

**PROPOSED DEVELOPMENT OF
THE NDAU SOLAR PV FACILITY
AND ASSOCIATED GRID
INFRASTRUCTURE – IB VOGT SA
(PTY) LTD.**

February 2024

DRAFT SCOPING REPORT



Details of Role Players

APPLICANT DETAILS

Applicant	Ib Vogt SA (Pty) Ltd
Client Contact Person	Mr. Thabo Ndlovu
Tel	072 630 4506
Address	Building B, 54 Maxwell Drive, Woodmead North Office Park, Waterfall, Woodmead, Johannesburg, 2191
Email	Thabo.Ndlovu@ibvogt.com

EAP DETAILS

EAP	Zander Liebenberg
Affiliations	EAPASA, SACNASP, IEMA
Tel	082 562 1404
Email	zander@bioblueenviro.com
Project Consultant	BioBlue Environmental Sustainability

Document Control			
Author	Zander Liebenberg	EAPASA Registered EAP SACNASP – 117291 Practitioner Member of IEMA	2024/02/06

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EXECUTIVE SUMMARY

INTRODUCTION

Ib Vogt SA (Pty) Ltd. (hereunder referred to as Ib Vogt) has appointed BioBlue Environmental Sustainability (Pty) Ltd. (hereunder referred to as BioBlue) as an independent Environmental Assessment Practitioner (EAP) to undertake the required Scoping and Environmental Impact Assessment (S&EIA) in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) EIA Regulations 2014 as amended; for the proposed development of the Ndau Solar PV facility on Portion 0 of the Farm Bains Hoff 483 LR, near the town of Lephalale within the jurisdiction of Lephalale Local Municipality, Limpopo Province.

SITE LOCATION

The site is located on the R518 road driving from Lephalale to Marken. The site is located 1km from the informal settlements of Mmatladi and Ga-Monyeki. Access can be gained directly off the R518 road.

BRIEF PROJECT DESCRIPTION

The applicant proposes to establish the Ndau Solar PV facility with a proposed generation capacity of 300Mw and associated grid infrastructure on Portion 0 of the Farm Bains Hoff 483 LR.

The proposed size of 300Mw is not final and could change due to the recommendations and outcomes of specialist assessments and inputs from Interested and Affected Parties.

Approximately 2.713ha per Mw is required.

The facility will comprise the following:

- Solar PV Array
- BESS (Battery Energy Storage Solutions)
- Associated Grid Infrastructure (132Kv Lines or 400Kv Lines and a collector substation)

Grid connection options for the project:

There are existing Eskom power lines running through the northern section of the site where connection can be established.

LEGISLATIVE REQUIREMENTS

In terms of the EIA Regulations of 2014 and activities listed in Listing Notice 1, 2 and 3 the following listed activities are deemed applicable to the proposed development based on the information provided by the project proponent, the consultants and specialists. (Refer to Section 4)

ALTERNATIVES

The word “alternatives”, as described in Chapter 1, Regulation 1, Sub-regulation (1) of the EIA Regulations of 2014 (GN No. R. 326), in relation to a proposed activity, means different ways of meeting the general purpose and requirements of the activity which may include alternatives to the-

Property on which or location where the activity is proposed to be undertaken;

- Type of activity to be undertaken;
- Design or layout of the activity;
- Technology to be used in the activity; or
- Operational aspects of the activity; and
- Includes the option of not implementing the activity.

As previously stated, the proposed layout alternatives will ultimately depend on the inputs from the specialists and other factors that will be taken into account throughout the Environmental Impact Assessment Process.

PUBLIC PARTICIPATION

Identification of Key Stakeholders and I&APs

The identification and registration of I&APs will be an ongoing activity during the course of the environmental impact assessment process for the proposed renewable energy project. BioBlue will develop, maintain and constantly update an electronic I&AP database for the application process. As such I&APs will be identified using the following:

- Existing I&AP databases obtained from the client;
- Existing I&AP databases for other projects within the study area; and
- Communication with community leaders/Forums and relevant ward councillor/s.

I&APs representing the following sectors of society will also be identified in terms of Chapter 6, Regulation 41, of the EIA Regulations):

- Provincial Authorities;
- Local Authorities;

- Ward Councillor/s;
- Parastatal/ Service Providers;
- Non-governmental Organisations;
- Local forums/ unions; and
- Adjacent Landowners.

Notifications and Advertisements

The proposed development and S&EIR process will be widely announced with an invitation to the public to register as I&APs and to actively participate in the PP process. This will be achieved using:

- Print media advertisements in the local Mogol Post newspaper in English;
- Identified key stakeholders who will be contacted telephonically or by email and informed of the proposed development and the S&EIR process;
- The identified I&APs will be invited to comment on the content of the DSR through letters via Email;
- Posters/ site notices indicating where the DSR will be made available and placed at public locations and around the site.

PLAN OF STUDY FOR EIA

The Scoping Report has been compiled in line with the requirements of the EIA Regulations (2014) and provides a brief description of receiving environment of the broader region, and the description of the nature and extent of the proposed development. Potential issues are also identified as part of the Scoping Phase of this S&EIR process.

The Plan of Study for EIA aims to:

- Describe how the EIR Phase of the proposed development will be conducted;
- Provide the terms of reference of specialists studies;
- Provide the impact assessment methodology to be used to rate impacts; and
- Indicate deliverables of the EIR Phase and the proposed timeframe.

The Plan of Study for the EIR phase sets out the proposed approach to the EIR phase:

- A description of the tasks that will be undertaken as part of the EIR Phase, including any specialist reports or specialised processes, and the manner in which such tasks will be undertaken;
- An indication of the stages at which the Department of Environmental Affairs will be consulted;

- A description of the proposed method of assessing the environmental issues and alternatives, including the option of not proceeding with the activity; and
- Particulars of the PP process that will be conducted during the environmental impact assessment process of the proposed development.

CONCLUSION

The EA application process is clearly outlined in the NEMA, EIA Regulations of 2014 (GN No. R. 326) as amended April 2017 will be followed throughout the S&EIR. The Scoping study has provided background to the project and outlined the process followed to date. The study has also outlined the process that will be followed during the EIR phase of the project upon acceptance of the Final Scoping Report. This Scoping Study has been informed, to a large degree, by the availability of existing information as well as information from various sources.

In terms of the EIA Regulations of 2014, an environmental impact assessment of a development of this nature has to undergo an S&EIR, due the triggered listed activities in terms of Listing Notice 2 of the EIA Regulations which may have an impact on the prevailing environment. As such the EIR Phase may only commence once the Department of Environmental Affairs has accepted the FSR and instructed the EAP to continue with the tasks contemplated in the Plan of Study for the EIR Phase of this S&EIR process.

Table of Contents

2	SCOPING REPORT REQUIREMENTS	14
3	INTRODUCTION.....	17
3.1	PROJECT LOCATION	17
3.2	PROJECT DESCRIPTION	20
3.3	site photographs	21
3.4	LAYOUT	23
3.5	NEED AND DESIRABILITY	23
4	LEGISLATIVE REQUIREMENTS.....	24
4.1	ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS OF 2014 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998)	24
4.2	OTHER RELEVANT LEGISLATION	31
4.2.1	Constitution of the Republic of South Africa	31
4.2.2	National Heritage Resources Act, 1999 (Act No. 25 of 1999)	32
4.2.3	Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)	32
4.2.4	National Environmental Management Waste Act 2008 (Act No. 59 of 2008)	32
4.2.5	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)	33
4.2.6	Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)	33
4.3	NATIONAL AND PROVINCIAL POLICIES AND/OR GUIDELINES.....	33
4.3.1	Integrated Environmental Management	33
4.3.2	LEPHALALE LM IDP 2023.....	34
5	PROJECT ALTERNATIVES	34
5.1	Site ALTERNATIVE	34
5.2	Type of Activity and Technology	35
5.3	Layout ALTERNATIVE	35
5.4	The No-Go Alternative.....	35
6	BASELINE ENVIRONMENT	36
6.1	SURROUNDING LAND USE.....	36
6.2	BIOPHYSICAL ENVIRONMENT	36
6.2.1	CLIMATE.....	36

6.2.2	TOPOGRAPHY	36
6.2.3	BIODIVERSITY	36
6.3	SOCIO-ECONOMIC CONTEXT	37
6.4	Population.....	37
6.5	Economic.....	38
6.5.1	Employment	39
7	PUBLIC PARTICIPATION	40
7.1	PUBLIC PARTICIPATION SCOPING PHASE.....	40
7.1.1	Identification of Key Stakeholders And I&APs	40
7.1.2	Notifications and Advertisements.....	40
7.1.3	Public Review of The Draft Scoping Report.....	41
7.2	PUBLIC PARTICIPATION EIA REPORTING PHASE	41
8	SCOPING & ENVIRONMENTAL IMPACT REPORTING PROCESS AND METHODOLOGY	42
8.1	SCOPING PHASE.....	42
8.1.1	Consultation with the Competent Authority	42
8.1.2	Consultation with other Relevant Authorities	43
9	PLAN OF STUDY FOR EIR	44
9.1	DETAILED IMPACT REPORTING PHASE	45
9.1.1	Introduction	45
9.2	IMPACT ASSESSMENT METHODOLOGY	46
9.2.1	METHODOLOGY	46
9.3	ENVIRONMENTAL IMPACT REPORTING	52
9.4	POTENTIAL IMPACTS.....	53
9.4.1	Construction Phase.....	53
9.4.2	Operational Phase.....	53
9.4.3	Decommissioning.....	54
9.5	ENVIRONMENTAL MANAGEMENT PROGRAMME.....	54
9.6	PUBLIC REVIEW OF THE ENVIRONMENTAL IMPACT REPORT	55
9.7	CONSULTATION WITH THE COMPETENT AUTHORITY	55
9.8	PROPOSED PROJECT PROGRAMME FOR THE S&EIR	56

9.9	GENERAL TERMS OF REFERENCE FOR SPECIALIST STUDIES.....	56
9.9.1	Heritage Impact Assessment.....	57
9.9.2	Other Specialist Assessment to be Conducted.	58
10	CONCLUSIONS	58
11	REFERENCES	60

LIST OF FIGURES

Figure 1: Locality Map	18
Figure 2: Ndau Solar – Pre-liminary Layout Map	19
Figure 3: Map of the Municipality and Local Municipality boundaries (Municipalities.co.za) .	37
Figure 4: Population pyramid of the LM	38
Figure 5: Cumulative Impacts (https://www.environment.fhwa.dot.gov/nepa/QAimpact.aspx)	52

LIST OF TABLES

Table 1: Document Map.....	14
Table 2: Triggered Activities in Terms of the EIA Regulations of 2014 as amended.....	25
Table 3: Gross Value Added per Sector in Lephalale at Constant 2005 prices R'm.	39
Table 4: Relevant Authorities Consulted	43
Table 5: Specialist studies indicated by the Environmental Screening Tool	44
Table 6: Impact Assessment Table.....	47
Table 7: Impact Significance Methodology	48

Appendices:

- Appendix A Locality Map
- Appendix B EAPASA Registration
- Appendix C EAP CV
- Appendix D EAP Declaration
- Appendix E Site Verification Report

GLOSSARY OF TERMS

- "Activity" means an activity identified in Government Notice Number R718 of 2009, and GNR. 324, R. 325, and R. 327, of 2017 as a listed activity.
- "Alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to property, activity, design or technology.
- "Applicant" means a person who has submitted or intends to submit an application. "Application" means an application for Environmental Authorization in terms of the EIA regulations, 2014 (as amended).
- "Associated Infrastructure," means any building or infrastructure that is necessary for the functioning of a facility or activity or that is used for an ancillary service or use from the facility.
- "Biodiversity" The variety of life occurring in an area, including the number of different species, the genetic wealth within each species, and the natural habitat where they are found.
- "Borehole" Includes a well, excavation or any artificially constructed or improved underground cavity that can be used for the purpose of:
 - intercepting, collecting or storing water in or removing water from an aquifer;
 - observing and collecting data and information on water in an aquifer; or
 - re-charging an aquifer.
- "Cultural significance" This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.
- "Cumulative impact" in relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
- "Environmental Impact Assessment" in relation to an application to which scoping must be applied, means the process of collecting, organizing, analysing, interpreting and communicating information that is relevant to the consideration of that application.
- "Environment" The environment has been defined as "The external circumstances, conditions and objects that affect the existence and

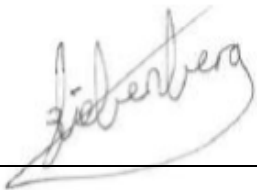
- development of an individual, organism or group". These circumstances include biophysical, social, economic, historical, cultural and political aspects.
- "Environmental Assessment Practitioner" Person or company, independent of the applicant (developer), that manages the environmental assessment process of a proposed project on behalf of the applicant.
 - "Environmental Impact Report" In-depth assessment of impacts associated with a proposed development. This forms the second phase of an Environmental Impact Assessment and follows on from the Scoping Report.
 - "Environmental Management Programme" means a programme presenting management and mitigation measures in relation to identified or specified activities envisaged in Chapter 5 of the National Environmental Management Act and described in regulation 34.
 - "Heritage resources" This means any place or object of cultural significance. It also includes archaeological resources.
 - "Interested and Affected Party" means an interested and affected party contemplated in section 24(4) (d) of the Act, and which in terms of that section includes - (a) Any person, group of persons or organization interested in or affected by an activity; and (b) Any organ of state that may have jurisdiction over any aspect of the activity.
 - "Public Participation Process" means a process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters;
 - "Registered Interested and Affected Party", in relation to an application, means an interested and affected party whose name is recorded in the register opened for that application in terms of regulation 42.
 - "Species of Conservation Concern" All those species included in the categories of endangered, vulnerable or rare, as defined by the International Union for the Conservation of Nature and Natural Resources.
 - "Significant impact" means an impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment.
 - "The Act" means the National Environmental Management: Waste Act, 1998 (Act No.59 of 2008).

DECLARATION OF INDEPENDENCE

The independent Practitioner

I, **Zander Liebenberg** declare that I –

- act as the independent Environmental Practitioner for the Scoping Report and Environmental Impact Assessment process;
- this report covers the Environmental assessment aspects only and no other scope of work was requested for this study and the information should be interpreted with caution
- do not have and will not have financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2010;
- have no and will have any vested interest in the proposed activity proceeding;
- undertake to disclose, to the competent authority any material information that have 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 Environmental Impact Assessment Regulations, 2010;
- BioBlue accepts no responsibility for the accuracy of any third-party data used in the production of this report.



Signature of Author – Zander Liebenberg (EAPASA Registered EAP)

Date – 2024/02/06

2 SCOPING REPORT REQUIREMENTS

The EIA Regulations of 2014 as amended in (GN No. R. 326) stipulate how an S&EIR is undertaken; therefore, the Scoping Report has been drafted in accordance with Appendix 2 of the EIA Regulations of 2014 as amended (GN No. R. 326). Below provides a document map indicating section of the report where all required information has been provided and address as per the Appendix 2 of the Regulations.

Table 1: Document Map

APPENDIX 2 REQUIREMENTS	SECTION IN REPORT
a) details of— i. the EAP who prepared the report; and ii. the expertise of the EAP, including a curriculum vitae;	Page ii Appendix B
b) the location of the activity, including— i. the 21-digit Surveyor General code of each cadastral land parcel; ii. where available, the physical address and farm name; iii. where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	Section 3.1 – Page 17 to 18
c) a plan which locates the proposed activity or activities applied for at an appropriate scale, or, if it is— i. (i) a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or ii. on land where the property has not been defined, the coordinates within which the activity is to be undertaken;	Figure 1 - Page 18 Appendix A
d) a description of the scope of the proposed activity, including— i. all listed and specified activities triggered; ii. a description of the activities to be undertaken, including associated structures and infrastructure;	Section 3.2 – 3.5 Section 4.1
e) a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process;	Section 4
f) a motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;	Section 3.5
g) a full description of the process followed to reach the	Section 5, Section 6

APPENDIX 2 REQUIREMENTS	SECTION IN REPORT
proposed preferred activity, site and location of the development footprint within the site, including— i. details of all the alternatives considered; ii. details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs; iii. a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them; iv. the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; v. the impacts and risks which have informed the identification of each alternative, including the nature, significance, consequence, extent, duration and probability of such identified impacts, including the degree to which these impacts— (aa) can be reversed; (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated; vi. the methodology used in identifying and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives; vii. positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected viii. focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; ix. the possible mitigation measures that could be applied and level of residual risk; the outcome of the site selection matrix; x. if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and xi. a concluding statement indicating the preferred alternatives, including preferred location of the activity;	and Section 7
h) a plan of study for undertaking the environmental impact assessment process to be undertaken, including— i. a description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity; ii. a description of the aspects to be assessed as part of the environmental impact assessment process; iii. aspects to be assessed by specialists; iv. a description of the proposed method of assessing the environmental aspects, including aspects to be assessed by specialists; v. a description of the proposed method of assessing duration and significance;	Section 9

APPENDIX 2 REQUIREMENTS	SECTION IN REPORT
vi. an indication of the stages at which the competent authority will be consulted; vii. particulars of the public participation process that will be conducted during the environmental impact assessment process; and viii. a description of the tasks that will be undertaken as part of the environmental impact assessment process; x. identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored.	
i) an undertaking under oath or affirmation by the EAP in relation to— i. the correctness of the information provided in the report; ii. the inclusion of comments and inputs from stakeholders and interested and affected parties; and iii. any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties;	Declaration on Page xii Appendix C
j) an undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment;	Declaration on Page xii
k) where applicable, any specific information required by the competent authority; and	
l) any other matter required in terms of section 24(4)(a) and (b) of the Act.	

3 INTRODUCTION

Ib Vogt SA (Pty) Ltd. (hereunder referred to as Ib Vogt) has appointed BioBlue Environmental Sustainability (Pty) Ltd. (hereunder referred to as BioBlue) as an independent Environmental Assessment Practitioner (EAP) to undertake the required Scoping and Environmental Impact Assessment (S&EIA) in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) EIA Regulations 2014 as amended; for the proposed development of the Ndau Solar PV facility on Portion o of the Farm Bains Hoff 483 LR, near the town of Lephalale within the jurisdiction of Lephalale Local Municipality, Limpopo Province.

The purpose of the application is to develop a renewable energy facility that will assist in alleviating pressure on the National grid and form part of the country's transition to more sustainable power sources.

3.1 PROJECT LOCATION

The site is located on the R518 road driving from Lephalale to Marken. The site is located 1km from the informal settlements of Mmatladi and Ga-Monyeki. Access can be gained directly off the R518 road.

The centre coordinates of the site are **23°36'16.42"S; 28° 2'46.66"E**

S21G Code: **TOLR00000000048300000**

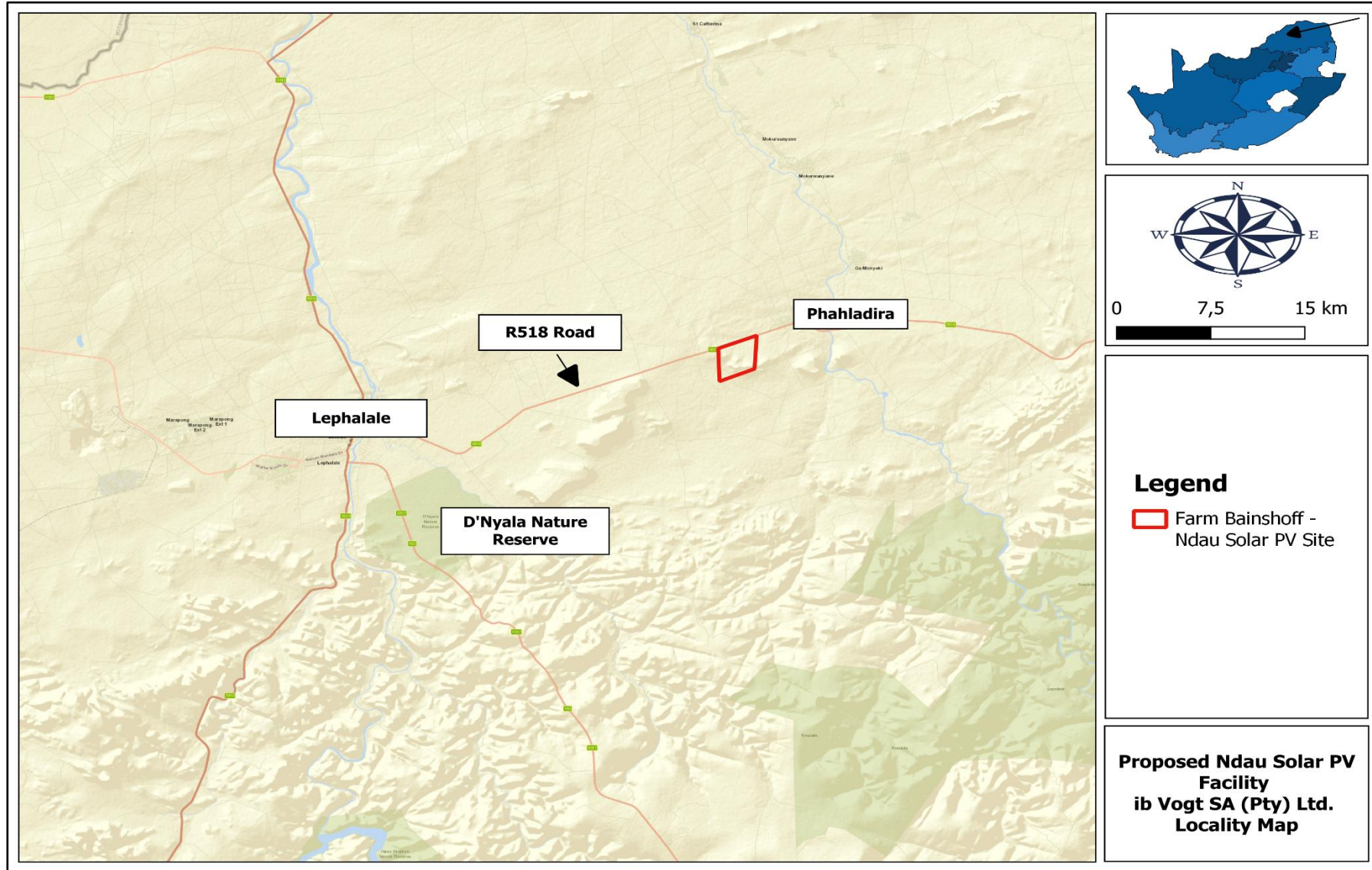


Figure 1: Locality Map

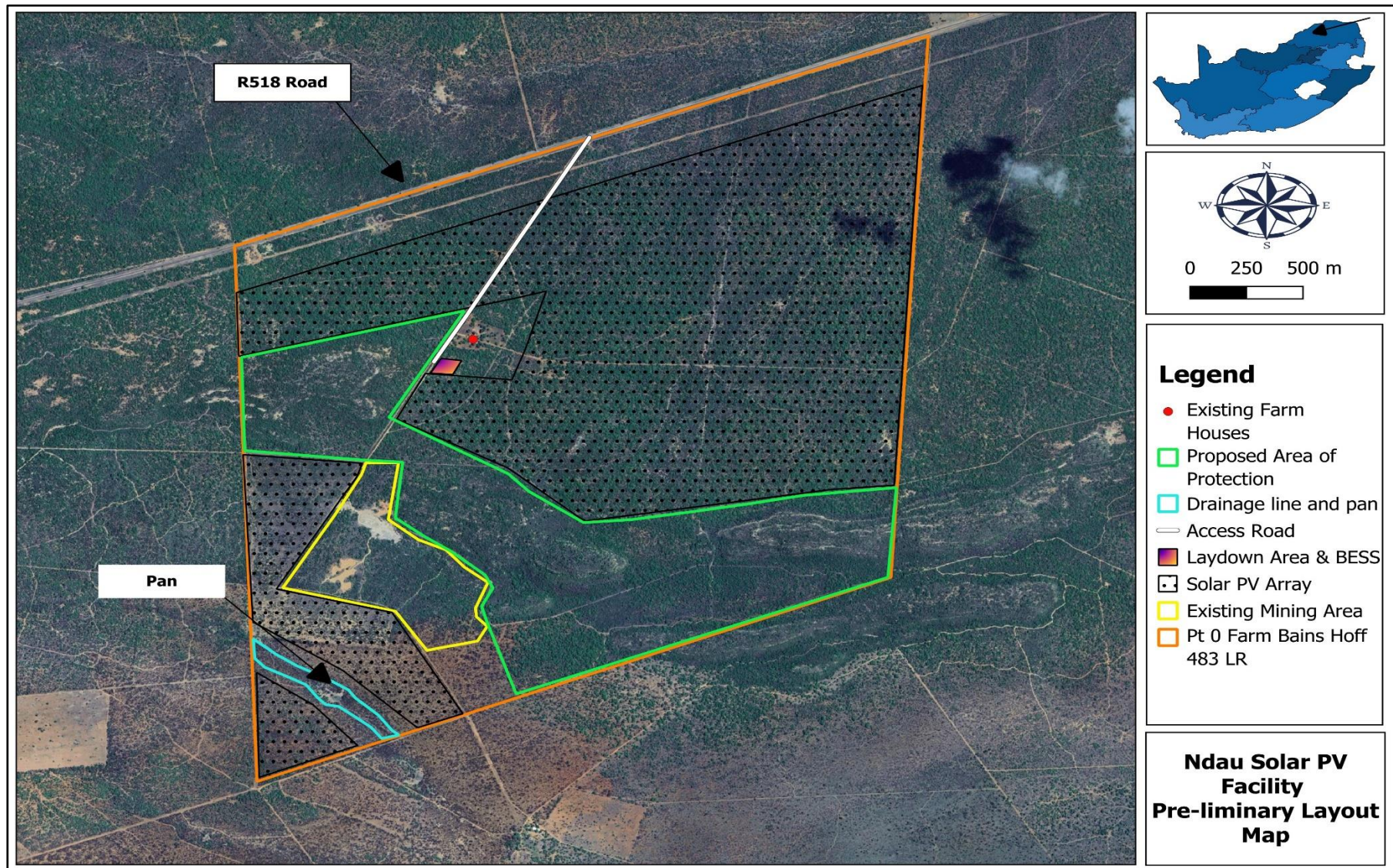


Figure 2: Ndau Solar – Pre-liminary Layout Map

3.2 PROJECT DESCRIPTION

The applicant proposes to establish the Ndau Solar PV facility with a proposed generation capacity of 300Mw and associated grid infrastructure on Portion 0 of the Farm Bains Hoff 483 LR.

The proposed size of 300Mw is not final and could change due to the recommendations and outcomes of specialist assessments and inputs from Interested and Affected Parties.

Approximately 2.713ha per Mw is required.

The facility will comprise the following:

- Solar PV Array
- BESS (Battery Energy Storage Solutions) - The BESS will be situated on a 400 square meters concrete platform.
- Associated Grid Infrastructure (132Kv Lines or 400Kv Lines and a collector substation)
 - Monopole heights of 33m.
 - Substations – 2500 square meters.
- Site access roads and internal roads. Road construction could necessitate roads of up to 8m wide.
- Temporary and permanent laydown area.
- Operations and maintenance buildings – 50 square meters.
- Pipelines from boreholes to enclosed steel reservoir or jojo tanks with a possible internal diameter of 0.36 meters.

Grid connection options for the project:

There are existing Eskom power lines running through the northern section of the site where connection can be established.

3.3 SITE PHOTOGRAPHS







3.4 LAYOUT

The final layout will depend on the inputs from the various specialist working on the project. Layout alternatives will be investigated throughout the Environmental Impact Assessment Process.

3.5 NEED AND DESIRABILITY

The power crisis in South Africa has worsened over the past few years, with loadshedding increasing on an annual basis. Coupled with the need to decarbonise due to the various climate strategies signed by world leaders, the development of renewable energy facilities such as Solar PV developments are of utmost importance not only to the economic security of our country but also to meet the requirements as set out in these global strategies.

Lephalale Local Municipality is currently one of the fastest growing municipalities in the country and governs a town that has the potential to become the future hub of power generation in South Africa. The municipality aims to build a vibrant city situated at the heart of the Waterberg coalfield. The global shift towards the use of renewable energy may push communities to diversify the economy and that is where the Ndau Solar PV facility will contribute hugely to a diverse range of power supply options in the rapidly expanding municipality.

The proposed Ndau Solar PV facility will contribute hugely to stabilising the electrical grid and also develop new clean energy sources within South Africa.

The project will also lead to the injection of International Investment into the country, create numerous direct and indirect job opportunities during the planning, construction and operational phases and lead to added economic benefits for the surrounding communities of Lephalale, Marken and the informal communities of Mmatladi and Ga-Monyeki.

The municipality is fairly rural, and its economic activity is centred around agriculture, community services, mining, transport and trade. The new proposed projects will contribute to the creation of job opportunities in an area that is in dire need of economic growth as the municipality has an unemployment rate of 22.2% and youth unemployment of 26.9%.

The “fourth priority intervention” of the Economic Reconstruction and Recovery Plan is to rapidly expand energy generation capacity (Lephalale LM IDP 2023). Restoring Eskom to operational and financial health and accelerating its restructuring process is central to this objective. Plans are in place to working to fulfil commitments under the United Nations by the Presidential Coordinating Commission on Climate Change. The commission will work on a plan for a just transition to a low-carbon economy and climate resilient society. This plan that is stipulated in the IPD indicates that these private sector investment projects such as Ndau Solar PV project, will play a very important role in fulfilling commitments to the UN but also the expansion of investment opportunities and creating a diverse power supply grid.

4 LEGISLATIVE REQUIREMENTS

4.1 ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS OF 2014 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998)

Section 24(5) and 44 of NEMA asserts that the Minister or Member of the Executive Council (MEC) may make regulations pertaining to applications under NEMA. The Minister (of Environmental Affairs) has made such regulations and the latest were published on 04 December 2014, Amended in April 2017. The EIA Regulations focus primarily on creating a framework for co-operative environmental governance. NEMA provides for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by State Departments and to provide for matters connected therewith.

In terms of the EIA Regulations of 2014 and activities listed in Listing Notice 1, 2 and 3 the following listed activities are deemed applicable to the proposed development based on the information provided by the project proponent, the consulting engineers and specialists.

Table 2: Triggered Activities in Terms of the EIA Regulations of 2014 as amended.

Listing Notice and Activity	Description	
(GN R. 327) Listing Notice 1		
Activity 9	The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water— (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more;	The project is still in planning phase, but water supply will be required during the construction phase and stormwater will play a big role in this development. Water supply will be obtained from boreholes in the area and pipelines could be required to the site.
Activity 11	The development of facilities or infrastructure for the transmission and distribution of electricity— (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts;	The Solar PV facility will connect to the main grid through transmission infrastructure to the existing Eskom grid lines on site, most likely through 132Kv lines.
Activity 24	The development of a road— (i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) with a reserve wider than 13,5 meters, or where no reserve exists	New internal roads will be required as there are currently only a few small roads on site and road widths of up to 8m could be required.

Listing Notice and Activity	Description	
	where the road is wider than 8 metres;	
Activity 12	The development of – (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square meters or (ii) infrastructure with a physical footprint of 100 square meters or more, where such developments occur – - o (a) within a watercourse. - o (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.	There is a drainage line located in the south-western corner of the site and some stormwater infrastructure could be located within 32m of the watercourse.
Activity 28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;	The current use of the site is mostly game farming and livestock. This will now change to mixed or industrial development when construction of the Solar facility commences. The Solar PV facility is considered as a commercial / industrial development, which will have an estimated total development footprint of more than 20ha outside of an urban area.

Listing Notice and Activity	Description	
Activity 56	The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre— (i) where the existing reserve is wider than 13,5 meters; or (ii) where no reserve exists, where the existing road is wider than 8 metres;	There are one or two wide internal roads that could require widening depending on requirements on the final layout.
(GN R. 325) Listing Notice 2		
Activity 1	The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more, excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs — (a) within an urban area; or (b) on existing infrastructure.	The proposed Solar development is planned to exceed 300Mw capacity.
Activity 9	The development of facilities or infrastructure for the transmission and distribution of electricity with a capacity of 275 kilovolts or more, outside an urban area or industrial complex.	In the event that it is not possible to only utilise 132Kv transmission lines, larger lines such as 400Kv will be required to be installed.
Activity 15	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for – - o (i) the undertaking of a linear activity, - o (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	The proposed Solar PV development will exceed the clearance of 20ha as an average of 2.7ha is required per Mw.

Listing Notice and Activity	Description	
(GN R. 324) Listing Notice 3		
Activity 4	The development of a road wider than 4 metres with a reserve less than 13,5 metres. a. Limpopo i. Outside urban areas: (aa) A protected area identified in terms of NEMPAA, excluding disturbed areas; (bb) National Protected Area Expansion Strategy Focus areas; (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (dd) Sites or areas identified in terms of an international convention; (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (ff) Core areas in biosphere reserves; or (gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve, excluding disturbed areas; or	The Screening Tool identified a CBA 2 area as well as the Phillippus Private Nature Reserve. In the vicinity of the site. There will be a need as part of the infrastructure of the development to create new internal roads wider than 4m.
Activity 12	The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. e. Limpopo	The Screening Tool identified a CBA 2 area, and the facility will require the clearance of natural vegetation in excess of 300m² in areas of natural vegetation.

Listing Notice and Activity	Description	
	i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; ii. Within critical biodiversity areas identified in bioregional plans; or - o On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.	
Activity 14	The development of – (ii) infrastructure or structures with a physical footprint of 10 square metres or more; Where the development occurs – (a) within a watercourse; (c) within 32 metres of a watercourse a. Limpopo i. Outside urban areas: (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (cc) World Heritage Sites; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ee) Sites or areas identified in terms of an international convention; (ff) Critical biodiversity areas or ecosystem service areas as identified	Stormwater infrastructure will form part of the development and parts of this infrastructure could be required to be situated within 32m of a watercourse in the south-western corner of the site.

Listing Notice and Activity	Description	
	in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (gg) Core areas in biosphere reserves; or (hh) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; or	
Activity 18	The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre. a. Limpopo i. Outside urban areas: (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (dd) Sites or areas identified in terms of an international convention; (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (ff) Core areas in biosphere reserves; (gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres	The Screening Tool identified a CBA 2 area as well as the Phillippus Private Nature Reserve. In the vicinity of the site. There will be a need as part of the infrastructure of the development to create new internal roads wider than 4m.

Listing Notice and Activity	Description	
	from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; or (hh) Areas within a watercourse; or within 100 metres from the edge of a watercourse; or ii. Inside urban areas: (aa) Areas zoned for use as public open space; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose.	

The listed activities include activities that could potentially have a detrimental impact on the social and biophysical state of the prevailing environment and as such, the applicant is required to obtain an EA by way of an S&EIR process in order undertake the project.

The environmental studies will follow a two-phased approach in accordance with the EIA Regulations of 2014:

- Environmental Scoping Phase; and
- Environmental Impact Reporting Phase.

This report constitutes the Draft Scoping Report and sets out the findings of the Environmental Scoping phase undertaken to identify and describe the potential environmental impacts associated with all aspects of the proposed project; it also outlines the public consultation process. The Environmental Scoping phase will influence the EIR phase, and the impacts identified in the Scoping Report will be incorporated into the EIR study for further assessment.

4.2 OTHER RELEVANT LEGISLATION

4.2.1 Constitution of the Republic of South Africa

The Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996) as amended has major implications for environmental management. The main effects are the protection of

environmental and property rights, the change brought about by the sections dealing with administrative law, such as access to information, just administrative action and broadening of the locus standing of litigants. These aspects provide general and overarching support and are of major assistance in the effective implementation of the environmental management principles and structures of NEMA. Section 24 in the Bill of Rights of the Constitution asserts that: Everyone has the right -

- To an environment that is not harmful to their health or well-being; and
- To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that -
- Prevent pollution and ecological degradation;
- Promote conservation; and
- Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

4.2.2 National Heritage Resources Act, 1999 (Act No. 25 of 1999)

The National Heritage Resources Act, 1999 (Act No. 25 of 1999) as amended (NHRA), legislates the necessity for cultural and heritage impact assessment in areas earmarked for development, which exceed 0.5 hectares (ha) and where linear developments (including roads) exceed 300 metres in length. The proposed development falls in neither of the stipulated thresholds.

4.2.3 Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)

The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) as amended (CARA), is to provide for control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and/or resources as well as the vegetation and the combating of weeds and invader plants; and for matters connected therewith. In terms of the amendments to the Regulations under the CARA, landowners are legally responsible for the control of alien species on their properties.

4.2.4 National Environmental Management Waste Act 2008 (Act No. 59 of 2008)

The act regulates the management of waste for all types of developments and activities which pose a threat to the environment in terms of the act. Waste is currently a very serious topic around the world and all efforts to minimise and recycle waste are currently being encouraged by government and international agencies. It is therefore important for any

development to manage waste in a sensible way and in line with the waste hierarchy where the preference is always minimisation.

4.2.5 Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

This Act is to provide for the health and safety of persons at work; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

4.2.6 Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)

The Act recognises that everyone has a Constitutional right of access to any information held by the state and by another person when that information is required to exercise or protect any rights. The purpose of the Act is to foster a culture of transparency and accountability in public and private bodies and to promote a society in which people have access to information that enables them to exercise and protect their rights. In light of this Act, the S&EIR process includes PP which in essence is a platform for communities affected by the proposed development as well as any other persons with interest to be given access to the information that forms part of this process so as to give comments and raise concerns about the proposed development. The Interested and Affected Parties (I&APs), State Departments and other stakeholders are afforded a period of 30 days, for each draft report (DSR and Draft EIR), to comment on the content of that draft report. The comments received from I&APs, State Departments and other Stakeholders are incorporated into a CRR which forms part of each final report (FSR and Final EIR), the final report inclusive of the CRR will be submitted to the DFFE for decision making.

4.3 NATIONAL AND PROVINCIAL POLICIES AND/OR GUIDELINES

4.3.1 Integrated Environmental Management

Integrated Environmental Management (IEM) is a philosophy for ensuring that environmental considerations are fully integrated into all stages of the proposed development process. This philosophy aims to achieve a desirable balance between conservation and development (DEAT, 1992). The IEM guidelines intend to encourage a pro-active approach to sourcing, collating, and presenting information in a manner that can be interpreted at all levels.

The Department of Environmental Affairs (DEA) IEM Information Series guidelines will form part of the literature consulted during this S&EIR process. Of particular relevance are the:

- Companion Guideline on the Implementation of the Environmental Impact Assessment Regulations (DEA, 2012); and
- Public Participation in the EIA Process (DEA, 2010).

Previous documents published by the DEA as part of the 2006 guideline series include:

- Guideline 3: General guide to the EIA Regulations;
- Guideline 4: Public participation; and
- Guideline 5: Assessment of alternatives and impacts.

4.3.2 LEPHALALE LM IDP 2023

The plan for the municipal service delivery and infrastructure planning. The IDP identifies areas of opportunity and improvement and lays out the plan to achieve the municipal mandate in terms of the Local Government Municipal Systems 2000 (Act 32 of 2000).

5 PROJECT ALTERNATIVES

The word “alternatives”, as described in Chapter 1, Regulation 1, Sub-regulation (1) of the EIA Regulations of 2014 (GN No. R. 326), in relation to a proposed activity, means different ways of meeting the general purpose and requirements of the activity which may include alternatives to the-

Property on which or location where the activity is proposed to be undertaken;

- Type of activity to be undertaken;
- Design or layout of the activity;
- Technology to be used in the activity; or
- Operational aspects of the activity; and
- Includes the option of not implementing the activity.

5.1 SITE ALTERNATIVE

No feasible site alternatives outside of the property boundaries are available. The final site layout will be investigated within the site boundaries and be influenced by the specialist reports and I&AP comments.

5.2 TYPE OF ACTIVITY AND TECHNOLOGY

The proposed Solar PV facility will utilise the latest technology, however, the final technology and type of installations will be investigated by the client throughout this process.

5.3 LAYOUT ALTERNATIVE

As previously stated, the proposed layout alternatives will ultimately depend on the inputs from the specialists and other factors that will be taken into account throughout the Environmental Impact Assessment Process.

5.4 THE NO-GO ALTERNATIVE

This option assumes that a conservative approach will be followed which would ensure that the environment is not impacted upon in anyway and the site remains in its current state. The farm portion is currently characterized by natural vegetation and is mainly used for game farming, grazing of livestock and a sand mine on the south-western portion of the farm. Should the Competent Authority decline the application, the 'No-Go' option will be followed, and the status quo of the site will remain. Should the CA consider the 'No-Go' option; the property will remain in its current state and will not add value to the area in terms of development and by providing employment to the local community. The natural vegetation will remain which will continue to be used for grazing and be able to supply habitat to the animals in the area.

6 BASELINE ENVIRONMENT

6.1 SURROUNDING LAND USE

The proposed site is surrounded by areas mainly used for agricultural activities such as game farming. The south, west and north of the site is characterised by game farming activities, while a large informal development is situated to the north-east and east of the site. There are existing sand mining activities on the western side of the farm and hills/mountains situated in the southern and south-eastern section.

6.2 BIOPHYSICAL ENVIRONMENT

6.2.1 CLIMATE

The site area falls within the bushveld biome that is characterized by hot summer months and short, cold winter months. The area is a summer rainfall region with annual precipitation amounting to 391mm.

6.2.2 TOPOGRAPHY

The general topography of the site is flat with the south and south-eastern sections characterised by a section of hills / mountains.

6.2.3 BIODIVERSITY

According to SANBI there are no Critical Biodiversity or Ecological Support Areas within the proposed site. The main vegetation type within the site is Roodeberg Bushveld vegetation.

6.3 SOCIO-ECONOMIC CONTEXT

Information in this section is obtained from the Lephalale Local Municipality IDP 2023 and other Municipal website resources.

Lephalale Local Municipality falls within the Waterberg District Municipality which is situated within the north-eastern parts of the Limpopo Province.

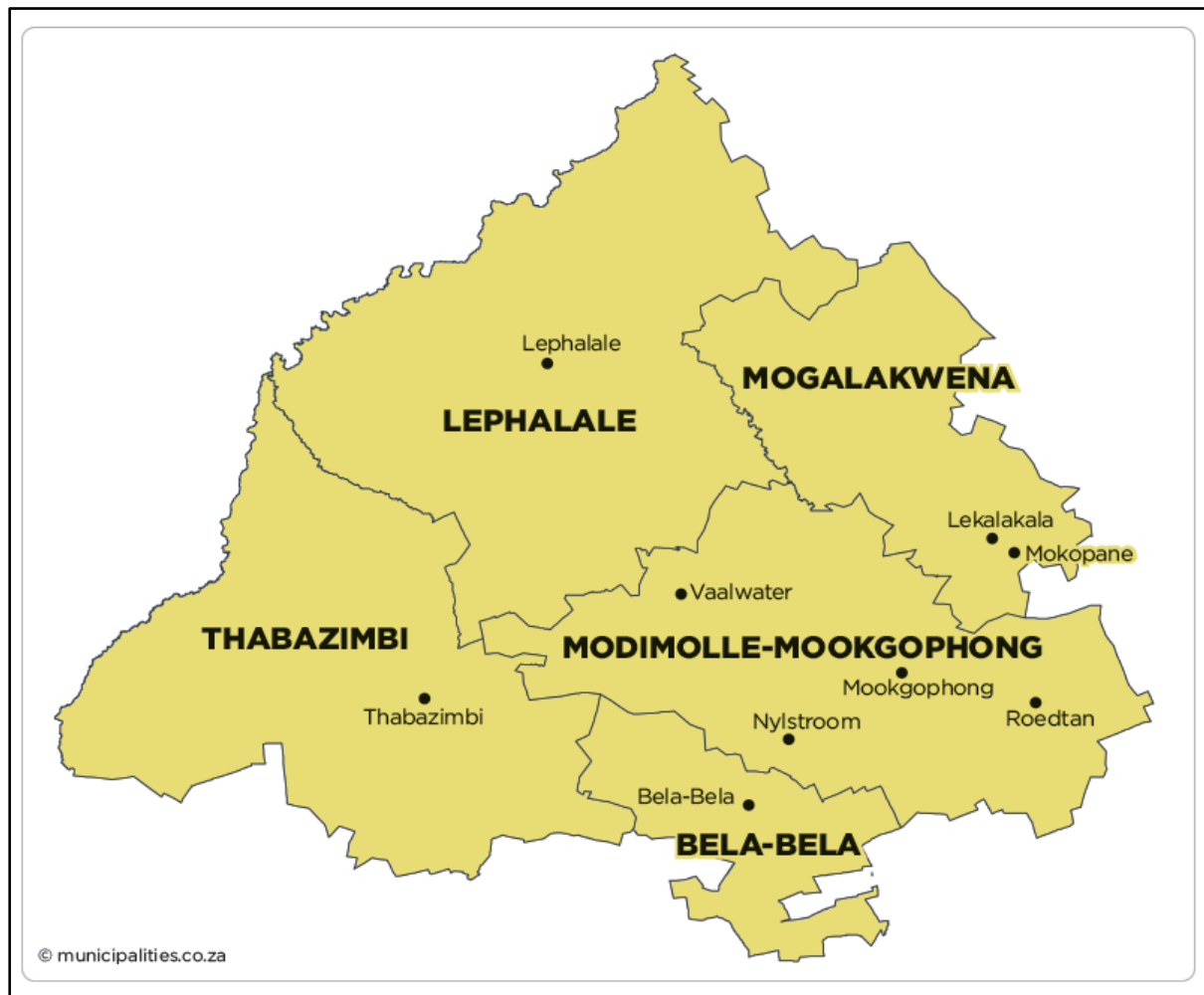


Figure 3: Map of the Municipality and Local Municipality boundaries (Municipalities.co.za)

6.4 POPULATION

During the 2011 census, the Local Municipality had a total population of 115 767 individuals, with a growth rate of 3,06%. Lephalale LM comprised 8% of the population of the District Municipality.

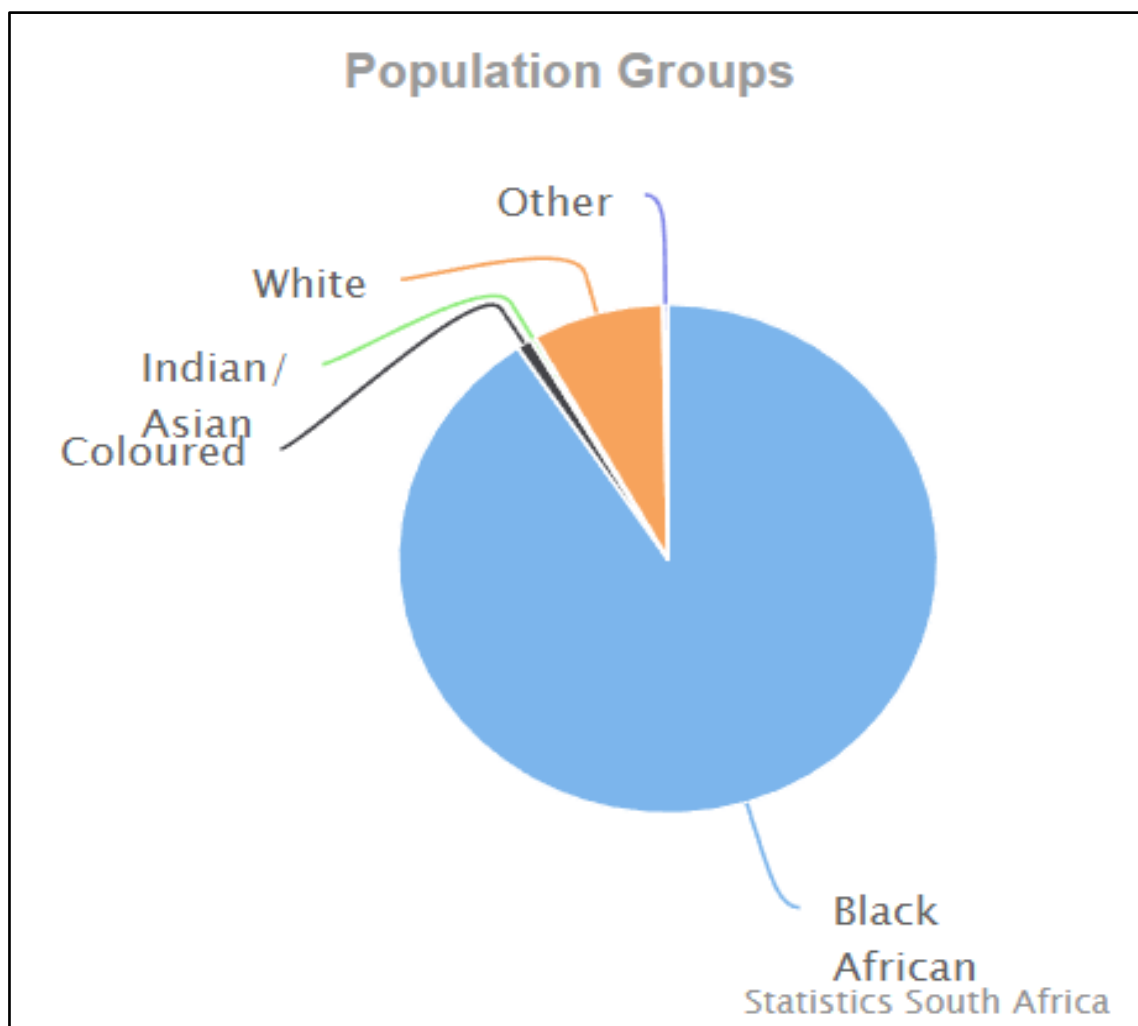


Figure 4: Population pyramid of the LM

6.5 ECONOMIC

Lephalale is the fastest growing town in the Waterberg district. Community services and infrastructure play a vital role in the development of the local economy in the region. The level of service in both categories directly and indirectly affects the ability of a region to attract and retain talented individuals and to compete for business.

Table 3: Gross Value Added per Sector in Lephalale at Constant 2005 prices R'm.

Sector	2008	2009	2010	2010 %
Agriculture, Forestry and Fishing	189	168	171	3.9
Mining and Quarrying	1415	2456	3148	71.4
Manufacturing	81	62	63	1.4
Electricity, Gas and Water	179	120	125	2.8
Construction	45	42	42	0.9
Wholesale and retail trade, catering, and accommodation	218	192	196	4.4
Transport, storage, and communication	191	185	193	4.4
Community, social and personal services	58	53	53	1.2
Finance, insurance, real estate, and business services	257	228	230	5.2
General Government	196	184	190	4.3
Total	2829	3690	4411	100.0

The community sector, which includes the government services, is generally a large contributor towards GVA. As can be seen the construction and electricity sectors are some of smaller sectors by percentage and these Solar PV projects would assist in growing these sectors and grow the economy as a whole. The aim will be to grow the sectors other than community service sector.

The renewable energy sector could be a vital driver of economic growth and job creation in these rural municipalities.

6.5.1 Employment

The official unemployment rate as of 2016 was 22% within the Local Municipality. It is very important the growth continue within the Municipality and that this percentage is decreased even more.

7 PUBLIC PARTICIPATION

The purpose of the Public Participation Process, as per Chapter 6, Regulation 40 of the EIA Regulations of 2014 as amended (GN No. R 326), is to provide access to all information that reasonably has or may have the potential to influence any decision with regard to an application unless access to that information is protected by law.

7.1 PUBLIC PARTICIPATION SCOPING PHASE

7.1.1 Identification of Key Stakeholders And I&APs

The identification and registration of I&APs will be an ongoing activity during the course of the environmental impact assessment process for the proposed clearance project. BioBlue will develop, maintain and constantly update an electronic I&AP database for the application process. As such I&APs will be identified using the following:

- Existing I&AP databases obtained from the client;
- Existing I&AP databases for other projects within the study area; and
- Communication with community leaders/Forums and relevant ward councillor/s.

I&APs representing the following sectors of society will also be identified in terms of Chapter 6, Regulation 41, of the EIA Regulations):

- Provincial Authorities;
- Local Authorities;
- Ward Councillor/s;
- Parastatal/ Service Providers;
- Non-governmental Organisations;
- Local forums/ unions; and
- Adjacent Landowners.

7.1.2 Notifications and Advertisements

The proposed development and S&EIR process will be widely announced with an invitation to the public to register as I&APs and to actively participate in the PP process. This will be achieved using:

- Print media advertisements in the Mogol Post, newspaper in English;
- Identified key stakeholders who will be contacted telephonically or by email and informed of the proposed development and the S&EIR process;

- The identified I&APs will be invited to comment on the content of the DSR through letters via Email;
- Posters/ site notices indicating where the DSR will be made available and placed at public locations and around the site.

7.1.3 Public Review of The Draft Scoping Report

The DSR will be made available to the public for review and commenting for a legislative period of 30 days from Tuesday 6th of February 2024 to Thursday the 7th March 2024.

A hardcopy of the report will be left at the Lephalale Library and the identified I&APs on the prepopulated stakeholder database will be sent an email with a link (Onedrive) to the report. The Report will also be made available on our website.

Note: The initial public participation process commenced on the 8th of December 2023 to ensure that all I&APs had enough time to register. However, registrations will remain open until the Draft Environmental Impact Report is submitted. The initial public participation included the placement of an advertisement, site notices and Background Information documents.

7.2 PUBLIC PARTICIPATION EIA REPORTING PHASE

The Draft EIR (with associated specialist studies) and EMP_r will be made available to the public for review and commenting for a legislative period of 30 days.

- An advertisement will be published to invite the public to review the draft EIR.
- Registered I&APs will receive an email with the link (Onedrive) to the report.
- A hard copy of the report will also be made available at Middelburg Library.
- The Report will also be made available on our website.

A commenting period of at least 30 days will be provided for registered I&APs and other stakeholders which include state departments and the municipality to comment on the Draft EIR. Comments on the Draft EIR will be captured and responded to in the updated CRR. Thereafter, the Draft EIR will be finalized and submitted to the Competent Authority for their review and decision making.

8 SCOPING & ENVIRONMENTAL IMPACT REPORTING PROCESS AND METHODOLOGY

The S&EIR process for the proposed development is comprised of two main phases, namely the Scoping Phase and the EIR Phase. This report documents the tasks that have been undertaken as part of the Scoping Phase and that will be undertaken as part of the EIR Phase.

8.1 SCOPING PHASE

The Scoping Phase serves to define the scope of the later detailed assessment of potential impacts resulting from a proposed development and to establish the baseline conditions of the receiving environment. The Scoping Phase has been undertaken in accordance with the requirements of Appendix 2 of the EIA Regulations of 2014 (GN No. R. 326) and the IEM Information Series (DEAT, 2002).

The objectives of the Scoping Phase are to:

- Ensure that the process is open and transparent and involves the relevant Authorities, the project proponent and key stakeholders;
- Identify the important characteristics of the affected environment;
- Ensure that feasible and reasonable alternatives are identified and selected for further assessment;
- Determine possible impacts of the proposed project on the biophysical and socio-economic environment and associated mitigation measures; and
- Ensure compliance with the relevant legislation.

The Scoping Report represents the findings of the Scoping Phase of the proposed development and the purpose of the report is, therefore, to document these findings in the form of a Draft and Final Scoping Report.

8.1.1 Consultation with the Competent Authority

Consultation with the Department of Forestry, Fisheries and Environment (DFFE) has commenced and will follow through until the conclusion of the environmental impact assessment for the proposed development. To date the authority consultation included the following:

- Submission, to the Department, of a completed EA application form together with applicable appendices in terms of the EIA Regulations (2014) promulgated under NEMA as well as the Draft Scoping Report;
- Following the submission of the completed EA application form, the Department will issue the applicant with a reference number; and
- The DSR is submitted to the Department and made available to the public for commenting for a 30-day period from Tuesday 6th of February 2024 to Thursday the 7th of March 2024.
- Comments from DFFE will be addressed in the Final Scoping Report.

8.1.2 Consultation with other Relevant Authorities

The Background regarding the proposed development is provided to other relevant Authorities, together with a registration and comment form, formally requesting the input into the S&EIR process. The Authorities include inter alia:

Table 4: Relevant Authorities Consulted

Name	Email Addresses	Company/Organisation
Mr. Kola L Mr. Selemela M	KolaLM@agric.limpopo.gov.za SelemelaM@agric.limpopo.gov.za	Limpopo Department of Agriculture and Rural Development
Mr. Tshepo Mathebe	MathebeT@dws.gov.za	Department of Water and Sanitation
Ms. M.F. Ramadisha	Ramadishamf@ledet.gov.za Kgopongns@ledet.gov.za	Limpopo Department of Economic Development, Environment and Tourism.
Riekie Coetzee T. Moroka Tapala Mabetha	munic@lephalale.gov.za Riekie.coetzee@lephalale.gov.za MorokaT@lephalale.gov.za Mabetha.Tapala@lephalale.gov.za	Lephalale Local Municipality

The Draft Scoping Report was made available to the Local Municipality and other relevant department.

9 PLAN OF STUDY FOR EIR

The Scoping Report has been compiled in line with the requirements of the EIA Regulations (2014) and provides a brief description of receiving environment of the broader region, and the description of the nature and extent of the proposed development. Potential issues are also identified as part of the Scoping Phase of this S&EIR process.

The Plan of Study for EIA aims to:

- Describe how the EIR Phase of the proposed development will be conducted;
- Provide the terms of reference of specialists studies;
- Provide the impact assessment methodology to be used to rate impacts; and
- Indicate deliverables of the EIR Phase and the proposed timeframe.

Initial site visit and screening:

An initial site visit and screening was conducted as required to verify the necessity of the specialist studies that were provided by the Environmental Screening Tool:

Table 5: Specialist studies indicated by the Environmental Screening Tool

Specialist studies	Initial Site screening
Agricultural Sensitivity	Initial Site screening showed that an agriculture impact assessment will be required for this project.
Heritage Impact Assessment & Palaeontological Assessment	The HIA specialist has been to site and will conduct a Phase 1 Heritage Impact Assessment.
Terrestrial and Vegetation Assessment	Screening Tool indicated Very High Sensitivity – A full Terrestrial and Vegetation assessment will be conducted.
Avi-fauna and fauna assessment	During the initial site assessment it was noted that numerous birds and game species were found on site. The specialists are conducting a full assessment as per Avi-faunal requirements.

Specialist studies	Initial Site screening
Geo-hydrological and Geo-technical Assessments	It was discussed with the specialists and was deemed necessary for the nature of the project.
Socio-economic assessment	As this is a large-scale project, the effects of the project on the socio-economic aspect of the region and the people need to be taken into account.

The Plan of Study for the EIR phase sets out the proposed approach to the EIR phase:

- A description of the tasks that will be undertaken as part of the EIR Phase, including any specialist reports or specialised processes, and the manner in which such tasks will be undertaken;
- An indication of the stages at which the Department of Environmental Affairs will be consulted;
- A description of the proposed method of assessing the environmental issues and alternatives, including the option of not proceeding with the activity; and
- Particulars of the PP process that will be conducted during the environmental impact assessment process of the proposed development.

Following the comments on the DSR by the Department of Environmental Affairs, the report will be finalised for decision on whether to continue with the EIR phase. Once the Final Scoping Report has been accepted the detailed EIR Phase of this S&EIR process will commence. This phase considers the potential impacts identified for the proposed development, assesses these in terms of their significance rating and recommends mitigation measures, where necessary. The following aspects are considered:

- Potential impacts during the planning and design phase;
- Potential impacts during the construction phase;
- Potential impacts during the operational phase;
- Potential impacts during the decommissioning phase, if any; and
- The potential cumulative impacts of the proposed development.

9.1 DETAILED IMPACT REPORTING PHASE

9.1.1 Introduction

The purpose of the Impact Reporting phase of this S&EIR process is to:

- Address issues that have been raised during the Scoping Phase;

- Assess alternatives to the proposed activity in a comprehensive and comparative manner;
- Assess all identified impacts and determine the significance of each impact; and
- Formulate mitigation measures in order to minimise negative impacts and optimise the effects of positive impacts.

Numerous acceptable approaches and methodologies exist by which the above purpose can be achieved. The environmental legislation in South Africa, including the guideline documents published in support thereof, do not provide a specific methodology for the assessment of the impacts. Rather, an assessment framework is provided within which EAPs are expected to structure a project-specific assessment methodology. This assessment framework recognises that there are different methodologies available for assessing the impact of a proposed development but that the specific methodology selected must provide for the following:

- A clear process for impact identification, prediction and evaluation;
- The specification of impact identification techniques;
- Criteria for evaluating the significance of impacts;
- The design of mitigation measures to address impacts;
- Defining types of impacts (direct, indirect or cumulative); and
- Specification of uncertainties.

9.2 IMPACT ASSESSMENT METHODOLOGY

9.2.1 METHODOLOGY

The following assessment methodology has been used for the purpose of assessing impacts because of the construction, operation and decommissioning of the Farming activities and ancillary infrastructure.

The impacts arising from the activities are included in the impact assessment tables. This is to identify activities that require certain environmental management actions to mitigate the impacts arising from them. The assessment of the impacts will be conducted according to a synthesis of criteria required by the integrated environmental management procedure (Table 6).

Table 6: Impact Assessment Table

Extent The physical and spatial scale of the impact.	Footprint	The impacted area extends only as far as the activity, such as footprint occurring within the total site area.
	Site	The impact could affect the whole, or a significant portion of the site.
	Regional	The impact could affect the area including the neighbouring farms, the transport routes and the adjoining towns.
	National	The impact could have an effect that expands throughout the country (South Africa).
	International	Where the impact has international ramifications that extend beyond the boundaries of South Africa.
Duration The lifetime of the impact, that is measured in relation to the lifetime of the proposed development.	Short Term	The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than that of the construction phase. Usually ≤ 1 to 5 years
	Medium Term	The impact will last up to the end of the development phases, where after it will be entirely negated. Usually 5 – 15 years .
	Long Term	The impact will continue or last for the entire operational lifetime of the development, but will be mitigated by direct human action or by natural processes thereafter.
	Permanent	This is the only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.
Intensity Is the impact destructive or benign, does it destroy the impacted environment, alters its functioning, or slightly alter the environment itself?	Low	The impact alters the affected environment in such a way that the natural processes or functions are not affected.
	Moderate	The affected environment is altered, but functions and processes continue, albeit in a modified way.
	High	Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.
Probability The likelihood of the impacts actually occurring. The impact may occur for any length of time during the life cycle of the activity, and not at any given time.		
	Improbable	The possibility of the impact occurring is very low, due either to the circumstances, design or experience. The chances of this impact occurring is defined as 25%.
	Probable	There is a possibility that the impact will occur to the extent that provisions must therefore be made. The chances of this impact occurring is defined as 50%.
	Highly Probable	It is most likely that the impacts will occur at some stage of the development. Plans must be drawn up before carrying out the

		activity. The chances of this impact occurring is defined as 75%.
	Definite	The impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied on. The chance of this impact occurring is defined as 100%.

Table 7: Impact Significance Methodology

The Significance of Environmental Impacts is to be assessed by means of the following method: Significance = Probability x Severity. Probability describes the likelihood of the impact actually occurring, and is rated below:	
Improbable	Rating = 2
Probable	Rating = 3
Highly Probable	Rating = 4
Definite	Rating = 5
The Severity rating is calculated by multiplying Intensity with Duration. The Intensity factor is described below:	
Low Intensity	Factor 1
Moderate Intensity	Factor 2
High Intensity	Factor 3
The Duration factor is described below:	
Short term	Factor 2
Moderate term	Factor 3
Long term	Factor 4
Permanent	Factor 5
The Severity rating obtained from the above calculations are discussed below:	
Low severity (Rating 2)	Calculated values 2 to 4
Moderate severity (Rating 3)	Calculated values 5 to 8
High severity (Rating 4)	Calculated values 9 to 12
Very High severity (Rating 5)	Calculated values 13 to 16 or more
Severity factors below 3 indicate no impact	
A Significance Rating = Severity Rating x Probability Rating. The significance rating should influence the development project as described below:	

Low Significance (Rating 4 – 6)	Positive Impact and negative impacts of Low significance should have no influence on the proposed development project.
Moderate Significance (Rating 7 to 12)	Positive Impact – Should indicate that the proposed project should be approved. Negative impact – Should be mitigated or mitigation measures should be stipulated before the proposed project can be approved.
High Significance (Rating 13 – 18)	Negative Impact – Should weigh towards decision to terminate the proposed project if not mitigation measures can be implemented. Mitigation measures should be stipulated and performed to reduce the significance to at least low significance.
Very High Significance (Rating 19 – 25 and more)	

Mitigation – The impacts that are generated by the development can be minimised if measures are implemented to reduce the impacts. The mitigation measures ensure that the development considers the environment and the predicted impacts to minimise impacts and achieve sustainable development.

Determination of Significance – Without Mitigation – Significance is determined through a synthesis of impact characteristics as described in the above paragraphs. It provides an indication of the importance of the impact in terms of both tangible and intangible characteristics. The significance of the impact “without mitigation” is the prime determinant of the nature and degree of mitigation required. Where the impact is positive, significance is noted as “positive”. Significance will be rated on the following scale:

No significance: The impact is not substantial and does not require any mitigation action;

Low: The impact is of little importance, but may require limited mitigation;

Medium: The impact is of importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels; and

High: The impact is of major importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

Determination of Significance – With Mitigation – Determination of significance refers to the foreseeable significance of the impact after the successful implementation of the necessary mitigation measures. Significance with mitigation will be rated on the following scale:

No significance: The impact will be mitigated to the point where it is regarded as insubstantial;
Low: The impact will be mitigated to the point where it is of limited importance;

Low to medium: The impact is of importance, however, through the implementation of the correct mitigation measures such potential impacts can be reduced to acceptable levels;

Medium: Notwithstanding the successful implementation of the mitigation measures, to reduce the negative impacts to acceptable levels, the negative impact will remain of significance. However, taken within the overall context of the project, the persistent impact does not constitute a fatal flaw;

Medium to high: The impact is of major importance but through the implementation of the correct mitigation measures, the negative impacts will be reduced to acceptable levels; and

High: The impact is of major importance. Mitigation of the impact is not possible on a cost-effective basis. The impact is regarded as high importance and taken within the overall context of the project, is regarded as a fatal flaw. An impact regarded as high significance, after mitigation could render the entire development option or entire project proposal unacceptable.

Assessment Weighting – Each aspect within an impact description was assigned a series of quantitative criteria. Such criteria are likely to differ during the different stages of the project's life cycle. To establish a defined base upon which it becomes feasible to make an informed decision, it will be necessary to weigh and rank all the identified criteria.

Identifying the Potential Impacts Without Mitigation Measures (WOM) – Following the assignment of the necessary weights to the respective aspects, criteria are summed and multiplied by their assigned weightings, resulting in a value for each impact (prior to the implementation of mitigation measures).

$$\text{Calculation 1:} \quad \text{Significance Rating (WOM)} = (\text{Extent} + \text{Intensity} + \text{Duration} + \text{Probability}) \times \text{Weighting Factor}$$

Identifying the Potential Impacts with Mitigation Measures (WM) – In order to gain a comprehensive understanding of the overall significance of the impact, after implementation of the mitigation measures, it will be necessary to re-evaluate the impact.

Mitigation Efficiency (ME) – The most effective means of deriving a quantitative value of mitigated impacts is to assign each significance rating value (WOM) a mitigation effectiveness (ME) rating. The allocation of such a rating is a measure of the efficiency and effectiveness, as identified through professional experience and empirical evidence of how effectively the proposed mitigation measures will manage the impact.

Thus, the lower the assigned value the greater the effectiveness of the proposed mitigation measures and subsequently, the lower the impacts with mitigation.

Calculation 2: Significance Rating (WM) = Significance Rating (WM) x Mitigation Efficiency

$$\text{Or } WM = WM \times ME$$

Significance Following Mitigation (SFM) – The significance of the impact after the mitigation measures are taken into consideration. The efficiency of the mitigation measure determines the significance of the impact. The level of impact will, therefore, be seen in its entirety with all considerations considered.

Consideration will also be given to potential cumulative impacts as illustrated below, occur as a result from the combined effect of incremental changes caused by other activities together with the proposed project. In other words, several developments with insignificant impacts individually may, when viewed together, have a significant cumulative adverse impact on the environment.

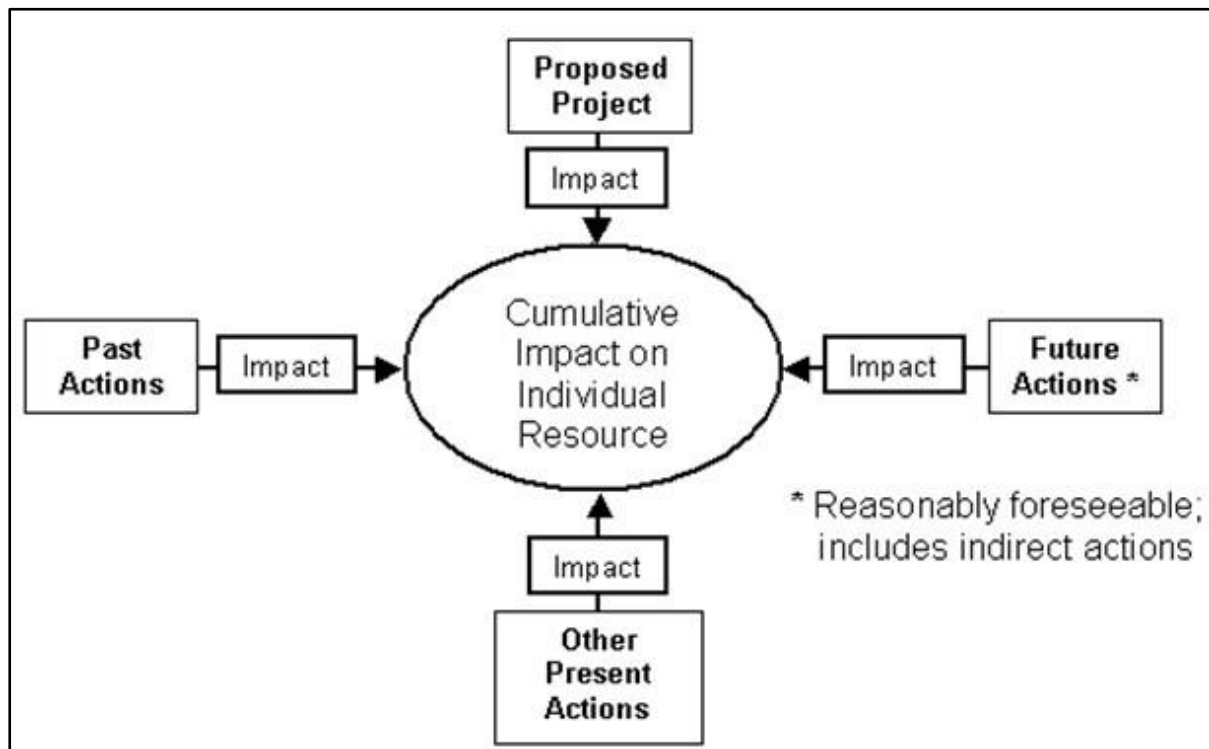


Figure 5: **Cumulative Impacts** (<https://www.environment.fhwa.dot.gov/nepa/QAimpact.aspx>)

An indication of the degree of confidence (low, medium or high) that there is, in the predictions made for each impact, based on the available information and the specialist. EAP's level of knowledge and expertise will also be reported. The Degree of confidence will however not be taken into account in the determination of consequence or probability.

This assessment is initially done for the scenario where no mitigation measures are implemented. Mitigation measures will then be identified and considered for each impact and the assessment repeated in order to determine the significance of the residual impacts (the impact remaining after the mitigation measure has been implemented) The results of the assessment of the significance of the residual impacts will then be linked to decision-making by Authorities.

9.3 ENVIRONMENTAL IMPACT REPORTING

This step in the process comes after the Scoping phase and will be compiled according to Appendix 3 of the NEMA, EIA Regulation 2014, as amended) GN No. R326).

9.4 POTENTIAL IMPACTS

The potential impacts associated with the proposed development have been identified through the scoping process and categorised in terms of biophysical and socio-economic parameters. The identified potential impacts will be investigated in detail within the Impact Assessment Phase of this S&EIR process.

The identification of key issues and the assessment of the significance of impacts within the process are thus aimed at giving input in the planning phases of the proposed development and ensuring the most viable and least environmentally sensitive environment is utilised for the proposed development.

The key impacts identified for all phases of the proposed project, as mentioned above, are listed below:

9.4.1 Construction Phase

- Loss of Biodiversity
- Loss of habitat for fauna species and habitat fragmentation.
- Avi-Fauna habitat destruction during site clearance
- Soil Erosion
- Increase in noise due to site preparation and introduction of machinery onto the site.
- Potential impact on ambient air quality (dust generation);and
- Potential socio-economic impacts (both positive and negative).
- Potential pollution of surface water resources north of the site.
- Impact on possible Archaeological and paleontological resources.

9.4.2 Operational Phase

- Alteration to the cultural and natural landscape by built elements
- Bird collisions with PV panels and associated infrastructure
- Impacts of access control and fencing to plants and animals.
- Soil Erosion

9.4.3 Decommissioning

Impacts during the decommissioning phase will be investigated and assessed during the EIR process.

9.5 ENVIRONMENTAL MANAGEMENT PROGRAMME

During the compilation of the EIR, an EMPr will be compiled in accordance with the Appendix 4 of the EIA Regulations of 2014. An EMPr will provide the actions for the management of identified environmental impacts resulting from the proposed development and a detailed outline of the implementation programme to minimise and/ or eliminate the anticipated negative environmental impacts. The EMPr will also provide strategies to be used to address the roles and responsibilities of environmental management personnel on site, and a framework for environmental compliance and monitoring. The EMPr will be included as an appendix to the EIR.

The EMPr will comply with Section 24N of NEMA and will be undertaken as per the legislative requirements as follows:

- Provide details of the EAP who undertook the EMPr and the expertise as well as a curriculum vitae of the EAP to prepare an EMPr thereof;
- Provide a detailed description of the aspects of the proposed development that are covered by the EMPr as identified by the project description;
- Produce a map which superimpose the proposed development, its associated structures and infrastructure on the environmental sensitivities of the preferred development site, indicating areas that should be avoided including buffers;
- Provide a description of the impact management objectives including management statements identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process of this S&EIR for all the phases of the proposed development, including-
 - Planning;
 - Pre-construction activities;
 - Construction/Site preparation activities;
 - Operation activities, where relevant;

- Provide a description and identification of impact management outcomes required for the aspects mentioned above;
 - Provide a description of proposed impact management actions, identifying the manner in which the impact management objections and outcomes contemplated above will be achieved, and must include the following actions, where applicable-
- Avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation; and
 - Comply with any prescribed environmental management standards or practices.

9.6 PUBLIC REVIEW OF THE ENVIRONMENTAL IMPACT REPORT

The Draft EIR (with associated specialist studies) and EMPr will be distributed to registered I&APs via email where possible and via courier services and on the company website. A hard copy of the reports will also be left at Lephalale Library.

A commenting period of at least 30 days will be provided for registered I&APs and other stakeholders which include state departments and the municipality to comment on the Draft EIR. Comments on the Draft EIR will be captured and responded to in the updated CRR. Thereafter, the Draft EIR will be finalized and submitted to the Department of Environmental Affairs for their review and decision making.

**It must be noted that as per the provisions of the EIA Regulations of 2014, no PP process is undertaken for the Final Report – these are for the consideration and decision making of the Competent Authority as asserted above.

9.7 CONSULTATION WITH THE COMPETENT AUTHORITY

It is envisaged that consultation with the DFFE will coincide with the compilation and submission of the following key documents:

- Application for EA;
- Overall Scoping Phase (Draft and Final Scoping Reports)
- Plan of Study for EIR; and
- Overall EIR Phase (Draft and Final EIR).

9.8 PROPOSED PROJECT PROGRAMME FOR THE S&EIR

The programme for the S&EIR process suggests the following timeframes with respect to the most important activities to be undertaken:

- Submission of the completed EA application form with applicable appendices to the DFFE on 6th of February 2024.
- Availability of the DSR for public comment, from (from 6th of February 2024 to 7th of March 2024.
- Submission of the FSR to DFFE for review and decision making, within 44 days of receipt of the application by the Department;
- Availability of the Draft EIR for public comment (30 days);
- Submission of the Final EIR to DFFE for review and decision making, within 107 days; and
- Receive decision from the Competent Authority within 5 days of reaching the decision.

The S&EIR process is interactive by nature, and it should therefore be noted that dates are subject to change.

9.9 GENERAL TERMS OF REFERENCE FOR SPECIALIST STUDIES

In April 2006, the Department of Environmental Affairs and Tourism (DEAT), now known as the Department of Environment Affairs (DEA) issued guidelines for involving specialists in the S&EIR processes. The specialists are required to make themselves aware of these guidelines and amendments thereof, as well as any other guidelines, codes, standards, or applicable legislation relative to their field of expertise, and will utilise them to more precisely determine methods and approaches to their specialist studies and will reference compliance with the above-mentioned requirements accordingly. Specialists are also expected to consider best practise when undertaking their study.

The assessment of environmental impacts should be broadly undertaken in accordance with the guidelines provided in the Guideline Document: EIA Regulations (DEA, 1998), NEMA Principles, Section 24, Sub-section (4) of NEMA and the DEA guideline documents as appropriate to the specific field of study. In addition, the following General Terms of Reference apply to each of the specialist studies:

- Undertake site visit(s);

- Design and undertake the specialist study in accordance with the specifications provided;
- Describe the baseline conditions that exist in the study area and identify any sensitive areas that would need special consideration;
- Provide an outline of the approach used in the study;
- Assess all project alternatives including the no-go alternative;
- Identify, assess and evaluate the possible environmental impacts of the proposed development during all development phases (construction and operation);
- Identify and assess any cumulative impacts arising from the proposed development;
- Determine the significance of assessed environmental impacts according to the methodology provided by the EAP, and provide a revised significance rating of assessed impacts after the implementation of mitigation measures;
- Undertake field surveys, as appropriate to the requirements of the particular specialist study;
- Identify areas where integration of studies with other specialists would ensure a better assessment and coordinate with other specialists in this regard;
- Apply the precautionary principle in the assessment of impacts, in particular where there is major uncertainty, low levels of confidence in predictions and poor data or information;
- Recommend practicable mitigation measures to minimise or eliminate negative impacts and/or enhance potential development benefits;
- Recommend appropriate auditing, monitoring and review measures;
- Compile all information into a stand-alone report;
- Take cognisance of and comply with the relevant guideline documents applicable to that particular specialist studies; and
- The specialist report must comply with Appendix 6 of the EIA Regulations of 2014 as amended (GN No. R. 326).

9.9.1 Heritage Impact Assessment

The Heritage Impact Assessment establishes whether there are any areas of cultural importance that needs to be enclosed and protected.

- Site Survey to identify any potential sites
- Recommendations on chance finds during site preparation and operations.

9.9.2 Other Specialist Assessment to be Conducted.

- Terrestrial Biodiversity Assessment
- Avi-Fauna and flora Assessment
- Stormwater Impact Assessment
- Visual impact assessment
- Geo-hydrological Assessment
- Geo-technical Assessment
- Palaeontological Assessment
- Socio-economic assessment

10 CONCLUSIONS

The EA application process is clearly outlined in the NEMA, EIA Regulations of 2014 (GN No. R. 326) as amended April 2017 will be followed throughout the S&EIR. The Scoping study has provided background to the project and outlined the process followed to date. The study has also outlined the process that will be followed during the EIR phase of the project upon acceptance of the Final Scoping Report. This Scoping Study has been informed, to a large degree, by the availability of existing information as well as information from various sources.

In terms of the EIA Regulations of 2014, an environmental impact assessment of a development of this nature has to undergo an S&EIR, due the triggered listed activities in terms of Listing Notice 2 of the EIA Regulations which may have an impact on the prevailing environment. As such the EIR Phase may only commence once the Department of Environmental Affairs has accepted the FSR and instructed the EAP to continue with the tasks contemplated in the Plan of Study for the EIR Phase of this S&EIR process.

BioBlue as the EAP commits to:

- Facilitate a fair and transparent process;
- Accurately capture and consider all comments received from all registered stakeholders and other I&APs;
- Remain independent of the applicant;

- Present the Competent Authority with the necessary information to reach a decision;
and
- Fulfil any and all other obligations placed on the EAP in terms of NEMA.

11 REFERENCES

- ✚ National Environmental Management Act 1998 (Act 107 of 1998) Environmental Impact Assessment Regulations, 2014 as amended.
- ✚ National Web-based Screening Tool
- ✚ Integrated Development Plan, 2023, Lephalale Local Municipality
- ✚ National Environmental Management Act 1998 (Act 107 of 1998) Environmental Impact Assessment Regulations, 2014 as amended.