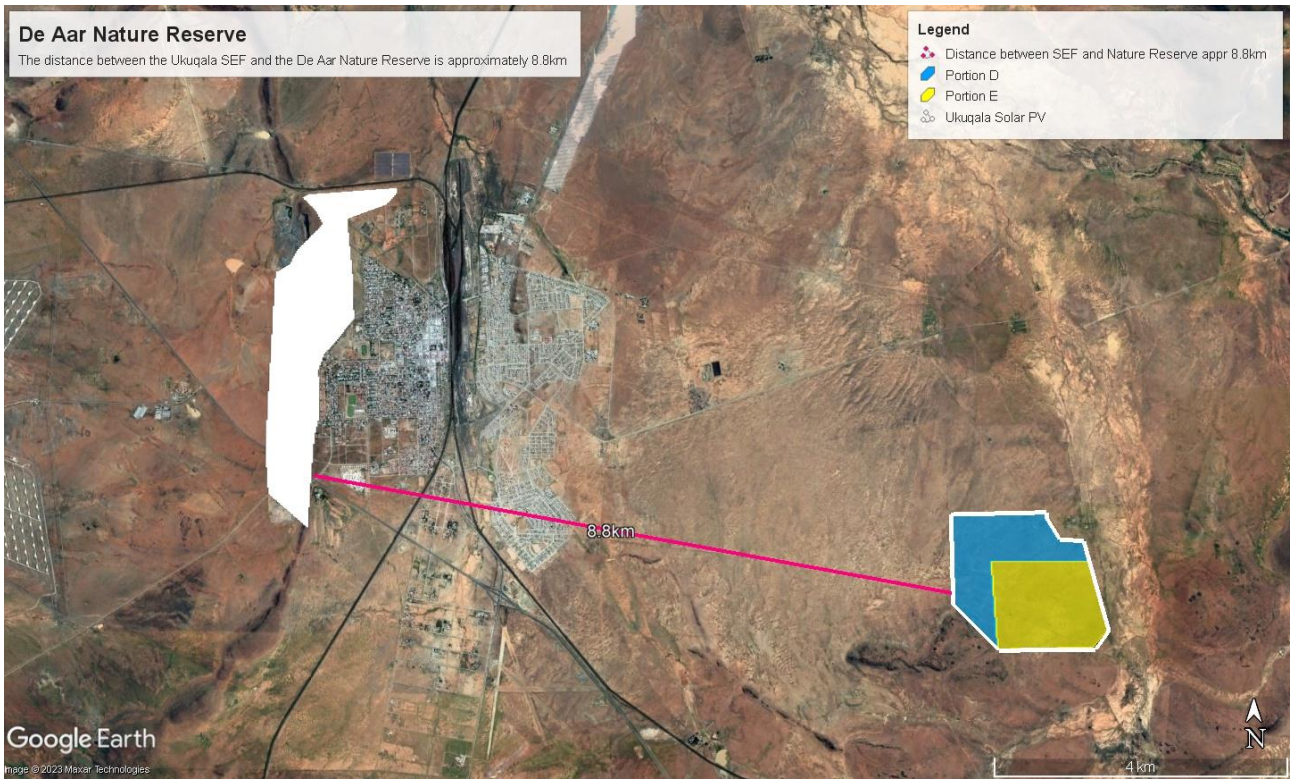


Figure 7: De Aar Nature Reserve and distance from the site

New guidelines that are now relevant: DFFE Screening Tool

The relevant Screening Tool themes are Animal-, Plant- and Terrestrial Biodiversity Theme. During the walk-through survey undertaken on 18 March 2021, 25 November 2021 and 4 March 2022, sensitivities for these themes were specifically addressed.

The Low sensitivity for the Plant- and Animal Themes matches the original assessment for the site.

Due to the presence of the Ecological Support Area the Terrestrial Biodiversity Theme was rated as Very High. A Terrestrial Biodiversity Theme assessment was therefore undertaken, which assessed Loss of Habitat as having Medium significance. This matches the original (2012) assessment for the site, where "Loss or fragmentation of indigenous natural vegetation" was assessed as having Medium significance.

Cumulative impacts

According to the Screening Tool report for the current project (dated 22/02/2023), there are 29 renewable energy (wind and solar) projects within 30km of the Ukuqala SEF project that have been approved.

The vegetation type in which the current project occurs (Northern Upper Karoo) is widespread and not threatened - it occupies a total area of more than 28100 km^2. Most of the solar projects listed as occurring within 30km of the current site only affect lowland plains, which is where Northern Upper Karoo is found. Few areas within any other nearby vegetation types are affected, therefore impacts on these other vegetation types are not considered to be relevant for the cumulative assessment. If the entire area within 30km of the current site is developed, this would amount to approximately 10% of the entire vegetation type. Loss of this entire area would not affect the conservation status of the vegetation type.

The cumulative assessment was rated as having medium significance based on being a permanent impact that will definitely happen, but the spatial extent, in terms of actual area affected, is very small. Recommended mitigation measures are adequate for ensuring that this is contained. On this basis the proposed development is supported.

Conclusion of Botanical Statement

The following conclusions may be made:

1. The baseline status of the environment in terms of the ecological assessment (Animal-, Plant, and Terrestrial Biodiversity Theme) has not changed since the initial EIA was done in 2012.
2. The initial impact rating undertaken during the initial assessment is still valid.
3. The mitigation measures provided in the initial assessment are still applicable. There are no new mitigation measures that should be added to the Environmental Authorisation.
4. No changes to the environment have occurred since the initial EA was issued.
5. It is confirmed that the PV Layout for Portion E, as approved in 2013 are still applicable.

In conclusion, the environment in terms of biodiversity has not changed significantly since 2012; therefore, there is no objection to the extension of the validity of the Environmental Authorisation for this project.

5.4 Avifauna Specialist Input

An Avifauna Specialist Input Letter was compiled by Arcus Consultancy Services SA (Pty) Ltd, represented by Dr Owen Davies (attached under Appendix C) and is summarised below.

Changes to the environment

The avifaunal community observed and recorded during the monitoring in 2021 and 2022 was comparable to the observations made by the previous studies conducted by Harebottle, WildSkies and Avisense. During the monitoring there was a relatively low diversity and abundance of smaller passerine birds compared to the overall diversity of the broader region. This is due to the relatively low level of habitat diversity across the site, comprising largely of flat, lowland scrub. The current status of the environment under consideration is therefore considered to be practically unchanged from an avifaunal perspective since the original studies was conducted in 2012.

New guidelines

The Birds and Solar Energy Best Practice Guidelines (2017) published in the intervening time period since the original assessment was conducted recommend that the avifaunal baseline be updated to allow for impacts of operational facilities to be measured through a before-after control-impact (BACI) analysis. This process was already conducted for the very close by Mulilo De Aar PV project (2022), and recent baseline data is therefore available for these recommendations to be followed during operation.

Cumulative impact

The Screening Tool currently lists 29 approved solar and wind energy facilities within 30km of the Ukuqala SEF. Several impacts with significance to avifauna are already present in and around the development site, including operational solar PV facilities and overhead power lines that converge on the nearby existing Hydra Main Transmission Substation. The primary impacts associated with solar PV facilities are considered to include habitat destruction, disturbance and displacement and direct mortality through collisions with solar arrays or associated infrastructure such as overhead transmission lines.

The relatively low avifaunal abundance and diversity recorded across the site makes it unlikely that the development will contribute significantly to the cumulative negative impact of habitat destruction to the avifaunal community of the receiving environment. The surrounding area is largely contiguous natural habitat that is more favourable to avifaunal species of conservation concern than the development site given the site's proximity to De Aar and the existing network of overhead power lines.

Impact ratings and Mitigation

The impact ratings undertaken during the initial assessment are still valid. The exclusion of avifaunal Species of Conservation Concern from the site through the development of solar infrastructure is likely to *reduce* the overall risk of collisions for species with existing transmission infrastructure.

Mitigation measures provided in the initial assessment and the PV layouts as approved in 2012 remain applicable.

Conclusion

The environment in terms of avifauna has not changed significantly since 2012; therefore, there is **no objection** to the extension of the validity of the Environmental Authorisation.

4.3 Bat Specialist Letter

A Bat Specialist Letter was compiled by Inkululeku Wildlife Services, represented by Ms Caroline Lotter, and is attached under Appendix C. A summary thereof follows below.

Potential significant impacts on bats according to the 2012/213 studies are:

- loss of and damage to natural bat habitats;
- collisions with solar panels while foraging for insects; and
- roost disturbance due to noise and dust created during construction.

With effective mitigation, it is expected that the construction of the Ukuqala SEF will have a low negative impact on bat populations in the area.

An extension of the validity of the EA of the Ukuqala SEF will *itself*, not alter the potential impacts on bats from the project. Within the EA extension period, however, the Ukuqala SEF will contribute to a foreseeably greater cumulative impact on bats from the rapidly growing number of renewable energy developments in and around the De Aar region. The potential contribution of the proposed Ukuqala SEF to the growing cumulative impact from increasingly more wind and solar developments in the Northern Cape region must be considered and mitigated for during all phases of this project.

Conclusion

- The baseline status of the environment in terms of the bat assessment has not changed since the initial EIA was done in 2012/2013.
- The initial impact rating undertaken during the initial assessment is still valid.
- The mitigation measures provided in the initial assessment are still applicable. There are no new mitigation measures that should be added to the Environmental Authorisation.
- No changes to the environment have occurred since the initial EA was issued.

In conclusion, the environment in terms of bats has not changed significantly since 2012; therefore, there is no objection to the extension of the validity of the Environmental Authorisation for the Ukuqala SEF.

4.4 Aquatic Biodiversity Impact Assessment Comment

An Aquatic Biodiversity Impact Assessment Comment was undertaken by Blue Science (Pty) Ltd, represented by Ms Toni Belcher and is attached under Appendix C. A summary thereof follows below.

Current status of the assessed environment

Recent assessments of the site have been undertaken of the site in 2021 and 2022 to inform the Mulilo Du Plessis Dam PV, Paarde Valley PV2, Mulilo Cluster 1 Substation as well as the Vetlaagte and Wag 'n Bietjie Main Transmission Substation and grid connections. Below is a description of the aquatic features delineated and assessed from these assessments:

- The rivers in the wider area comprise unnamed tributaries of the Brak River, a tributary of the Lower Orange River System that joins the river near Prieska. The larger watercourses all mostly drain in a north westerly direction. The rivers can all be characterised as foothill streams within the Nama Karoo Ecoregion. Due to the low level of impact on these watercourses, they tend to be still largely natural to moderately modified and vary in

ecological importance from low for the smaller watercourses to moderate for the larger floodplain systems. It is recommended that the larger watercourses, floodplains and wetlands within the site are not allowed to degrade further from their current ecological condition of largely natural to moderately modified.

- A buffer of 50m from the delineated edge of the aquatic habitats was recommended.
- Site Verification Assessment: The Screening Tool has indicated that the wider area in which the project is proposed, is mapped as being of very high Aquatic Biodiversity Combined Sensitivity. The very high sensitivity is linked to the Strategic Water Source Area for groundwater that has been identified in the wider area. The proposed project is unlikely to impact the Strategic Water Source Area.

Specialist review of the initial baseline study findings

It is confirmed that the findings of these more recent assessments do not alter the findings and recommendations of the original ecological impact assessment, dated 2012.

Comment on any changes to the aquatic ecosystems within the site

More recent field visits to the farm Vetlaagte No. 4, De Aar, undertaken in 2021 and 2022 indicated that there has not been any significant change to the aquatic features within the site from the original baseline assessment as they tend to be still largely natural to moderately modified ecological condition. The ecological integrity of the river and wetland habitat at the site appears to be essentially unchanged from the 2012 assessment.

Comment on the Site Verification and development layout for the site

The assessment has found the larger aquatic features on-site to be of moderate sensitivity and the smaller features to be of low sensitivity. The Very high Aquatic Biodiversity Combined Sensitivity mapping of the screening tool differs as it is linked to the SWSA for groundwater. No change to the approved PV layout is thus deemed necessary.

General comment on the change to impact significance

Given the fact that the approved PV site is located outside of the mapped aquatic features and no physical changes are proposed, the assessed impact ratings (Low with mitigation) are not likely to alter.

General comment on additional mitigation measures

The mitigation measures stated in the original ecological impact study dated 2012 are deemed to be adequate (particularly considering the approved PV site is located outside of the mapped aquatic features). Thus, no additional mitigation measures being required.

Consideration of cumulative impacts

The cumulative impact of the project activities, together with other renewable energy projects and the existing activities in the area, could have the potential to reduce the integrity of the watercourses if not properly mitigated and managed. By implementing suitable buffers along the watercourses (30m for the smaller watercourses and 50m for the larger watercourses) and

minimising the works within the river/stream corridors, the impact of the proposed project activities would be low and unlikely to impact the integrity of the aquatic ecosystems. The approved layout is located outside of the recommended buffer, together with the mitigation measures provided for the approved project are thus deemed to be sufficient to prevent cumulative impacts resulting from the construction and operation of this project.

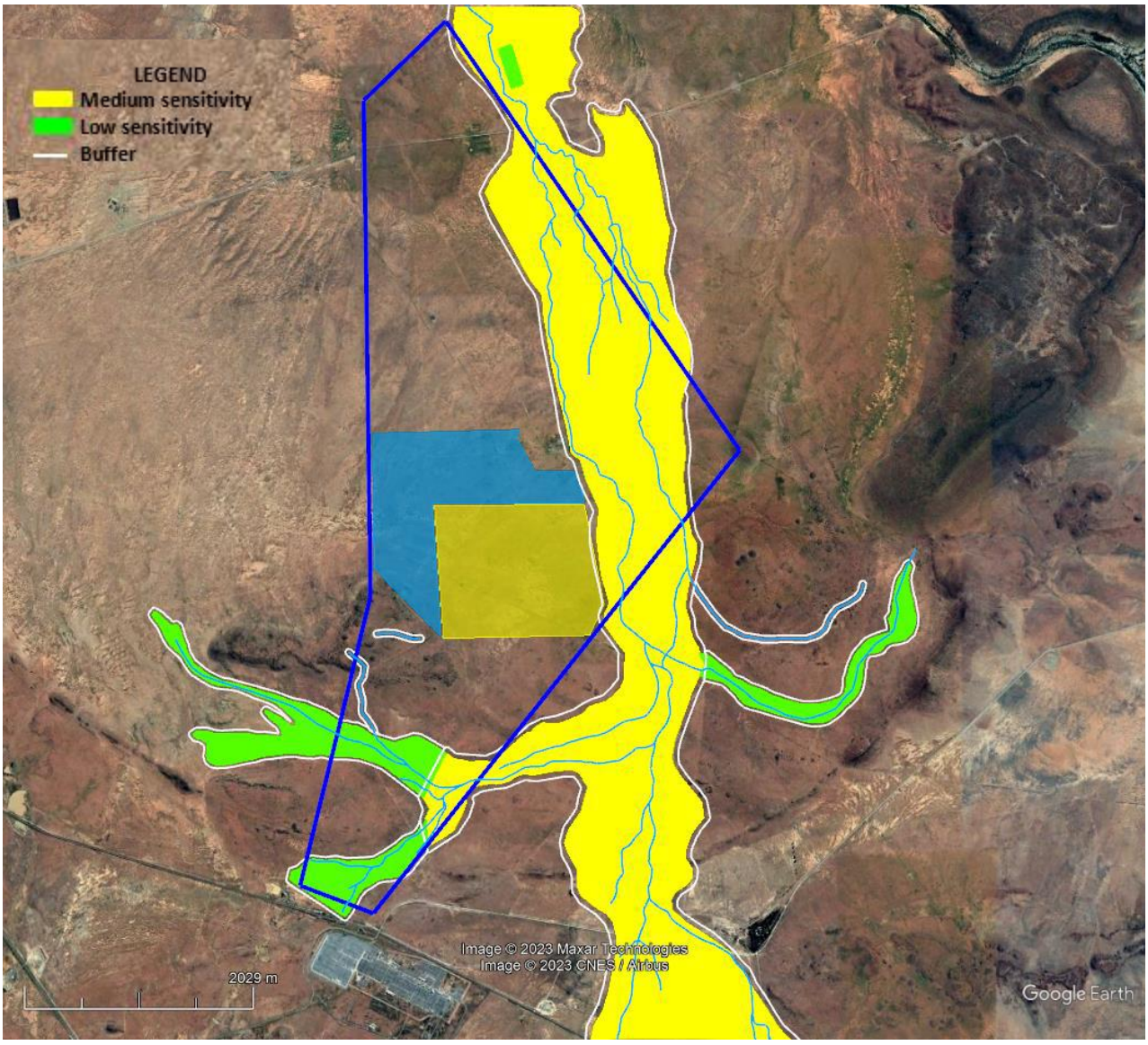


Figure 8: Aquatic Sensitivity Map

Recommendations

The environment in terms of aquatic features has not changed significantly since 2012; therefore, there is no objection to the extension of the validity of the Environmental Authorisation.

5.5 Agricultural Specialist Statement

An Agricultural Specialist Statement was compiled by Johann Lanz, Soil Scientist, and attached under Appendix C. A summary thereof follows below.

Changes to the status of the site

The Agricultural Impact Assessment completed in 2012 rated the significance of the agricultural impact as very low. This was because the site was found to have a low agricultural production potential due to the arid climate as well as restrictive soil characteristics.

It is hereby confirmed that the current status of the site remains exactly as it was in the original assessment. Agricultural production potential is a function of climate, terrain and soils and cannot change significantly in the time period since the original assessment, or even in a much longer time period.

Cumulative Impact

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.

The most important concept related to a cumulative impact is that of an acceptable level of change to an environment.

The potential cumulative agricultural impact of importance is a regional loss (including by degradation) of future agricultural production potential. The defining question for assessing the cumulative agricultural impact is this:

- What loss of future agricultural production potential is acceptable in the area, and will the loss associated with the proposed development, when considered in the context of all past, present or reasonably foreseeable future impacts, cause that level in the area to be exceeded?

The cumulative impact assessment has considered all renewable energy projects within a 30 km radius. All of these projects have the same agricultural impacts in an almost identical agricultural environment, and therefore the same mitigation measures apply to all.

In quantifying the cumulative impact, the area of land taken out of agricultural use as a result of all the projects within the 30km range (total generation capacity of 1703 MW) will amount to a total of approximately 4258 hectares. As a proportion of the total area within a 30km radius (approximately 282,700 ha), this amounts to only 1.51% of the surface area. This is within an acceptable limit in terms of loss of low potential agricultural land which is only suitable for grazing, of which there is no scarcity in the country.

The cumulative impact of loss of future agricultural production potential will not have an unacceptable negative impact on the agricultural production capability of the area.

Conclusion

1. The baseline status of the environment in terms of agricultural impact has not changed since the initial EIA was done in 2012.

2. The initial impact rating undertaken during the initial assessment is still valid.
3. The mitigation measures provided in the initial assessment are still applicable.
4. There are no new mitigation measures that should be added to the Environmental Authorisation if the DFFE decides to extent the commencement period as per the application.
5. The Layout as approved in 2012 is still applicable.

5.6 Heritage/Cultural Environment and Palaeontology

A Heritage Input Statement Letter was compiled by CTS Heritage, represented by Ms Jenna Lavin (attached under Appendix C) and is summarised below.

Cultural Landscape and Built Environment
The old Vetlaagte homestead with a restored farmhouse, outbuildings, midden and labourers quarters, as well as a dilapidated dam wall constructed in the drainage line east of the farmstead were identified in the 2012 study. The entire farmstead is however situated approximately 500m north of Portion E in an area excluded from the solar farm development.

A small family graveyard, associated with the farmstead at Vetlaagte, also occurs in the exclusion zone about 100m north of the farm house.

No other structures within the vicinity of Portion E was identified that is conservation worthy.

Archaeology
Widespread Middle Stone Age (MSA) material, including characteristic formal MSA stone tools such as points, blades and scrapers were documented in the 2012 study along a north-south oriented drainage on the eastern periphery of the property.

None of the infrastructure proposed as part of this development application are located near the archaeologically sensitive drainage line located along the eastern periphery of the property.

The field assessment conducted for this project has demonstrated that the specific area proposed for development has low sensitivity for impacts to significant archaeological heritage.

Based on the findings of the various reports completed for the area, and the results of the walkdown assessments, no significant archaeological resources will be impacted by the Ukuqala SEF and there is no objection to the extension of the validity of the EA from an archaeological perspective.

Palaeontology
According to the SAHRIS Palaeo Sensitivity Map, the area proposed for development is underlain by sediments of high and very high paleontological sensitivity. According to the extract from the Council for GeoSciences Map 3024 for Colesburg, the development area is underlain by Jurassic

Dolerite, the Tierberg Formation of the Ecca Group and the Adelaide Subgroup of the Beaufort Group.

The palaeontological sensitivity for the development area has been ground-truthed by Almond (2012) who ultimately concluded that the palaeontological sensitivity of this area is LOW.

In Bamford's assessment completed for this area in 2021, she notes that "Based on experience, other reports and the lack of any significant previously recorded fossils from the area, it is unlikely that any fossils would be preserved in the Tierberg Formation or Adelaide Subgroup. Nonetheless, a Fossil Chance Find Protocol should be added to the EMPr."

Note from EAP: This mitigation was added to the EMPr and, in terms of NEMA EIA Regulation 36(1) it should reflect in the next environmental audit report that will be undertaken for this project.

Cumulative Impact

The proposed project is located within a belt of approved renewable energy facilities located outside of De Aar. 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 culturally significant 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.

Site Sensitivity Verification

According to the DFFE Screening Tool analysis, the development area has Very High levels of sensitivity for impacts to palaeontological heritage and High levels of sensitivity for impacts to archaeological and cultural heritage resources.

The results of this assessment in terms of site sensitivity are as follows:

- The cultural value of the broader area has limited significance in terms of its agricultural history (Moderate).
- Limited significant archaeological resources were identified within the broader area (Low).
- 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 (Low).

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 as well as for archaeology and cultural heritage - these should be considered to be Moderate to Low.

Statement on environmental processes impacting on archaeology and palaeontology

Archaeological and palaeontological heritage resources react to the environments of the deeper past and are unlikely to change significantly in as short a geological time span as 10 years. Some

changes to heritage resources may result from processes of erosion and deflation but, in this particular ecological setting, would likely represent heavily disturbed contexts and consequently would be of limited scientific/heritage value.

Conclusion

- It is very unlikely that the baseline status of the environment has changed since the initial EIA for the two lease areas was done in 2012.
- The mitigation measures provided in the initial assessment are still applicable.
- Apart from the Fossil Chance Find Protocol, no new mitigation measures should be added to the Environmental Authorisations if the DFFE decides to extend the commencement period as per the application.

The environment in terms of impacts to heritage resources has not changed significantly since 2012; therefore, there is no objection to the extension of the validity of the Environmental Authorisations.

5.7 Visual Statement

A Visual Statement was compiled by VRM Africa, represented by Mr Steve Stead (attached under Appendix C) and is summarised below.

Policy Fit	**Medium to High +VE**
In terms of the spatial planning defined for the area, the proposed project has a good policy fit. The project will contribute to economic growth and diversification, social development projects, economic development in the region, sustainable development and affordable energy without detracting from significant natural or cultural landscapes. While not in a REDZ area, the project has a good policy fit in terms of landscape planning as the area has limited landscape resources that are utilised for landscape based tourism. The area is also significantly defined as a MTS area, with multiple powerlines in the locality that detract from the local landscape character.	

Zone of Visual Influence	**No change**
The visible extent, or viewshed, is "the outer boundary defining a view catchment area, usually along crests and ridgelines". No change to the PV panel heights have been made and as such, the viewshed would remain the same but would most likely have a *Moderate Extent with the ZVI contained to the Foreground/ Midground (6km buffer).*	

Receptors and Key Observation Points	**No change**
Key Observation Points (KOPs) are the people (receptors) located in strategic locations surrounding the property that make consistent use of the views associated with the site where the landscape modifications are proposed. As the ZVI remains the same, no change to the receptors and Key Observation Points is expected. No new receptors were identified.	

SCENIC QUALITY	Medium to Low
The 2012 VIA did not have a rating for Scenic Quality. This review found the Scenic Quality to be Medium to Low, as informed by the more recent assessment of the Mulilo De Aar PV and BESS survey (adjacent to the Ukuqala SEF site). While the powerlines detracted from the local sense of place, the low hills and open grasslands did add some value to the broader landscape.	

RECEPTOR SENSITIVITY TO LANDSCAPE CHANGE	Moderate
As indicated in the 2012 report, receptors are limited but could include the N10 (Medium to Low Exposure) as well as the outer dwellings of Happy Valley and Nonzwakazi (Low Exposure). The findings of this review is that that 2012 statement is correct: "The potential visual impact of the primary infrastructure on residents of homesteads in close proximity to the proposed facility is likely to be of *Moderate Significance*."	

EXPECTED Impact significance	
Low	*No change to the 2012 impact statement* "the study concluded that the anticipated impact on the visual character of the landscape and sense of place of the region is likely to be of **low** significance".

CUMULATIVE RISKS	
Medium	The 2012 study concludes that while inter-visibility will take place, the resultant cumulative effect is likely to be Medium, stating "in a very populated area, with complex landscape patterns, the number of proposed developments could result in a high visual impact. In this context, the long views, exposed sites, roads with little traffic, small to medium sized towns, all combine to rate this cumulative impact as medium". The site visit confirmed these findings, with the flat terrain and the low prominence of the site, as well as the lower visual exposure to urban receptors, helping to reduce the intensity of the visual intrusion, and thus the intervisibility as well.

Conclusion

The findings of this visual statement, based on the review of the 2012 report as well as a site visit to undertake a basic visual assessment of the adjacent Mulilo De Aar PV, is that the previous findings are still valid, and that *Visual Impacts are likely to be Low*.

The findings of this review are that the environment in terms of the visual resources has not changed significantly since 2012; therefore, there is no objection to the extension of the validity of the EA.

5.8 Social Statement

A Social Statement was compiled by Mr Tony Barbour and is attached under Appendix C. A concise summary thereof follows below.

OVERVIEW OF BASELINE CONDITIONS

Policy and planning documents

Given that the SIA was undertaken in 2012, there have been changes to some key national, specifically the Integrated Resource Plan (2010), and local planning documents, including relevant Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDF).

As part of the amendment process, the latest local policy documents have been reviewed, including:

- Integrated Resource Plan (IRP) for South Africa (2019).
- National Infrastructure Plan (NIP) (2012 and 2021).
- National Development Plan (2011).
- Northern Cape Provincial Spatial Development Framework (NCSDF) (2012)
- Northern Cape Province Green Document (2017/2018).
- Pixley ka Seme District Municipality Integrated Development Plan (2019-2020).
- Pixley ka Seme District Municipality Spatial Development Framework (2017).
- Emathanjeni Local Municipality Integrated Development Plan (2021-2022).

The development as proposed is in line with / support of these policies.

Overview of land uses

The land uses in the study area have not changed since the original SIA was undertaken in 2012. The settlement pattern in the study remains sparse. The relevant properties continue to be used for grazing, mainly seasonal (summer) grazing. Very few dedicated permanent employment opportunities are associated with the study properties. No tourism receptors are located within any significant proximity to the site.

The 2012 SIA also noted that the visual character of the area and sense of place had been altered by the existing infrastructure and adjacent land uses, such as the Hydra substation and associated power lines and the electrified railway line and Bletterman station. A number of PV SEF facilities were proposed for the area in and around De Aar which include the ACED (adjacent to the eastern boundary), RetroSolar and INCA PVSEFs (located immediately to the south of the site). These statements remain valid.

ASSESSMENT OF SOCIAL ISSUES

Construction and Operational Phases

The significance of the creation of employment and business opportunities with enhancement for the Ukuqala SEF will be **Medium Positive**.

The enhancement and mitigation measures listed in the 2012 SIA also remain valid. However, it is recommended that the following mitigation measures be included in the EMPr:

- Preparation and implementation of a Stakeholder Engagement Plan (SEP).
- Preparation and implementation of a Community Health, Safety and Security Plan (CHSSP).

Note from EAP: This mitigation was added to the EMPr and, in terms of NEMA EIA Regulation 36(1) it should reflect in the next environmental audit report that will be undertaken for this project.

ASSESSMENT OF CUMULATIVE IMPACTS

The findings of the 2012 SIA indicated that the cumulative impact on the areas sense of place associated with the proposed Ukuqala SEF and other PV SEFs would be Low Negative. The cumulative visual impact associated with the proposed Ukuqala 75MW PV SEF is however likely to be Medium Negative.

The recommendation that the recommendations contained in the VIA should be implemented remains valid.

Cumulative impact on the local economy

The findings of the 2012 SIA indicated that the establishment of a number of solar energy facilities near De Aar will create of socio-economic opportunities for the town, which in turn, will result in positive social benefits. The positive cumulative impacts include creation of employment, skills development and training opportunities, creation of downstream business opportunities and stimulation of the local property market. The significance was rated as **High Positive**. This finding remains valid.

In terms of mitigation, the proponents should meet with representatives from the ELM to discuss and identify initiatives that can be supported by renewable energy companies in the area.

Note from EAP: This mitigation was added to the EMPr and, in terms of NEMA EIA Regulation 36(1) it should reflect in the next environmental audit report that will be undertaken for this project.

Cumulative impact on accommodation and services

The establishment of the proposed Ukuqala SEF and the other renewable energy facilities in the Emathanjeni Local Municipality (ELM) has the potential to place pressure on local services in nearby towns, specifically De Aar. Services affected include medical, education and accommodation. This pressure will be associated with the influx of workers to the area associated with the construction phases, and to a lesser extent, the operational phases. The significance with mitigation was rated as Medium Negative.

In terms of mitigation, the Northern Cape Provincial Government, in consultation with the ELM and the proponents involved in the development of renewable energy projects in the ELM, should consider establishing a Development Forum to co-ordinate and manage the development and operation of renewable energy projects in the area with the specific aim of mitigating potential negative impacts and enhancing opportunities. This would include identifying key needs, including capacity of existing services, accommodation and housing and the implementation of an accredited training and skills development programs aimed at maximising the opportunities for local workers to be employed during the construction and operational phases of the various proposed projects. These issues should be addressed in the Integrated Development Planning process undertaken by the ELM.

Note from EAP: This recommendation was added to the EMPr and, in terms of NEMA EIA Regulation 36(1) it should reflect in the next environmental audit report that will be undertaken for this project.

CONCLUSION

Land uses

There has been a negligible change in the land uses and farming activities on the Vetlaagte farm. The baseline has therefore not changed significantly at a site-specific level.

Socio-economic environment

The socio-economic baseline conditions in the ELM and De Aar have changed since 2012 when the Vetlaagte SIA was undertaken. These changes include increase in population, changes in economic activities, specifically the impact on COVID-19 on the local economy (2019-2020/22). These changes do not however have a material bearing on the findings of the 2012 SIA.

Social issues, impact ratings and mitigation

The social issues identified and associated impact ratings for the construction and operational phase contained in the 2012 SIA remain valid and the associated mitigation measures remain applicable.

Cumulative impacts

The potential cumulative include cumulative impacts on the areas sense of place, cumulative impacts on services, specifically during the construction phase, and cumulative impacts on the local economy. The significance of the cumulative impacts on sense of place, local services and the local economy are rated as Medium Negative, Medium Negative and High Positive respectively.

Concluding statement

Based on the review of the 2012 SIA and associated documentation, the proposed extension of the validity period of the EA are acceptable and supported from a social and socio-economic perspective.

5.9 Cumulative Impact Statement

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 renewable energy developments within a 30km radius of the proposed development site are shown on the map below. This map was obtained from the DFFE website on 27 April 2023.

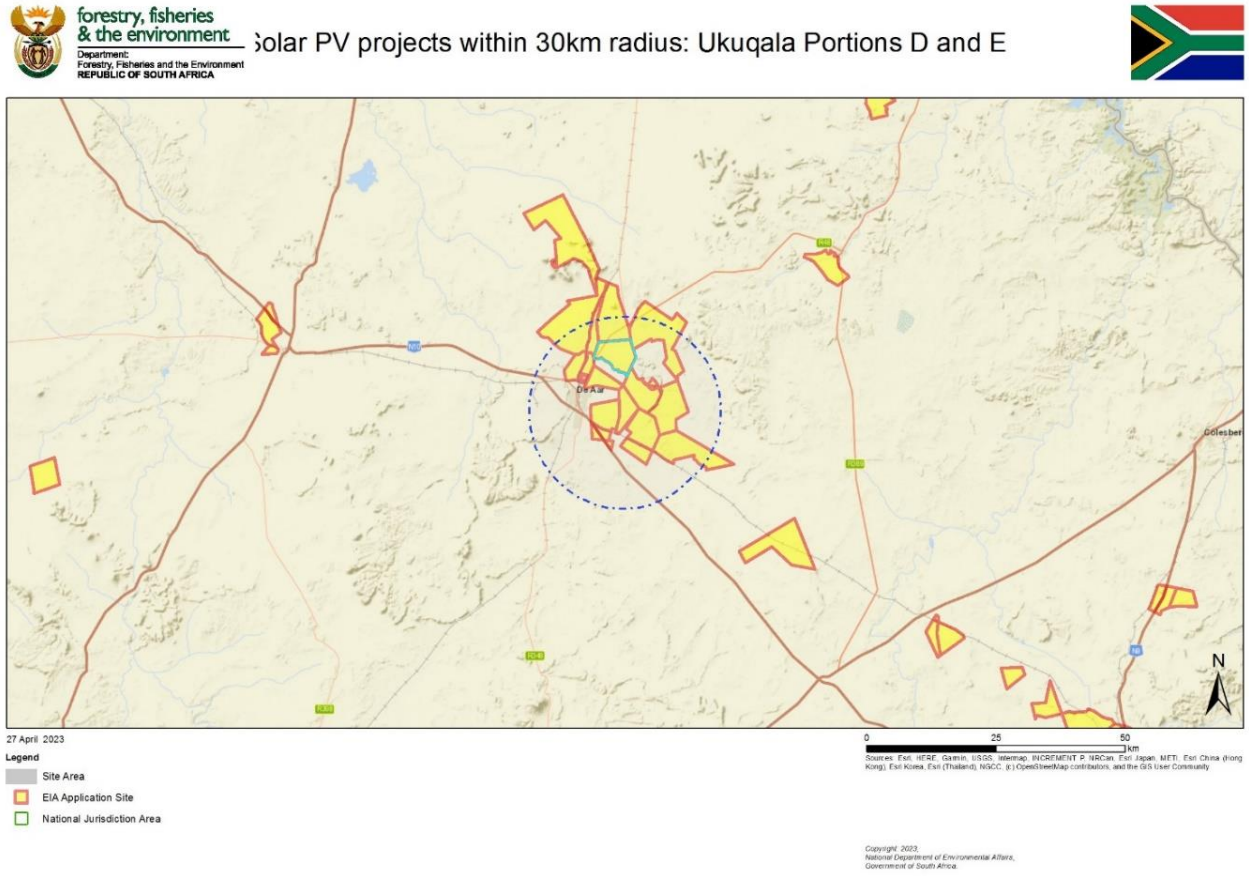


Figure 9: PV Applications within a 30km Radius (DFFE Screening Tool)

Important to factor into the cumulative assessment is that the project site is located within an area dominated by renewable energy projects. Cumulative impact, even to some degree, is therefore expected and acceptable.

The cumulative impact for each negative impact associated with the different specialist fields was assessed by the specialists and is provided in Chapter 4 and Chapter 5 of this report under the relevant headings. In all instances, the cumulative impact has been rated as being of a medium to low significance. The land parcel area is always bigger than the actual footprint of the facility and that not all the facilities will be built. The impact may thus be less severe. The medium rating must be taken as a worst-case scenario.

The social cumulative effect is rated as High Positive due to the potential to create a number of socio-economic opportunities for the local municipality, which, in turn, will result in a positive social benefit. The positive cumulative impacts include creation of employment, skills development and training opportunities and creation of downstream business opportunities. These benefits should also be viewed within the context of the limited economic opportunities in the area and the impact of the decline in the mining sector in recent years.

There is no reason, from a cumulative impact viewpoint, that the proposed project should not be authorised.

5.10 Conclusion of Specialist Statements

Generally, the major concern with the extension of validity for a period longer than 10 years is that the environment (biophysical and social) could have changed and needs to be re-assessed. This concern is addressed in the specialist and engineering studies as summarised under Chapter 4 and Chapter 5 of this report. **They all confirmed that changes to the environment since 2012/2013 are insignificant, and that they are in support of the application to extend the EA validity.**

5.11 Authorised Environmental Sensitivity Map (2013)

There were no identified sensitive areas within the borders of the site

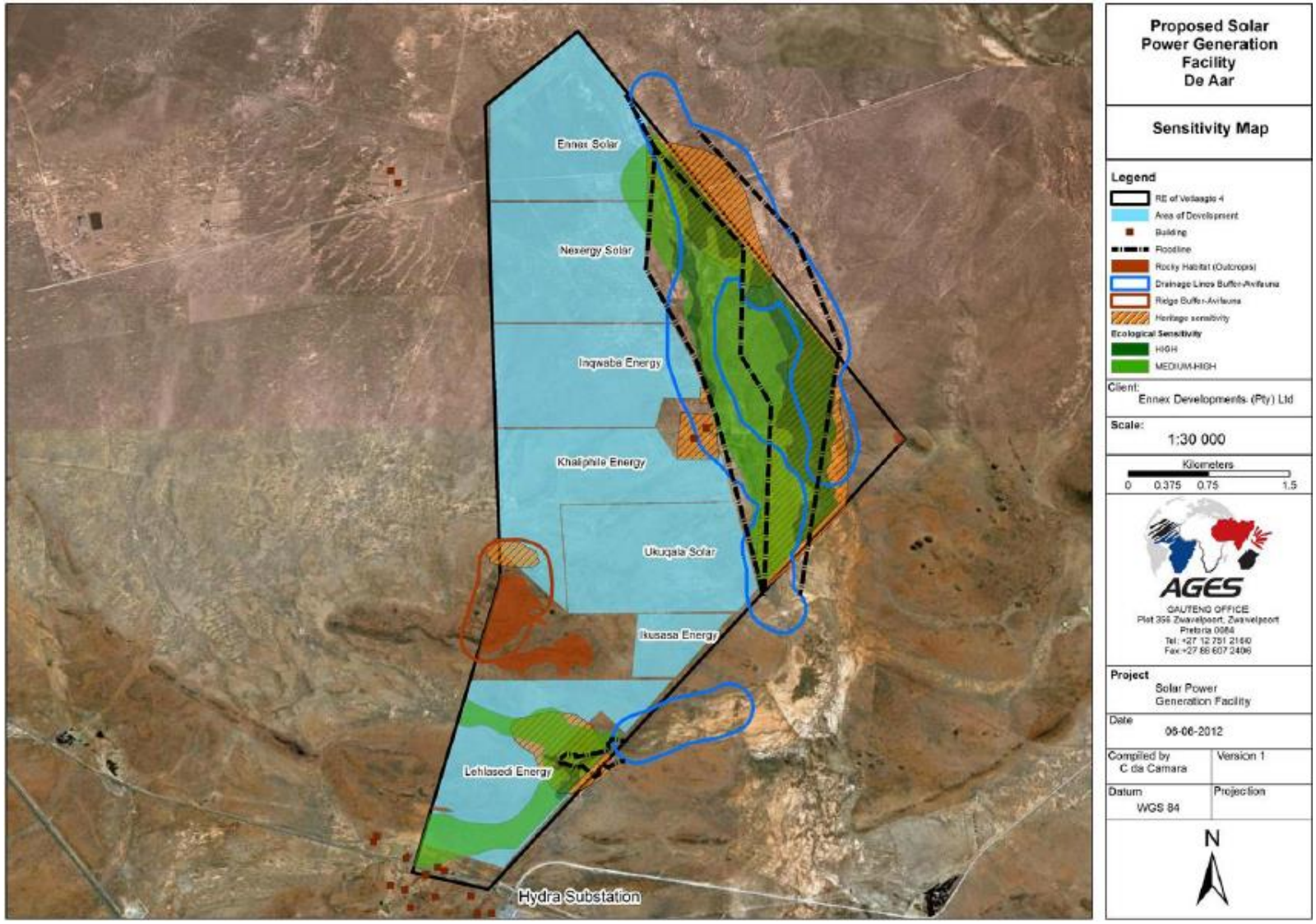


Figure 10: 2013 Environmental Sensitivity Map

5.12 Environmental Sensitivity Map based on new layout

There are no identified high sensitive areas within the borders of the site. The site includes areas of Very Low Avifaunal Sensitivity and Medium Botanical Sensitivity

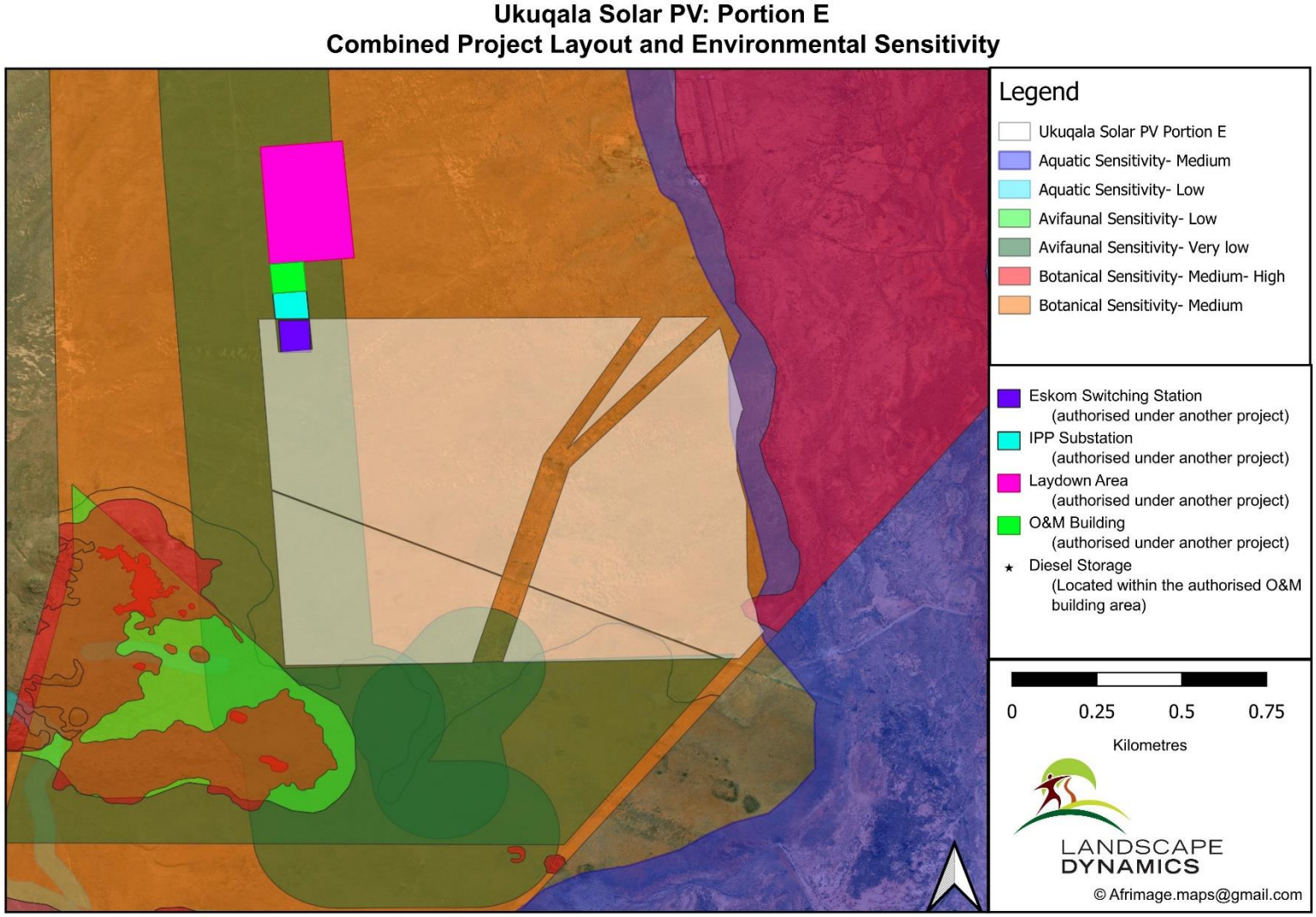


Figure 11: Environmental Sensitivity Map based on new layout

5.13 Northern Cape Conservation Plan (CBAs and ESAs)

The site falls entirely within an Ecological Support Area (ESA)

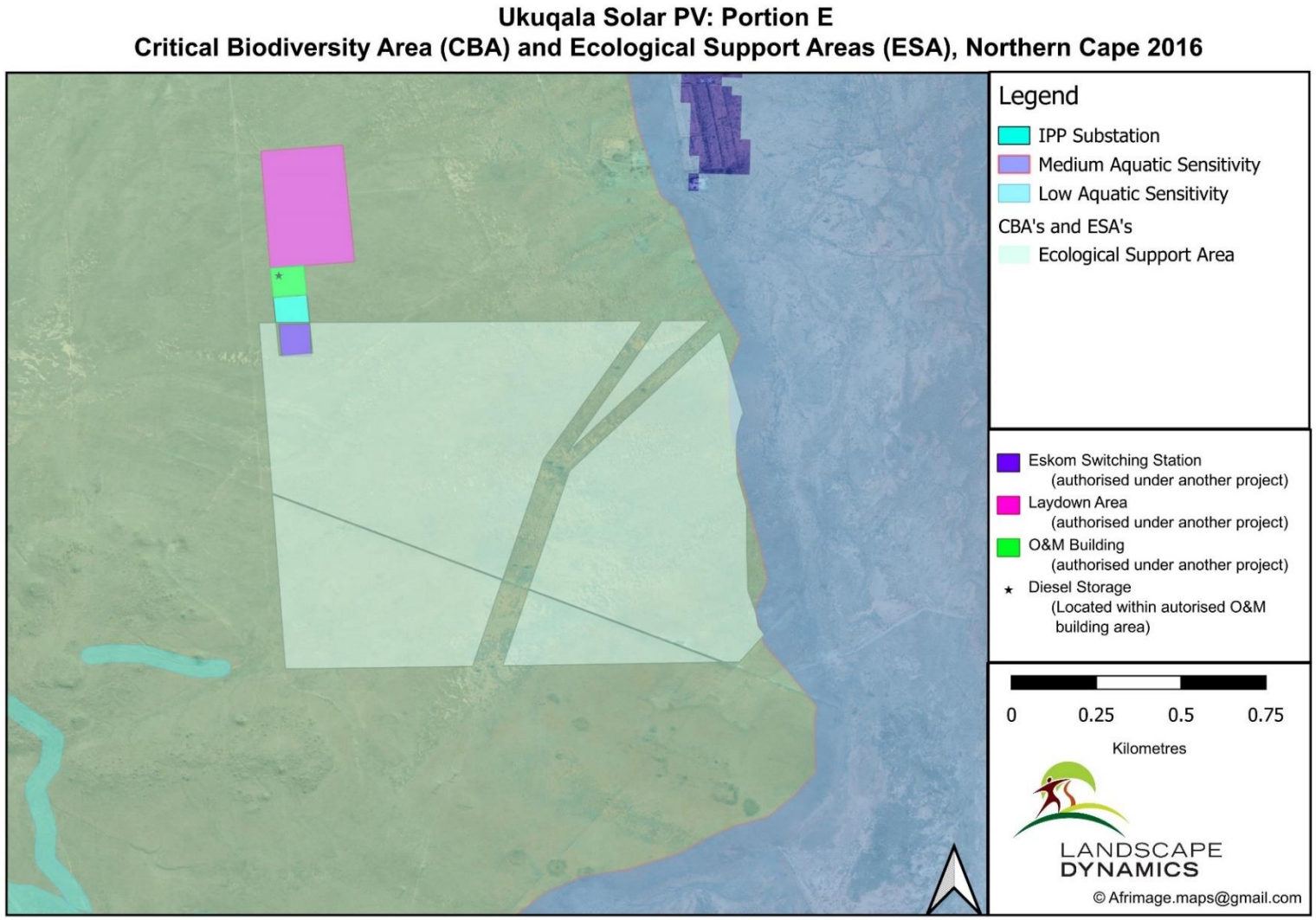


Figure 12: Northern Cape Conservation Plan (CBAs and ESAs)

CHAPTER 6: ENGINEERING REPORTS

6.1 Terms of Reference for the Engineering Reports

The engineers for this project received the same Terms of Reference as the specialists - please refer to Section 5.1 of this report.

6.2 Updated Traffic Management Plan

An Updated Traffic Management Plan was undertaken by Corli Havenga Transportation Engineers (attached under Appendix D) and is summarised below.

GENERATION FOR A TYPICAL PLANT

The construction phase of this type of development represents the worst-case traffic scenario. Once the plant is commissioned the trip generation is insignificant compared to that during the construction phase.

Construction Phase

The following information will be used for the purposes of this plan:

- Employment, 200 to 300 people residing in De Aar
- Truck loads: 55 - 70 trips per 10MW

Construction activities generate daily trips with deliveries of materials, diesel, concrete, maintenance, plant, etc. The major trip generation however occurs once the solar panel deliveries commence.

The following assumptions for trip generation purposes are being made:
Employment:

- One shift per day.
- 200 employees per shift.
- 70% of the workers will use developer's transport, 35-seater bus or 15-seater bus.
- 20% of the workers will use own transport with average occupancy of 2.5 persons per car.
- 10% of the workers will use own transport with an average occupancy of 1.5 persons per car.

Trips are to site in the morning and from site in the afternoon.

Construction activities

- 20 - 30 light vehicle trips to site per day.

- 4 to 6 heavy vehicle trips to site per day.

Based on the above assumptions the typical number of trips that the Ukuqala SEF can generate per day is as follows:

- Bus/car and light vehicles: 62 trips to site and 62 from site.
- Trucks: 2 to 3 trips to site per day and 2 to 3 trips from site per day.
  (This can vary significantly depending on the construction stage.)

Operational Phase

During the operational phase typical activities include meter readings, cleaning panels, cutting grass and security. These activities are not regarded as normal weekday morning and afternoon peak hour trip generators.

In terms of COTO TMH 16 Volume 1(2), *"A Traffic Impact Assessment shall be undertaken and submitted when an application is made for a change in land use and when the highest total additional hourly vehicular trip generation as a result of the application exceeds 50 trips per hour".* **This is not expected during the operational phase.**

PEAK TRAFFIC HOURS

Breaking down the trip generation indicated above to expected peak hour trips to and from the construction site, the following peak hour trip generation can be expected (assuming a worst-case scenario with approximately 200 people working on site at a time):

- Bus/car and light vehicles: Estimated 37 trips to site during the morning peak hour
- Estimated 37 trips from site during the afternoon peak hour

EXISTING PEAK HOUR TRAFFIC DEMAND

Comparing the peak hour traffic counts conducted during the site visit in 2013 with the results of a desktop study traffic count, it is not expected to have change significantly.

CUMULATIVE IMPACT

The Solar Capital, De Aar PV Plant was developed since the initial study was done. Construction of this solar plant started in 2013 (located approximately 10km north of the proposed Ukuqala SEF). The cumulative traffic impact of this facility would have been noticeable if both were developed during the same period, which is not the case.

During the construction phase of Ukuqala Solar PV Project the bulk of the truck trips are expected to be to and from the N1's side and along the N10. No accumulated traffic impact is expected. When the Ukuqala SEF is running, it is expected that most trips will be to and from De Aar.

PROPOSED TRAFFIC MANAGEMENT PLAN

The following plan is recommended for this plant during the construction phase (5 years).

Access Roads

- From De Aar via the interchange on the N10 to Road P3061 and along the surfaced section of P3061 up to the railway line then on gravel section of P3061.
- Access to the site will be taken off Road P3061. Access to this road should be in accordance with and subject to approval by the Roads Department.
- Internal roads to be designed to serve the Ukuqala SEF from this point up to the existing gravel road from De Aar.
- No changes to the proposals made in the original study are required. A route is however now proposed through the site as depicted in the Google Earth image below.
  Note from EAP: this access road (black route in the map below) was authorised as part of another project (the Ukuqala Solar PV Grid Connection project) and will also be utilised by the Ukuqala SEF.

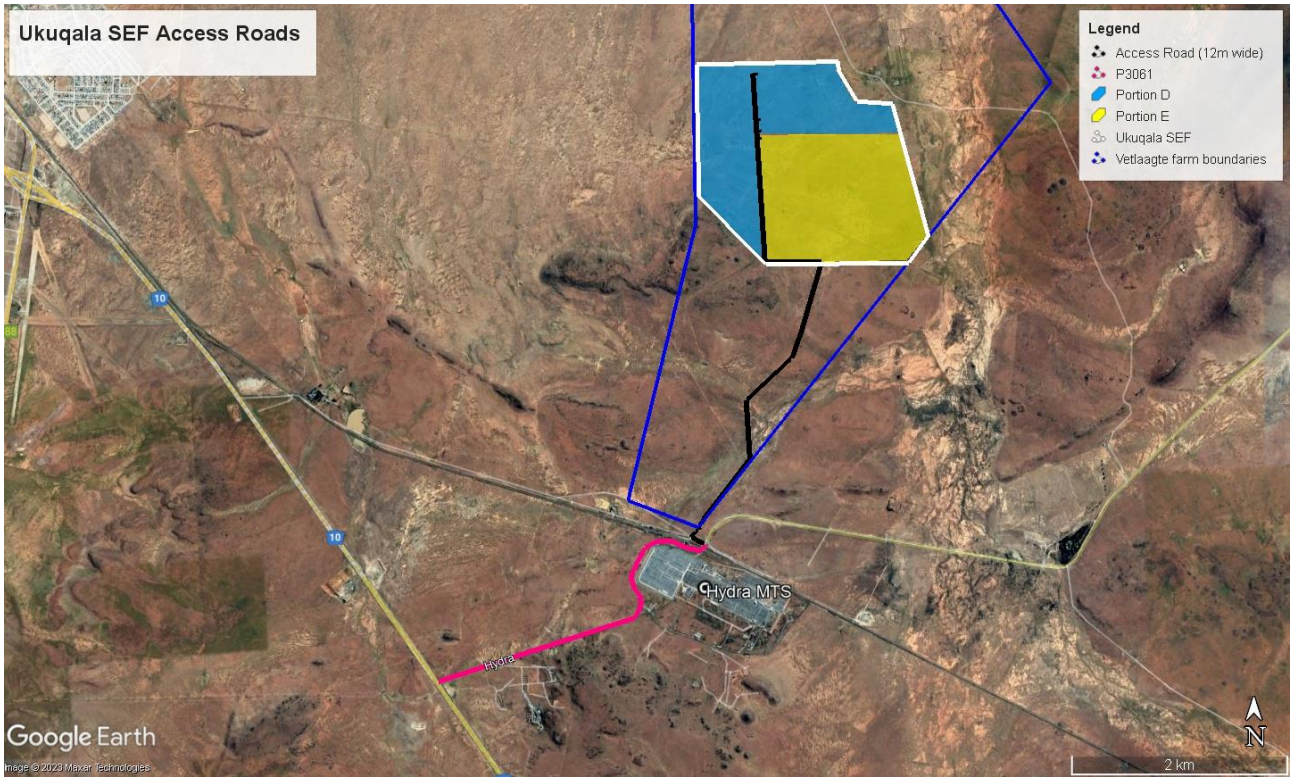


Figure 13: Access roads

Internal Roads

Dust is a major issue during construction, and dust suppression will be required continuously on the internal construction roads. Regular maintenance on these roads should be done as and when required.

External Roads

From De Aar to the N10 and Road P3061:

- It is expected that the bulk of the trucks will be coming from the N1, turning right into the N10 and then right onto Road P3061. The traffic from De Aar's side will be left-turning movements. This intersection should be upgraded in accordance with SANRAL's design

standards to eliminate conflicting movements with through traffic on the N10. The layout as depicted in the Typical T-junction & Intersection layout of SANRAL is recommended as follows:

- 60m right-turn lane on the N10, from the N1's side; and
- 60m left-turn lane from De Aar's side.

Access to the site from Road P3061

- This can remain a gravel road. The intersection on Road P3061 should be upgraded geometrically to accommodate large delivery vehicles. Dust suppression on a daily basis (on the gravel section) and maintenance as and when required is also applicable to this section, the same as on the internal construction roads.

Construction Working Hours

For the purposes of this report:

- 07:00-17:00 on normal weekdays.
- 07:00-15:00 on Saturdays if required.

With these working hours, the expected traffic demand to and from the construction site will not have a significant impact on the peak period traffic flow in De Aar.

Railway Crossing

This is an existing crossing on Road P3061. This crossing should be maintained during the construction phase to ensure that all the warning signs are in place at all times.

The following plan is recommended during the operational phase of the Ukuqala SEF:

- The access route from the N10 via Road P3061 is used
- Intersection: N10 and Road P3061:
  The intersection should be upgraded to a Typical T-junction & Intersection layout of SANRAL Drawing No. TD-R-JI-001-V1 with the following additional lanes:
  - 60m right-turn lane on the N10, from the N1's side; and
  - 60m left-turn lane from De Aar's side.

The maintenance work and dust suppression should tie in with that of the internal roads of the Ukuqala SEF.

RECOMMENDATION

The environment in terms of traffic has not changed significantly since 2012; therefore, there is no objection to the extension of the validity of the Environmental Authorisation.

6.3 Flood Line and Storm Water Statement Plan

A Flood Line and Storm Water Management Plan was compiled by Wetcon in 2012 for the Vetlaagte Farm. Wetcon (now called Matukane) also compiled a Flood Line and Storm Water Management Plan (attached under Appendix D) for the Vetlaagte MTS project in 2022, which is situated directly south of the Ukuqala SEF.

The following is hereby confirmed:

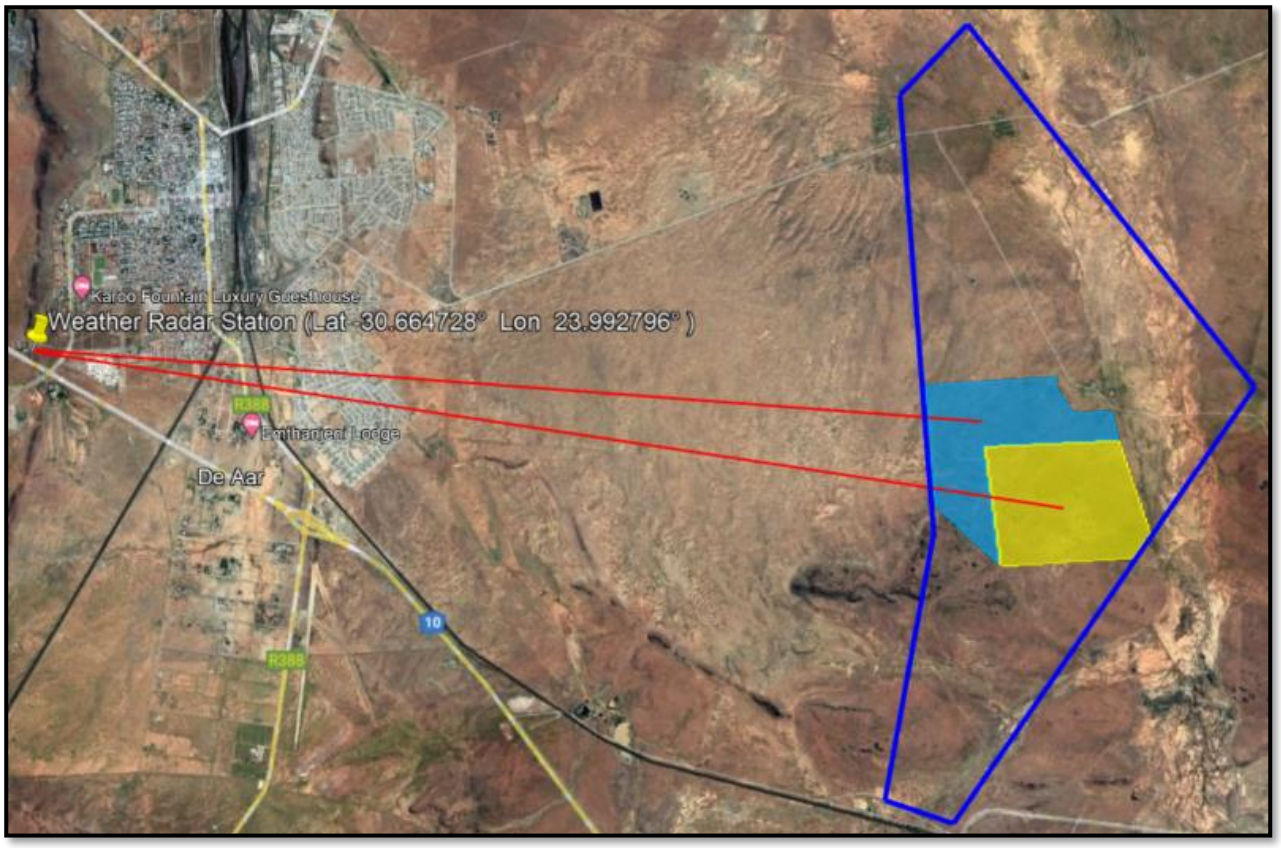
- No significant changes to the environment took place since 2012 that alter the position of the flood lines or the assessment of the storm water.
- The mitigation as provided in the 2012 report is still valid.
- No new mitigation measures are proposed.

6.4 Radio Frequency Interference

A Radio Frequency Interference (RFI) Assessment was undertaken by Interference Testing and Consultancy Services (Pty) Ltd (attached under Appendix D) and is summarised below.

The purpose of this study is to report on the possible RFI from the Ukuqala SEF's inverters and sun tracking systems to surrounding electrical/electronic equipment and to assess whether any mitigation will be required.

According to the DFFE screening report, the Weather Radar Installation is the only highly sensitive installation close to the proposed Ukuqala SEF. This means that there is a possibility that the Ukuqala SEF could interfere with existing electrical/electronic equipment or electrical/electronic infrastructure.



Clearance Zone

The clearance zone around a PV facility is the separation distance needed between the edges of the PV plant (source) to a specific Electromagnetic Interference (EMI) sensitive location or infrastructure, for the PV plant to have no RFI on existing electrical infrastructure. It is assumed that the inverters that will be used for this SEF comply with CISPR11 Class A specification (57 dBµV/m @ 3m which relates to an EIRP of -38.16dBm).

Table 6: Clearance Zone Distances

Electromagnetic Interference sensitive location	Distance between the edge of a PV plant and an EMI sensitive location
Existing Radar equipment ex. Weather radar	152.4m
Navigational and communication equipment	45.72m
Equipment sensitive to EMI	45.72m
Airfield/Airport Radar system	76.2m

Conclusion

According to the Radio Mobile data, the proposed Ukuqala SEF will have no RFI influence on the Weather Radar Installation located approximately 10km to the west of the SEF. The aforementioned statement is only true when assuming that the facilities emit less RFI than the CI SPR 11 class A limit levels. The Ukuqala SEF is situated outside the exclusion zones listed in the Clearance Zone Distance table and will not cause unintentional RFI to surrounding electrical/electronic equipment.

CHAPTER 7: PUBLIC PARTICIPATION

7.1 Objectives of the Public Participation Programme

The main aim of public participation is to ensure transparency throughout the environmental process. The objectives of public participation in this EA amendment application are the following:

- To identify all potentially directly and indirectly affected stakeholders, government departments, municipalities and landowners;
- To communicate the proposed project in an objective manner with the aim to obtain informed input;
- To assist the Interested & Affected Parties (IAPs) with the identification of issues of concern, and providing suggestions for enhanced benefits and alternatives;
- To obtain the local knowledge and experience of IAPs;
- To communicate the proceedings and findings of the specialist studies;
- To ensure that informed comment is possible; and
- To ensure that all concerns, comment and objections raised are appropriately and satisfactorily documented and addressed.

7.2 Public Participation Process Followed

All applicable public participation documentation is attached under Appendix E.

The public participation programme (PPP) that is being followed is described below. The PPP is being conducted in terms of Sections 39, 40, 41, 42, 43 & 44 of the NEMA EIA Regulations 2014, as amended.

- ***IAP Register: Landowner, Government Departments, Municipalities and other IAPs***
  An Interested & Affected Party (IAP) register was compiled which includes the directly affected landowners, adjacent landowners, municipalities, government departments and other applicable organisations. This register is being updated throughout this process.

- ***Onsite notification***
  Two A2 laminated onsite notices were placed on 13 June 2023 at the following places:
  - Along the N10 highway at the P3061 crossing (the road that leads to the Hydra MTS)
  - At the entrance to the De Aar Post Office

- ***Newspaper advertisement***
  A newspaper advertisement was placed in The Echo on 15 June 2023.

- ***Distribution of the Draft Motivation Report***

  The Draft Motivation Report (this document) is being distributed as follows:

  - The onsite notices and newspaper advertisement stated the availability of the Motivation Report with a request for comment (proof to be provided in the Final Motivation Report).
  - All IAPs identified in the IAP Register received notification via email that the Draft Motivation Report is available for comment (proof thereof will be provided in the Final Motivation Report).
  - This Draft Motivation Report is being distributed for a 30-day (plus holidays) commenting period.
  - All IAPs received an email with the Draft Motivation Report as an attachment. A link to the Draft Motivation Report and all the Appendixes is available on the Landscape Dynamics website (www.landscapedynamics.co.za) – detailed instructions on how to access these documents were provided in the said email.
  - The report was submitted to DFFE for comment via their online system.

- ***Submission of Final Motivation Report***

  Comment received on the Draft Motivation Report will be included in the Final Motivation Report, which will be submitted to the DFFE for consideration for the extension of the validity period of the current Environmental Authorisation.

7.3 Comment Received on the Draft Motivation Report

The Draft Motivation Report (this document) is now being distributed for a 30-day commenting period. Comment received will be included in the Final Motivation Report.

7.4 Conclusion of the Public Participation Programme

The PPP is being conducted in terms of Sections 39, 40, 41, 42, 43 & 44 of the NEMA EIA Regulations 2014, as amended. Comment received, and responses thereto will be included in the Final Motivation Report.

CHAPTER 8: CONCLUSION and AFFIRMATION

7.1 Environmental Impact Statement

Certain questions need to be answered when determining the acceptability of extending an EA beyond 10 years. These questions, including the responses of each specialist as well as engineers, are shown in the table below.

Table 7: Summary of findings	**Fauna & Flora**	**Avifauna**	**Aquatic**	**Heritage**	**Visual**	**Agricultural**	**Socio-economic**	**Traffic**	**RFI**
Has the environment as assessed in 2012 changed to such an extent that it could influence the viability of the project?	No	No	No	No	No	No	No	No	N/a
Is the impact rating as provided in the initial assessment valid?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/a	N/a
Is the mitigation measures provided in the initial assessment still applicable?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/a
Is there any new mitigation to be included into the EA?	No	No	No	No	No	No	Yes	No	No
Is the cumulative impact acceptable?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Should the request to extend the commencement period be granted by the DFFE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7.2 Assumptions, Uncertainties, and Gaps in Knowledge

Assumptions

It is assumed that all documentation and information obtained from the different stakeholders, professional team members and specialists are accurate, unbiased and valid.

Uncertainties

The proposal to extend the EA validity period in relation to its environment was thoroughly investigated by various specialists and professionals and there are therefore no uncertainties with regards to the project as proposed.

Gaps in knowledge

No obvious gaps in knowledge are known. It is not foreseen that any information not included in the report will change the outcome of the recommendations.

7.3 Recommendation by the Environmental Assessment Practitioner

The Environmental Management Programme (EMPr) for the Ukuqala SEF project was approved in the original EA issued in 2013. Some mitigation measures to address the social impact were provided in the EMPr but the mitigation as given under "Section 4.8: Social Statement" of this report is in more detail and in line with current policies and guidelines. Further mitigation to protect possible paleontological resources were also provided under "Section 4.6: Heritage/Cultural Environment and Palaeontology". These mitigation measures were added to the EMPr in terms of NEMA EIA Regulation 36(1) and must be reflected in the next environmental audit report that will be undertaken for this project.

Based on the information provided in this report and summarised in the table above, the EAPs can, with confidence, state that the impacts the proposed Ukuqala SEF will have on the environment were thoroughly assessed, significant changes to the environment since 2013 did not occur, the impact ratings as provided in the 2013 EIA assessments are still valid, apart from mitigation provided in the Social Statement no new mitigation is proposed and the cumulative impact is acceptable. **It is strongly recommended that the application for the extension of the validity period of the EA be granted**.

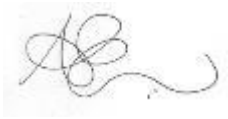
7.4 Affirmation by the Environmental Assessment Practitioner

We, Susanna Nel & Annelize Erasmus, herewith affirm the following:

- The information contained in this report is to the best of our knowledge and experience correct.

- All relevant comment and input provided by the stakeholders and IAPs are included and addressed in this Motivation Report.
- Input and recommendations from the specialist reports are provided in and integrated in the Motivation Report.
- All information made available by the EAP to IAPs and any responses thereto as well as comment and input from IAPs are provided in the Motivation Report.

Susanna Nel
DATE: 8 July 2023



Annelize Erasmus
DATE: 8 July 2023

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