



ecodriven



# Du Plessis Dam Solar PV 1

Section 54 A (3) Desktop Environmental External Audit  
Report

December 2019

Prepared for:



**MULILO**  
RENEWABLE PROJECT DEVELOPMENTS

Mulilo Renewable Project Developments (Pty)Ltd  
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## Project Details

**Document Title:** Du Plessis Dam Solar PV 1 Section 54 A (3) Desktop Environmental External Audit Report

**DEA Reference No:** 14/12/16/3/3/2/456

**Project Location:** Remainder of the Farm Du Plessis Dam 179 near the eastern border of the town of De Aar, Northern Cape Province

**Report Revision:** Final

**Author(s):** EcoDriven Environmental Services  
Mr. Charles Lubbe

**Reviewer(s):** Adv. Fef Le Roux SC

**Client:** Mulilo Renewable Project Developments (Pty)Ltd  
Andrew Pearson

**Date:** December 2019

## Project Team Expertise and Declaration of Independence

### **Charles Lubbe – EcoDriven Manager and Principal Environmental Consultant (9 years' experience as an EAP)**

Charles graduated at Cape Peninsula University of Technology with a National Diploma and BTech Degree in Environmental Management. He started his career in 2009 as a Junior Environmental Consultant at DJ Environmental Consultants (DJEC) and was in 2011 promoted to Senior Environmental Consultant at the same company. In 2013, DJEC opened a provincial office in the Northern Cape Province and Charles was appointed to run the office as the Provincial Manager. In 2016, Charles joined Savannah Environmental where he served in various capacities as Environmental Assessment Practitioner, Environmental Control Officer and Environmental Office Manager until March 2018. He was appointed as EcoDriven's Manager and Principal Consultant with effect from 1 April 2018. His environmental experience covers nine years dealing with various projects across a spectrum ranging from renewable energy projects (Photovoltaic, Concentrated Solar Power and Wind Farms), residential development projects (Private sector and Government sector) and mining sector (open cast mining). His role in the abovementioned sectors, includes the planning and design phases, construction phases and operational phases, allowing him to have a full understanding of the complete life cycle of any given environmental project.

I, **Charles Lubbe**, as an independent consultant compiled this audit report and declare that it correctly reflects the findings made at the time of the audit. I further declare that I:

- » Act as an independent consultant;
- » Do not have any financial interest in the undertaking of the activity, other than remuneration for the work performed in terms of the National Environmental Management Act, 1998 (Act 107 of 1998);
- » Undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the National Environmental Management Act, 1998 (Act 107 of 1998);
- » Based on information provided to me by the project developer and in addition to information obtained during the course of this audit, present the results and conclusion within the associated document to the best of my professional judgement.

**Adv. Fef Le Roux SC - Chairman of the Board of Directors, Senior Environmental Consultant.**

Fef has 37 years' experience as a practising lawyer, initially, until 2012, mostly on environmentally related matters and since then as founder of and senior environmental consultant and legal advisor with EcoDriven. He graduated at Stellenbosch University in 1975 with a B.A. Law and LLB degrees and then qualified himself as an attorney, conveyancer and notary of the High Court of South Africa. In 1981, he joined the Cape Bar, where he practised as an advocate until his retirement from his practice in June 2012. He was awarded Senior Counsel status by President Nelson Mandela in 1996. Throughout his career as an advocate, he focused on environmentally related fields of law with a special interest in water law. His interest in the environment led him to establish the Academy for Environmental Leadership (AEL) in 2015 ([www.afel.co.za](http://www.afel.co.za)) with EcoDriven as its Environmental Services Division. In addition to his role as chairman of AEL, he is responsible for lecturing the module Environmental Legislative Framework, covering a practical introduction to the full spectrum of environmental legislation.

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**APPENDICES****Appendix A:** Environmental Authorisations Checklists**Appendix B:** Environmental Management Programme Checklists**LIST OF ACRONYMS AND ABBREVIATIONS**

<b>DEA</b>	<b>Department of Environmental Affairs</b>
<b>DAFF</b>	<b>Department of Agriculture Forestry and Fisheries</b>
<b>DENC</b>	<b>Department of Environment and Nature Conservation</b>
<b>NCDENC</b>	<b>Northern Cape Department of Environment and Nature Conservation</b>
<b>DWS</b>	<b>Department of Water and Sanitation</b>
<b>EA</b>	<b>Environmental Authorisation</b>
<b>ECO</b>	<b>Environmental Control Officer</b>
<b>EMPr</b>	<b>Environmental Management Programme</b>
<b>EO</b>	<b>Environmental Officer</b>
<b>REIPPP</b>	<b>Renewable Energy Independent Power Producer Procurement Programme</b>
<b>NCR</b>	<b>Non-Compliance Report</b>
<b>NEMA</b>	<b>National Environmental Management Act</b>
<b>OPL</b>	<b>Overhead Power Line</b>
<b>PV</b>	<b>Photovoltaic</b>
<b>WUL</b>	<b>Water Use License</b>

## 1. INTRODUCTION

EcoDriven Environmental Services was appointed by Mulilo Renewable Project Developments (Pty)Ltd (*Developer*) to conduct an independent external environmental compliance audit on the project EA and approved EMPr as required under section 54 A (3) of the Amended EIA regulations 2014. The project type consists of 75 MW photovoltaic solar energy facility and will comprise the following:

- A photovoltaic component comprising of many rows of Photovoltaic (PV) panels and associated support infrastructure to generate up to 75MW through the PV effect.
- Central substation: One 132kV substation central to Du Plessis Dam Farm with a connection to the Eskom grid.
- Facility substation: An onsite 132kV, six bay substation to connect the PV1 facility to the powerline.
- Transmission line: 132kV double circuit overhead transmission line to connect the onsite PV facility substation via a "loop in loop out" configuration to the Eskom Chameleon — Bushbuck 132kV transmission line (Solar Capital Line).
- Additional infrastructure: This would include access roads (main and internal), a potential water pipeline for potable water, and storm water infrastructure.
- Laydown area: This area will be used to store equipment and materials and house the construction camp.
- Temporary offices will also be constructed to manage construction activities from a central point.

The project is currently in the planning and pre-construction phase and none of the construction activities has yet commenced. The PV facility received its EA on 28 September 2015 and no amendments have been applied for since. **An overall compliance score of 100% was achieved for the planning and pre-construction specifications from the approved EMPr. Compliance with the EA (facility) planning and pre-construction specifications was also scored at 100%.**

## 2. SCOPE AND PURPOSE

Section 54 A (3) of the Amended NEMA EIA regulations 2014 states: “*Where an environmental authorisation issued in terms of the ECA regulations or the previous NEMA regulations is still in effect by 8 December 2014, the EMPr associated with such environmental authorisation is subject to the requirements contained in Part 3 of Chapter 5 of these Regulations and the first environmental audit report must be submitted to the competent authority no later than 7 December 2019 and at least 5 years thereafter for the period during which such environmental authorisation is still in effect.*” This audit was triggered by the abovementioned regulation requirement and the purpose of it was to determine compliance with the planning and pre-construction requirements of the project EA and approved EMPr.

Section 34 of the Amended NEMA EIA regulations 2014 requires that the audit report be prepared by an independent person and must contain all the information required in Appendix 7 of the regulation. This audit report complies with the requirements under Appendix 7 of the Amended NEMA EIA regulations 2014 and contains the content as required under subsection 3 of Appendix 7. Refer to the Project Team Expertise and Declaration of Independence section above for the declaration of independence statement of the auditor.

This report provides a summary of the external audit findings and provides recommendations that will assist the developer to avoid and rectify any environmental non-conformities identified during the audit.

## 3. AUDIT METHODOLOGY

The project is currently in the planning and pre-construction phase and as a result, the audit methodology consists of a desktop assessment against the existing applicable verifiable project EA and EMPr conditions.

The following auditing tools were used to gather information:

- Documentation review;

- Compilation of audit checklist/questionnaire
- Drafting of Environmental Audit Report

An audit checklist was compiled on **25 November 2019** by extracting relevant presently existing verifiable conditions from the EA and EMPr. Conformance scores, based on the level of compliance for the overall site, are allocated to each audit item/condition on the checklist. These are presented in **Table 1**. An overall compliance is derived, based on the following:

- » Number of items scored for the audit event;
- » The highest conformance score for the audit event;
- » The actual conformance score for the audit event; and
- » Total Conformance Score.

**Table 1:** Compliance Scoring

Conformance Score (Scale from 0 to 3):	Rating of Conformances Scores:
0	A <b>score of 0</b> indicates a <i>Major Non-Compliance</i> and relates to the absence of a requirement to be implemented or the total breakdown of a process. A number of minor non-compliances listed against the same requirement may represent a total breakdown of a process and thus could collectively be a major non-compliance.
1	A <b>score of 1</b> indicates a <i>Minor non-compliance</i> and the requirement is partially implemented or non-compliant.
2	A <b>score of 2</b> constitutes a <i>deviation</i> and relates to a matter about which the assessor is concerned but which cannot be clearly stated as non-compliance. <i>Deviations</i> also indicate trends which may result in a future non-compliance.
3	A <b>score of 3</b> indicates <i>Compliance</i> with the project management plans and procedures that are executed in a managed fashion (planned, tracked, verified and adjusted)

<b>Conformance Score (Scale from 0 to 3):</b>	<b>Rating of Conformances Scores:</b>
	based upon defined activities, inputs and outputs. Objective evidence is available for each process.

#### **4. ASSUMPTION AND LIMITATIONS**

The audit findings are based on a desktop compliance assessment of the relevant presently existing verifiable planning and pre-construction requirements. No site visit was conducted as the developer advised the auditor that the construction phase of the project has not yet commenced. The findings are relevant to a specific phase of the project and as a result, changing circumstances throughout the life-time and progress of the project planning and pre-construction phase may differ and deliver different results. None of the construction conditions has been assessed during this audit.

#### **5. AUDIT FINDINGS**

An overall compliance score of 100% was achieved for the planning and pre-construction specifications from the approved EMPr. Compliance with the EA (facility) planning and pre-construction specifications was also scored at 100%.

##### **5.1 Environmental Management Programme - Results**

A combined checklist was derived from the specifications of the EMPr (refer to Appendix B). The percentage compliance scores in Appendix B have been calculated at the end of audit. These percentage scores have been calculated without weighing any issues (i.e. all environmental specifications have the same weight).

##### **5.1.1 Description of environmental non-conformities under the EMPr.**

No non-conformities have been identified against the project EMPr. Majority of the planning and pre-construction environmental specifications in the EMPr was identified as not applicable (n/a) at this stage of the project. The developer advised on most of the n/a specifications that should the project be selected as a preferred bidder in the REIPPP process, then the relevant requirement will be implemented accordingly.

## **5.2 Environmental Authorisation - Results**

A checklist was derived from the conditions of the project EA (please refer to Appendix A). The percentage compliance scores in Appendix A have been calculated at the end of audit.

### ***5.2.1 Description of environmental non-conformities under the EA.***

No non-conformities have been identified against the project EA. Majority of the planning and pre-construction environmental specifications in the EA was identified as not applicable (n/a) at this stage of the project. The developer advised on most of the n/a specifications that should the project be selected as a preferred bidder in the REIPPP process, then the relevant requirement will be implemented accordingly.

## **6. CONCLUSION AND RECOMMENDATIONS**

**An overall compliance score of 100% was achieved for the planning and pre-construction specifications from the approved EMPr. Compliance with the EA (facility) planning and pre-construction specifications was also scored at 100%.**

Overall, it was found that the facility is designed in an environmentally friendly manner. The audit revealed that environmental aspects as a whole are considered. It is imperative that the developer takes full cognisance of the requirements of the EA and EMPr to ensure that all planning and pre-construction requirements are addressed and implemented before the construction phase commences.

**APPENDIX A**  
**ENVIRONMENTAL AUTHORISATION CHECKLIST**

## 3 POINT RATING SCALE



**Not compliant**

**Compliant**

- 3 - full compliance
- 2 - partial compliance (viz >50% compliance)
- 1 - Insufficient compliance (viz <50% compliance)
- 0 - nothing in place
- N/A - not applicable

The total score, average score and percentage compliance for each aspect of all elements is calculated.

## ENVIRONMENTAL AUTHORISATION CHECKLIST FOR THE DU PLESSIS DAM PV 1, NORTHERN CAPE



**Client name:** Mulilo Renewable Project Developments (Pty)Ltd  
**Athorisation Holder:** Du Plessis Dam Solar PV1 (Pty) Ltd  
**Project name:** Du Plessis Dam Solar PV1  
**Authorisation registered number:** 14/12/16/3/3/2/456  
**Date issued:** 28/09/2015  
**Last Amended:** First Issue  
**Environmental Auditor:** Charles Lubbe (Principal EAP)  
**Audit date:** 25/11/2019



### SCOPE OF AUTHORISATION

Number	Environmental Condition	Permit Type	Compliant	Not Compliant	Rating	Owner and Auditor Comment
1	The 75 MW Du Plessis Dam Solar PV1 photovoltaic solar energy facility and its associated infrastructure on the Remainder of the Farm Du Plessis Dam 179 near the town of De Aar within the Emthanjeni Local Municipality in the Northern Cape Province is hereby approved.				N/A	The owner takes not of this condition
2	Authorisation of the activity is subject to the conditions contained in this environmental authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.				N/A	The owner takes not of this condition
3	The holder of the environmental authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the environmental authorisation.		✓		3	The Mulilo Environmental Manager is curelly responsible for ensuring compliance with the conditions contained in this environmental authorisation
4	The activities authorised may only be carried out at the property as described above.				N/A	The owner takes not of this condition
5	Any changes to, or deviations from, the project description set out in this environmental authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the environmental authorisation to apply for further environmental authorisation in terms of the regulations.		✓		3	No changes have been made to the approved plan and project description
6	This activity must commence within a period of five (05) years from the date of issue of this environmental authorisation. If commencement of the activity does not occur within that period, the environmental authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.		✓		3	The authorisation is still valid as it was issued on 28/09/2015 and only lapses on 28/09/2020
7	Commencement with one activity listed in terms of this environmental authorisation constitutes commencement of all authorised activities.				N/A	The owner takes not of this condition
8	The holder of an environmental authorisation must apply for an amendment of environmental authorisation with the competent authority for any alienation, transfer or change of ownership rights in the property on which the activity is to take place.				N/A	The owner takes not of this condition

### NOTIFICATION OF AUTHORISATION & RIGHT TO APPEAL

9	The holder of the authorisation must notify every registered interested and affected party, in writing and within 12 (twelve) calendar days of the date of this environmental authorisation, of the decision to authorise the activity.		✓		3	The authorisation was issued on 28/09/2015, however, the EAP only received it on 23/11/2015 and as a result, the I&APs was notified on 27/11/2015
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<b>Project name:</b> Du Plessis Dam Solar PV1
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<b>Date issued:</b> 28/09/2015
<b>Last Amended:</b> First Issue
<b>Environmental Auditor:</b> Charles Lubbe (Principal EAP)
<b>Audit date:</b> 25/11/2019



**SCOPE OF AUTHORISATION**

10	The notification referred to must — 10.1. specify the date on which the environmental authorisation was issued; 10.2. inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Environmental Impact Assessment Regulations, 2010; 10.3. advise the interested and affected party that a copy of the environmental authorisation will be furnished on request; and 10.4. give the reasons of the competent authority for the decision.	✓	3	All requirements were adhered to
11	The holder of the authorisation must publish a notice — 11.1. informing interested and affected parties of the decision; 11.2. informing interested and affected parties where the decision can be accessed; and 11.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in the newspaper(s) contemplated and used in terms of regulation 54(2)(c) and (d) and which newspaper was used for the placing of advertisements as part of the public participation process.	✓	3	All requirements were adhered to

**MANAGEMENT OF ACTIVITY**

12	The Layout Plan drawn by D. Ogier, drawing title: PROPOSED PV1 PHOTOVOLTAIC ENERGY FACILITY NEAR DE AAR, NORTHERN CAPE (reference: SAProject1E109378IPV\mxd21PreferredLayout.mxd) (attached as Appendix 1.2 of the EIAr dated March 2015) submitted as part of the Application for EA is hereby approved. This approved layout plan must be implemented and adhered to.		N/A	The owner takes not of this condition
13	The Environmental Management Programme (EMPr) submitted as part of the application for EA is hereby approved. This EMPr must be implemented and adhered to.		N/A	The owner takes not of this condition
14	The EMPr must be implemented and strictly enforced during all phases of the project. It must be seen as a dynamic document and must be included in all contract documentation for all phases of the development when approved.	✓	3	All EMPr planning and pre-construction requirements are adhered to.
15	Should the holder of this environmental authorisation propose any changes to the EMPr, the holder of this environmental authorisation must undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.		N/A	The owner takes not of this condition
16	The Department reserves the right to amend the approved EMPr should any impacts that were not anticipated or covered in the EIAr be discovered.		N/A	The owner takes not of this condition



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**SCOPE OF AUTHORISATION**

17	<p>A shapefile of the development layout/footprint must be submitted to this Department within two months from the date of this decision. The shapefile must be created using the Hartebeesthoek 94 Datum and the data should be in Decimal Degree Format using the WGS 84 Spheroid. The shapefile must include at a minimum the following extensions i.e. .shp; .shx; .dbf; .prj; and, .xml (Metadata file). If specific symbology was assigned to the file, then the .avl and/or the lyr file must also be included. Data must be mapped at a scale of 1:10 000 or specify if an alternative scale was used. The metadata must include a description of the base data used for digitizing. The shapefile must be submitted in a zip file using the EIA application reference number as the title. The shape file must be submitted to:</p> <p>Postal Address:          Department of Environmental Affairs          Private Bag X447          Pretoria          0001</p> <p>Physical address:          Department of Environmental Affairs          Environment House          473 Steve Biko          Arcadia          Pretoria          For Attention: Mr Muhammad Essop          Integrated Environmental Authorisations          Strategic Infrastructure Developments          Telephone Number: (012) 399 9406          Email Address: MEssop@environment.gov.za</p>				<p>The owner indicated that a shapefile of the development layout/footprint was submitted together with the final EIA report to DEA. However, they were unable to find proof of email submission. The owner further stated that It should be noted that if the project is selected as a preferred bidder, the layout will be amended and the final layout will still need to be submitted to DEA for approval. At this time an updated shapefile will also be submitted.</p>
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**ENVIRONMENTAL CONTROL OFFICER (ECO) DUTIES**

18	<p>The holder of this authorisation must appoint an independent and qualified Environmental Control Officer (ECO) with experience or expertise in undertaking ECO functions. The ECO will have the responsibility to ensure that the conditions referred to in this environmental authorisation are implemented and to ensure compliance with the provisions of the approved EMPr.</p>			N/A	<p>The owner takes not of this condition, The ECO will be appointed prior to the commencement of the construction phase</p>
19	<p>The ECO must be appointed before commencement of any authorised activity.</p>			N/A	<p>The owner takes not of this condition, The ECO will be appointed prior to the commencement of the construction phase</p>
20	<p>Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of this Department.</p>			N/A	<p>The owner takes not of this condition, The ECO will be appointed prior to the commencement of the construction phase</p>
21	<p>The ECO must meet with the contractors to discuss the conditions of the EA and the contents of the EMPr prior to any site clearing occurring.</p>			N/A	<p>The owner takes not of this condition,</p>
22	<p>The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.</p>			N/A	<p>The owner takes not of this condition,</p>
23	<p>Records relating to monitoring and auditing must be kept on site and made available for inspection to the competent authority in respect of this development</p>			N/A	<p>The owner takes not of this condition,</p>



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**SCOPE OF AUTHORISATION**

24	<p>The duties of the ECO must include the following:</p> <p>24.1. Keeping record of all activities on site, problems identified, transgressions noted and a schedule of tasks undertaken by the ECO.</p> <p>24.2. Keeping and maintaining a detailed incident (including spillage of bitumen, fuels, chemicals, or any other material) and complaint register on site indicating how these issues were addressed, what rehabilitation measures were taken and what preventative measures were implemented to avoid re-occurrence of incidents/complaints.</p> <p>24.3. Keeping and maintaining a daily site diary.</p> <p>24.4. Keeping copies of all reports submitted to the Department.</p> <p>24.5. Keeping and maintaining a schedule of current site activities including the monitoring of such activities.</p> <p>24.6. Obtaining and keeping record of all documentation, permits, licences and authorisations such as waste disposal certificates, hazardous waste landfill site licences etc. required by this facility.</p> <p>24.7. Compiling a monthly monitoring report.</p>				N/A	The owner takes note of this condition,
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**RECORDING AND REPORTING TO THE DEPARTMENT**

25	The holder of this environmental authorisation must keep all records relating to monitoring and auditing on site and make them available for inspection to any relevant and competent authority in respect of this development.				N/A	This is the first audit against the project EA and relates to only planning and pre-construction activities.
26	All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this environmental authorisation, must be submitted to the Director: Compliance Monitoring at this Department.				N/A	This is the first audit against the project EA and relates to only planning and pre-construction activities.

**ENVIRONMENTAL AUDIT REPORT**

27	The holder of this environmental authorisation must submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and within 30 days of completion of rehabilitation activities.				N/A	The owner takes note of this condition
28	<p>The environmental audit report must:</p> <p>28.1. Be compiled by an independent environmental auditor;</p> <p>28.2. Indicate the date of the audit, the name of the auditor and the outcome of the audit;</p> <p>28.3. Evaluate compliance with the requirements of the approved EMPr and this environmental authorisation;</p> <p>28.4. Include measures to be implemented to attend to any non-compliances or degradation noted;</p> <p>28.5. Include copies of any approvals granted by other authorities relevant to the development for the reporting period;</p> <p>28.6. Highlight any outstanding environmental issues that must be addressed, along with recommendations for ensuring these issues are addressed;</p> <p>28.7. Include a copy of this environmental authorisation and the approved EMPr;</p> <p>28.8. Include all documentation such as waste disposal certificates, hazardous waste landfill site licences etc. pertaining to this environmental authorisation; and</p> <p>28.9. Include evidence of adherence to the conditions of this environmental authorisation and the approved EMPr where relevant such as training records and attendance records.</p>				N/A	This is the first audit and is conducted by an independent environmental auditor as required under section 54 A (3) of the Amended EIA regulations 2014. All requirements highlighted under this condition is adhered to.

**COMMENCEMENT OF ACTIVITY**



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**SCOPE OF AUTHORISATION**

29	The authorised activity shall not commence within twenty (20) days of the date of signature of the environmental authorisation.	✓	3	The authorisation was issued on 28/09/2015 and none of the activities has commenced as yet.
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**NOTIFICATION TO AUTHORITIES**

30	A written notification of commencement must be given to the Department no later than fourteen (14) days prior to the commencement of the activity. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence. This notification period may coincide with the Notice of Intent to Appeal period.			N/A	The owner takes note of this condition
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**OPERATION OF THE ACTIVITY**

Conditions under this heading are not applicable at this stage and are not considered during this audit

**SITE CLOSURE AND DECOMMISSIONING**

Conditions under this heading are not applicable at this stage and are not considered during this audit

**SPECIFIC CONDITIONS**

Conditions under this heading are not applicable at this stage and are not considered during this audit



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**SCOPE OF AUTHORISATION**

**GENERAL**

64	In terms of Section 43(7), an appeal under Section 43 of the National Environmental Management Act, 1998 will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity until such time that the appeal has been finalised.				N/A	The owner takes note of this condition
65	A copy of this authorisation and the approved EMPr must be kept at the property where the activity will be undertaken. The environmental authorisation and approved EMPr must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who undertakes work at the property.				N/A	The owner takes note of this condition. The condition will be implemented during the construction phase
66	National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the holder of the authorisation or his/her successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the holder of the authorisation with the conditions of environmental authorisation as set out in this document or any other subsequent document emanating from these conditions of environmental authorisation.				N/A	The owner takes note of this condition

	8
TOTAL SCORE	24
AVERAGE	3,0
PERCENTAGE	100,0

**APPENDIX B**  
**ENVIRONMENTAL MANAGEMENT PROGRAMME CHECKLISTS**

### 3 POINT RATING SCALE



**Not compliant**

**Compliant**

- 3 - full compliance
- 2 - partial compliance (viz >50% compliance)
- 1 - Insufficient compliance (viz <50% compliance)
- 0 - nothing in place
- N/A - not applicable

The total score, average score and percentage compliance for each aspect of all elements is calculated.

**REVISED FINAL LIFE-CYCLE ENVIRONMENTAL MANAGEMENT PROGRAMME CHECKLIST FOR THE DU PLESSIS DAM PV 1, NORTHERN CAPE**

**Client name:** Mulilo Renewable Project Developments (Pty)Ltd

**Project name:** Du Plessis Dam Solar PV1

**EMPr Revision:** 6

**Environmental Auditor:** Charles Lubbe (Principal EAP)

**Audit date:** 25/11/2019



**PRE-CONSTRUCTION & DESIGN PHASE REQUIREMENTS**

EMPr Page Number	Environmental Condition	Compliant	Not Compliant	Rating	Owner / Auditor Comment	Auditor Recommendations
<b>Plans, policies, programmes and permits required for the planning and design phase:</b>						
LEMPr, pg. 7	3,1 During the planning and design phase specific plans, policies, programmes and permits need to be compiled and obtained to be included in the LEMP. Table 4 below provides a quick reference list of these requirements:					
LEMPr, pg. 7	<b>Flora - <u>Plant rescue and protection plan</u></b> - To be compiled and implemented during the planning phase			N/A	Should the project be selected as a preferred bidder in the REIPPP process, this will then be implemented accordingly.	
LEMPr, pg. 7	<b>Flora - <u>Open space management plan</u></b> - To be compiled in planning phase and implemented during construction and operational phase			N/A	Should the project be selected as a preferred bidder in the REIPPP process, this will then be implemented accordingly.	
LEMPr, pg. 7	<b>Avifauna - <u>Pre-construction monitoring as part of the long term avifauna monitoring programme</u></b> - In process. Section 6 of this LEMP includes details of the avifaunal monitoring programme.	✓		3	Pre-construction bird monitoring plan dated April 2014 was in place	
LEMPr, pg. 7	<b>Heritage - <u>Fossil collection permit</u></b> -To be compiled by the Heritage specialist, if required.			N/A	The owner takes note of this condition	
LEMPr, pg. 7	<b>Socio- Economic - <u>Local employment policy and training programme</u></b> -To be compiled during the planning phase and implemented during construction and operational phase			N/A	Should the project be selected as a preferred bidder in the REIPPP process, this will then be implemented accordingly.	
LEMPr, pg. 7	<b>Surface water <u>Stormwater management plan</u></b> - <u>Stormwater management plan included in Annexure C of LEMP</u>	✓		3	Conceptual Stormwater Management Plan dated 27 August 2013 was in place	
LEMPr, pg. 7	<b>Roads- <u>Traffic management plan and transport management plan</u></b> - To be compiled during the planning phase and implemented during construction and operational phase.			N/A	Should the project be selected as a preferred bidder in the REIPPP process, this will then be implemented accordingly.	
LEMPr, pg. 7	<b>Roads- <u>Permits for any abnormal loads</u></b> - Should abnormal loads be required, then permits will be obtained.			N/A	Abnormal loads are not anticipated to be required.	
LEMPr, pg. 7	<b>Roads - <u>Design of new access roads</u></b> - The detailed design of the new access roads must be undertaken by a professional engineering consultant or professional engineering technologist, registered with the Engineering Council of South Africa. The plan must be submitted to SANRAL for approval			N/A	Should the project be selected as a preferred bidder in the REIPPP process, this will then be implemented accordingly.	
LEMPr, pg. 8	<b>Sedimentation and Erosion - <u>Erosion management plan</u></b> - Included in section 7 of the LEMP	✓		3	The Erosion Management Plan forms part of the LEMP.	
LEMPr, pg. 7	3.2 Mitigations measures application for the planning and design phase of the project					

**PRE-CONSTRUCTION & DESIGN PHASE REQUIREMENTS**

EMPr Page Number	Environmental Condition	Compliant	Not Compliant	Rating	Owner / Auditor Comment	Auditor Recommendations
LEMPr, pg. 8	<p><b>3.2.1 Botanical</b></p> <ul style="list-style-type: none"> <li>· A plant rescue and protection plan shall be compiled and implemented with the aid of a suitably qualified rehabilitation specialist should it be requested by DEA. It should be noted that the botanical specialist did not identify any threatened, near threatened, declining or rare plant species within Du Plessis Dam Farm. Should it still be required this plan will allow for the maximum transplant of conservation important species from areas to be transformed should they be identified at a later stage. This plan will be implemented prior to the commencement of the construction phase.</li> <li>· An open space management plan will be compiled and implemented during the construction and operational phase.</li> <li>· Disturbance of indigenous vegetation outside of the footprint of construction must be kept to a minimum.</li> </ul>			N/A	Should the project be selected as a preferred bidder in the REIPPP process, this will then be implemented accordingly.	
LEMPr, pg. 8	<p><b>3.2.2 Fauna</b></p> <ul style="list-style-type: none"> <li>· Allow small ground level openings, 20-30 cm in height, in the electrical fence to facilitate the movement of small mammals and reptiles through the site.</li> </ul>			N/A	The owner takes note of this condition	
LEMPr, pg. 8	<p><b>3.2.3 Avifauna</b></p> <ul style="list-style-type: none"> <li>· Pre-construction monitoring is required as part of the long term avifauna monitoring detailed in Section 6 of this LEMP.</li> <li>· Implement planning and design mitigation measures for protection of avifauna based on the outcome of the comprehensive bird monitoring programme as per the guidelines provided in Section 6 of this LEMP.</li> <li>· The length of any above-ground power lines shall be minimised and all new lines should be marked with bird flight diverters.</li> </ul>	✓		3	Pre-construction bird monitoring plan dated April 2014 was in place	
LEMPr, pg. 8	<p><b>3.2.4 Heritage</b></p> <ul style="list-style-type: none"> <li>· Prior to construction, a heritage specialist must undertake a final site examination, which will include the historic farmstead and all its related features and artefacts. The historic farmstead site is too significant to be mitigated since an extensive excavation and recording program over several weeks would be required.</li> <li>· Radiocarbon dating may also be required, but this depends on the preservation of the appropriate organic materials that are needed for the dating process.</li> <li>· Once the exact lines have been identified for the linear components of the project they should be examined from the desktop then subjected to a walk-down if deemed necessary.</li> <li>· Where archaeological sites cannot be avoided, mitigation in the form of excavation and collection of artefacts should be carried out.</li> <li>· The palaeontologist concerned with mitigation work will need a valid fossil collection permit from the South African Heritage Resources Agency (SAHRA) and any material collected would have to be curated in an approved depository (e.g. museum or university collection). All palaeontological specialist work should conform to international best practice for palaeontological fieldwork and the study (e.g. data recording, fossil collection and curation, final report) should adhere as far as possible to the minimum standards for Phase 2 palaeontological studies recently developed by SAHRA (2013).</li> <li>· Where archaeological sites J021, J022, J023, J024, J025, J029, J030, J040, J048 (a, b and c), J059 and J060 as identified in the HIA cannot be avoided by the proposed development, mitigation in the form of excavation is required. A permit in terms of Section 35 of the NHRA is required from SAHRA before this work can take place.</li> <li>· Archaeological sites J060 and L052 are possible graves, as such they should not be impacted. If avoidance is not possible, then test excavation under section 35 of the National Heritage Resources Act (NHRA) must be undertaken in order to assess the nature of these resources. If they reveal to be graves, section 36 of the NHRA may apply.</li> <li>· Once the access road and power line alignments have been finalised, they must be subject to a desk top analysis and subject to a final walk down where required.</li> <li>· Should any evidence of archaeological sites or remains (e.g., remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, fossils or other categories of heritage resources are found during the proposed activities, SAHRA APM Unit (Colette Scheermeyer 021 462 4502) must be alerted immediately, and a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance a Phase 2 rescue operation might be necessary.</li> </ul>			N/A	Should the project be selected as a preferred bidder in the REIPPP process, this will then be implemented accordingly.	

**PRE-CONSTRUCTION & DESIGN PHASE REQUIREMENTS**

EMPr Page Number	Environmental Condition	Compliant	Not Compliant	Rating	Owner / Auditor Comment	Auditor Recommendations
LEMPr, pg. 9	<b>3.2.5 Visual</b> <ul style="list-style-type: none"> <li>· Implement good traffic management and keep local people informed of activities.</li> <li>· Lay-down area(s) should be screened with shade and cloth.</li> <li>· Site offices, if required, shall be limited to a single storey and shall be sited carefully using temporary screen fencing to screen from the wider landscape.</li> <li>· Visibility of buildings and the local sub-station should be reduced by cladding the buildings in non-reflective colours and materials that would blend in with the natural environment (e.g. cladding with local stone or plaster and paint with earthy tones for paint colours, roofs should be grey and non-reflective and doors and window frames should reference either the roof or wall colours).</li> <li>· Minimising the length of any new power lines installed and burying lines wherever possible. If lines cannot be buried, ensure that all new lines are marked with bird flight diverters.</li> </ul>			N/A	The owner takes note of this condition and will be implemented during construction phase	
LEMPr, pg. 10	<b>3.2.6 Socio-Economic</b> <ul style="list-style-type: none"> <li>· Obtain a list of locally available labour and skills. Preference should be given to local communities for employment opportunities.</li> <li>· Base recruitment on sound labour practices and with gender equality in mind.</li> </ul>			N/A	This will be done closer to the construction commencement date	
LEMPr, pg. 10	<b>3.2.7 Surface Water</b> <ul style="list-style-type: none"> <li>· Design recommendations as set out in the Stormwater Management Plan (Annexure C).</li> <li>· The area should be sub-divided into smaller sub-catchments (which will distributed the runoff) and have multiple outlets from the site.</li> <li>· The runoff from the Du Plessis Dam Farm site should, in the most part, be directed to the tributary of the Brak River to the north of the site which follows the pre-development flow across the site.</li> <li>· The runoff from the western side of the site should be directed away from the R48 north towards the Brak River. Should localised drainage within this area be a concern during the design phase, attenuation ponds may be required.</li> <li>· Cut-off drains should be provided along the outside boundaries of the PV facility that receive overland flow from areas upstream. The cut-off drains will typically be at least 300mm deep and v-shaped.</li> <li>· A buffer of 30m should be maintained adjacent to the identified streams for the proposed PV footprint area as well as the substations.</li> <li>· Most access roads and water pipelines should be planned in areas that will minimise disturbance within no-go areas.</li> </ul>				Conceptual Stormwater Management Plan dated 27 August 2013 was in place	
LEMPr, pg. 10	<b>3.2.8 Roads (internal and external)</b> <ul style="list-style-type: none"> <li>· A Traffic Management Plan will be compiled and implemented during the construction and operational phase. This plan will include measures to minimize impacts on local commuters.</li> <li>· A Transportation Plan for the transport of panel components, main assembly cranes and other large pieces of equipment will be compiled.</li> <li>· Engage with the roads authorities prior to construction to ensure the necessary road upgrades, permits, traffic escorts etc. are scheduled.</li> <li>· Internal roads should be designed to have minimal impact on the environment.</li> <li>· Where roads intersect natural, defined drainage lines, suitably sized pipe culverts or drive through causeways should be installed or constructed.</li> <li>· The gravel roads should have the following: a crowned driving surface, a shoulder area that slopes directly away from the edge of the driving surface, and a ditch.</li> <li>· Where the roads intersect drainage lines a suitably sized culvert should be used. It is important that ditches and culverts be kept clear from obstructions.</li> </ul>				Should the project be selected as a preferred bidder in the REIPPP process, this will then be implemented accordingly.	
LEMPr, pg. 10	<b>3.2.9 Sedimentation and Erosion</b> <ul style="list-style-type: none"> <li>· Refer to the Erosion Management Plan in section 7.</li> </ul>	✓		3	The Erosion Management Plan forms part of the LEMPr.	
LEMPr, pg. 10	<b>3.2.10 Agricultural land-</b> <ul style="list-style-type: none"> <li>· A simplified and generic phased construction approach and related mitigations must be adopted.</li> <li>· Allow normal agricultural activities to continue in unaffected areas.</li> </ul>			N/A	The owner takes note of this condition and will be implemented during construction phase	

5

TOTAL SCORE  
AVERAGE  
PERCENTAGE

15
3,0
100,0