



BACKGROUND INFORMATION DOCUMENT



MERCURY CLUSTER SOLAR PV PROJECT, VILJOENSKROON, FREE STATE PROVINCE

PURPOSE OF THIS DOCUMENT

Landscape Dynamics Environmental Consultants (Pty) Ltd was appointed by Mulilo Renewable Project Developments (Pty) Ltd to obtain Environmental Authorisation for the Mercury Cluster Solar PV Project. The project will involve the development of Photo Voltaic (PV) solar facilities on privately owned land in the vicinity of Viljoenskroon in the Free State Province, together with associated grid connections (power lines) to connect the solar farms to the existing Mercury Transmission Substation (MTS).

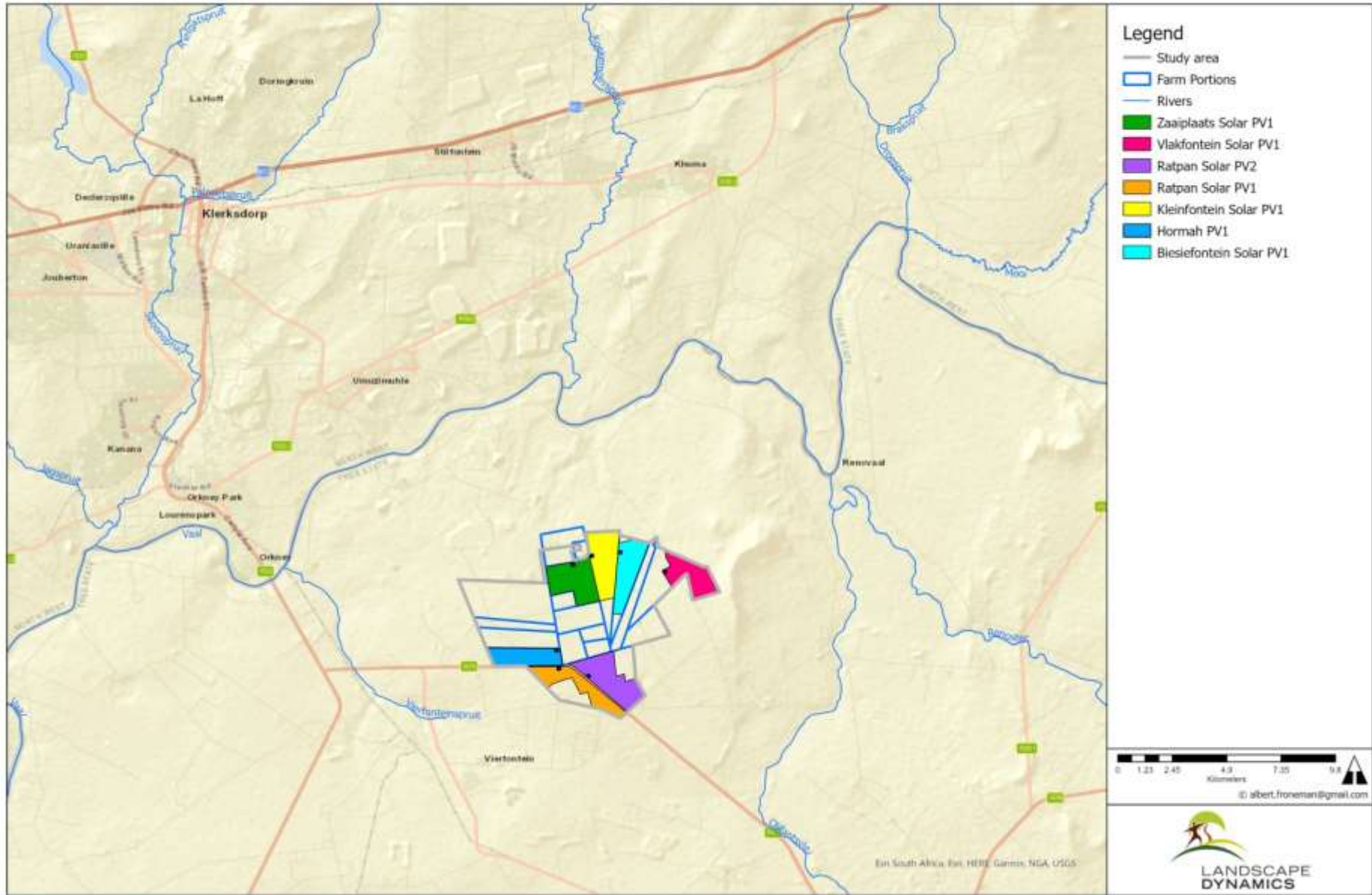
This Background Information Document (BID) serves as notice in terms of Regulation 41 published in Government Gazette R982 promulgated in terms of the National Environmental Management Act, 1998 (Act No 107 of 1998) and the 2014 EIA Regulations as amended, of the intent to develop the proposed Mercury Cluster Project. This document provides you with a brief description of the proposed project and the Environmental Impact Assessment (EIA) process that will be followed, as well as giving you the opportunity to:

- Register as an Interested and Affected Party (IAP) - Notifications regarding the process and the availability of reports will only be sent to registered IAPs; and
- Provide initial comments on any environmental, social and economic issue relating to the proposed development. Issues of concern and potential environmental and social impacts will be evaluated during the EIA process. Your comments will ensure that relevant issues are evaluated and addressed and will form part of the application to the authorities for decision-making.

PROJECT LOCALITY

The assessment area for the proposed PV Solar farms and grid connections is situated north and south of the R76 close to the town of Viljoenskroon in the Free State Province. It falls within the jurisdiction of the Moqhaka Local Municipality in the Fezile Dabi District Municipality.

MERCURY CLUSTER PROJECT: LOCALITY MAP



BACKGROUND TO THE PROJECT

The majority of the total assessment area of the 3 400 hectares site has a high agricultural sensitivity according to the Screening Tool of the Department of Forestry, Fisheries and the Environment (DFFE). The Subdivision of Agricultural Land Act (Act 70 of 1970) (SALA) requires that any long term lease or a change of land use on agricultural land be approved by the Department of Agriculture, Land Reform and Rural Development (DALRRD). It is one of the main reasons that a Basic Screening Assessment was done of the entire assessment area as indicated on the map on Page 4 of this document. The No Go areas in terms of terrestrial and aquatic ecology and wetlands as well as avi-fauna were also identified to guide decision-making by Mulilo. This approach was followed to ensure that areas that will definitely not be considered for approval by the authorities are excluded from further consideration and unnecessary time delays and cost expenditure. The outcome of this assessment was based on input obtained from the following specialists:

- Agriculture
- Avi-fauna
- Aquatic
- Fauna & Flora

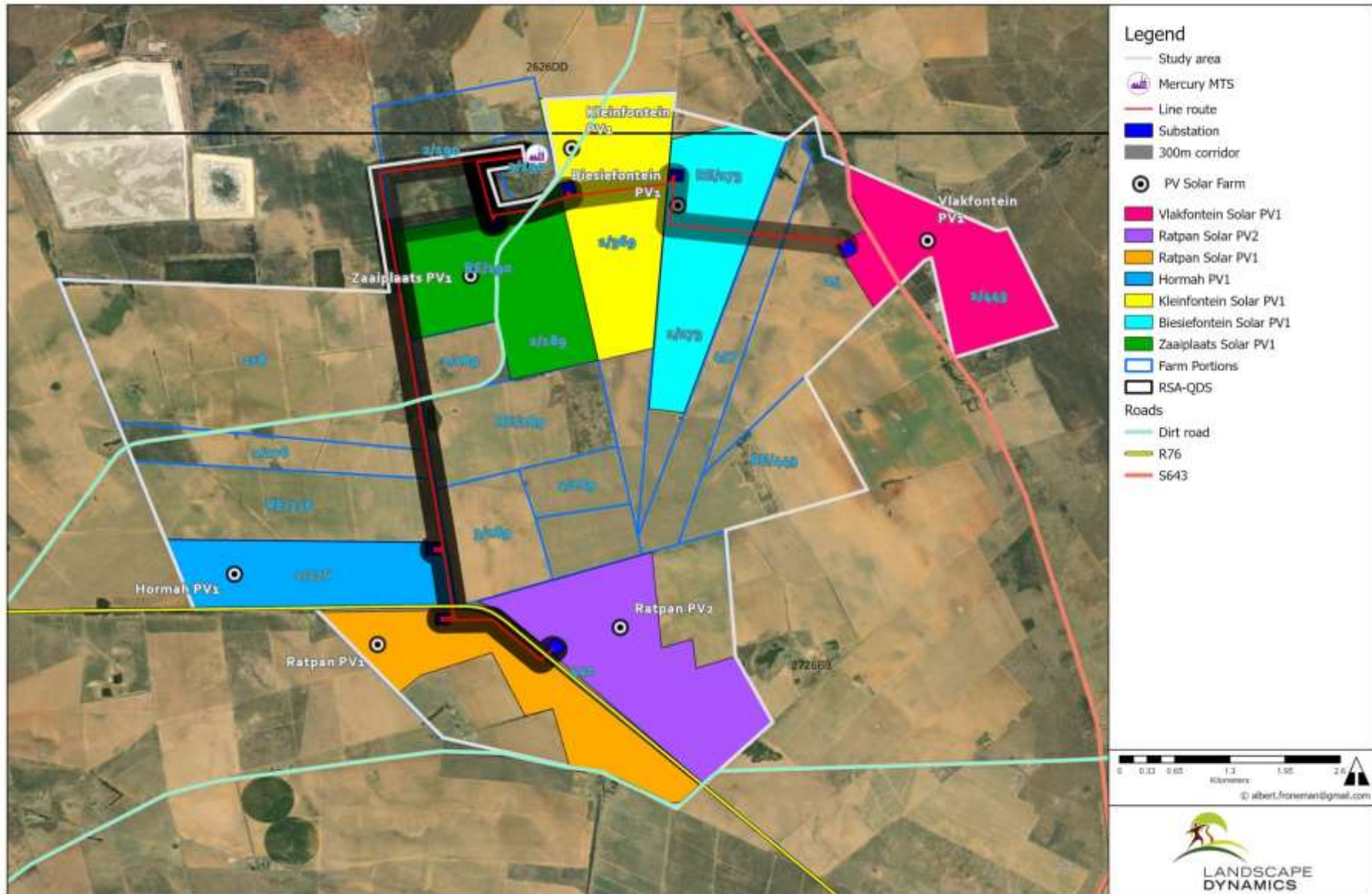
PROJECT DESCRIPTION

The fourteen proposed applications described below are the result from the Basic Screening Assessment referred to above, as well as consideration by Mulilo in terms of financial viability and landowner/farmer recommendations. ***The number of these applications can however change and/or the site areas could be redefined within the total assessment area during the course of the EIA process. Changes will be based on findings and recommendations from the specialists (which are currently underway) as well as comment received during the public participation process.***

Project components to be confirmed for each separate application could include the following:

- Solar PV Farm
- Battery Energy Storage Systems (BESS)
- Diesel storage facility of less than 500m³
- Auxiliary Generator Set (GENSET)
- 132kV Grid Connections with switching station/substations for each PV facility
- Laydown area for the construction period
- Operational & Maintenance Buildings
- Additional infrastructure (Access Roads - new and/or upgrade; stormwater; water pipelines, etc.)

MERCURY CLUSTER PROJECT TOTAL ASSESSMENT AREA AND PROPOSED SOLAR FARMS WITH GRID CONNECTIONS



AFFECTED PROPERTIES: SOLAR FARMS AND GRID CONNECTIONS

Solar Farm and affected properties	Approximate size in hectare	Grid Connection and affected properties	Approximate length (in a 300m corridor assessed)	Applicant
100MW Vlakfontein Solar PV1 <ul style="list-style-type: none"> Vlakfontein Nr 15 The Remainder of Jackalsfontein Nr 443 	240ha	<u>Vlakfontein Solar PV1 Grid Connection</u> <ul style="list-style-type: none"> The Farm Vlakfontein Nr 15 The Farm Uitval No 457 The Remainder of the Farm Biesiefontein No 173 Portion 1 of the Farm Biesiefontein No 173 Portion 1 of the Farm Kleinfontein No 369 The Remainder of the Farm Zaaiplaats, No 190 The Remainder of the Farm Moab No 279 Portion 3 of the Farm Zaaiplaats No 190 	5,6km	Vlakfontein Solar PV1 (Pty) Ltd
100MW Biesiefontein Solar PV1 <ul style="list-style-type: none"> The Remainder of the Farm Biesiefontein No 173 Portion 1 of Biesiefontein No 173 	253ha	<u>Biesiefontein Solar PV1 Grid Connection</u> <ul style="list-style-type: none"> The Remainder of the Farm Biesiefontein No 173 Portion 1 of Biesiefontein No 173 Portion 1 of the Farm Kleinfontein No 369 The Remainder of the Farm Zaaiplaats, No 190 The Remainder of the Farm Moab No 279 Portion 3 of the Farm Zaaiplaats No 190 	3km	Biesiefontein Solar PV1 (Pty) Ltd
100MW Kleinfontein Solar PV1 <ul style="list-style-type: none"> Portion 1 of the Farm Kleinfontein No 369 	300ha	<u>Kleinfontein Solar PV1 Grid Connection</u> <ul style="list-style-type: none"> Portion 1 of the Farm Kleinfontein No 369 The Remainder of the Farm Zaaiplaats No 190 The Remainder of the Farm Moab No 279 Portion 3 of the Farm Zaaiplaats No 190 	2,1km	Kleinfontein Solar PV1 (Pty) Ltd
100MW Zaaiplaats Solar PV1 <ul style="list-style-type: none"> The Remainder of the Farm Zaaiplaats No 190 Portion 2 of the Farm Fraai Uitzicht No 189 	308ha	<u>Zaaiplaats Solar PV1 Grid Connection</u> <ul style="list-style-type: none"> The Remainder of the Farm Zaaiplaats No 190 The Remainder of the Farm Moab No 279 Portion 3 of the Farm Zaaiplaats No 190 	1,2km	Zaaiplaats Solar PV1 (Pty) Ltd

<p><u>100MW Hormah Solar PV1</u></p> <ul style="list-style-type: none"> • Portion 2 of the Farm Hormah No 276 	220ha	<p><u>Hormah Solar PV1 Grid Connection</u></p> <ul style="list-style-type: none"> • Portion 2 of the Farm Hormah No 276 • The Remainder of the Farm Hormah, No 276 • Portion 1 of the Farm Hormah No 276 • The Remainder of the Farm, Gerar No 278 • Portion 3 the Farm Fraai Uitzicht No 189, • The Remainder of the Farm Fraai Uitzicht 189 • Portion 1 of the Farm Fraai Uitzicht, No 189 • the Remainder of the Farm Zaaiplaats No 190, Peet Botha Familie Trust • The Remainder of the Farm Moab No 279 • Portion 3 of the Farm Zaaiplaats No 190 	6km	Hormah Solar PV1 (Pty) Ltd
<p><u>100MW Ratpan Solar PV1</u></p> <ul style="list-style-type: none"> • The Farm Ratpan No 441 	370ha	<p><u>Ratpan Solar PV1 Grid Connection</u></p> <ul style="list-style-type: none"> • The Farm Ratpan No 441, Pretorius Johannes Andries • Portion 2 of the Farm Hormah No 276 • The Remainder of the Farm Hormah, No 276 • Portion 1 of the Farm Hormah No 276 • The Remainder of the Farm, Gerar No 278 • Portion 3 the Farm Fraai Uitzicht No 189 • Portion 1 of the Farm Fraai Uitzicht, No 189 • The Remainder of the Farm Zaaiplaats No 190 • The Remainder of the Farm Moab No 279 • Portion 3 of the Farm Zaaiplaats No 190 	6,8km	Ratpan Solar PV1 (Pty) Ltd
<p><u>75MW Ratpan Solar PV2</u></p> <ul style="list-style-type: none"> • The Remainder of the Farm Ratpan No 441 	345ha	<p><u>Ratpan Solar PV2 Grid Connection</u></p> <ul style="list-style-type: none"> • The Farm Ratpan No 441 • Portion 2 of the Farm Hormah No 276 • The Remainder of the Farm Hormah, No 276 • Portion 1 of the Farm Hormah No 276 • The Remainder of the Farm Gerar No 278 • Portion 3 the Farm Fraai Uitzicht No 189 • Portion 1 of the Farm Fraai Uitzicht, No 189 • The Remainder of the Farm Zaaiplaats No 190 • The Remainder of the Farm Moab No 279 • Portion 3 of the Farm Zaaiplaats No 190 	8km	Ratpan Solar PV2 (Pty) Ltd

LEGAL REQUIREMENT

The 2014 Environmental Impact Assessment Regulations as amended, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) have reference. Authorisation must be given by the relevant competent authority before any construction of the development may commence. The relevant competent authority is the Department of Forestry, Fisheries & the Environment (DFFE).

The relevant NEMA listed activities that could be triggered are provided below. Note that the list of activities will be confirmed during the course of the investigations and relevance will be confirmed for each application.

Listing Notice 1 (GN Nr 327)

- Activity Nr 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 275kV*
- Activity Nr 12: *The development of infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs within a watercourse or within 32metres of a watercourse, measured from the edge of the watercourse.*
- Activity Nr 14: *The development and related operation of facilities of infrastructure for the storage of for the storage, or for the storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.*
- Activity Nr 19: *The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal of moving of sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse.*
- Activity Nr 24: *The development of a road with a reserve wider than 13,5 metres or where no reserve exists where the road is wider than 8 metres.*
- Activity Nr 27: *The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of vegetation is required for (i) the undertaking of a linear activity,*
- Activity Nr 28: *Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes of afforestation on or after 1 April 1998 and where such development will occur (ii) outside an urban area where the total land to be developed is bigger than 1 hectare, excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.*

Listing Notice 2 (GN Nr 325)

- *Activity Nr 1: The development of facilities or infrastructure for the generation of electricity from a renewable resources where the electricity output is 20MW 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.*
- *Activity Nr 15: The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.*

Even though Listing Notice 2 is relevant, according to the regulations gazetted on 16 February 2018 in GN113 and GN114, a Basic Assessment process will apply for all of the applications (as compared to a full EIA process), because the study area is falling in its entirety within the Klerksdorp Renewable Energy Development Zone (REDZ) as well as the Central Strategic Transmission Corridor (STC). Also, a shortened timeframe of 57 days for the processing of an Application for Environmental Authorisation (instead of the normally required 107 days) once the final reports had been submitted, is applicable.

Listing Notice 3 (GN Nr 324) – triggered for the Free State Province because the total assessment area falls within a Critical Biodiversity Area and Endangered Ecosystem; and development will take place within a watercourse of wetland or within 100 metres from the edge of a watercourse or wetland; and it is potentially situated within 5kms from a nature reserve (to be confirmed).

- *Activity Numbers 4: The development of a road wider than 4 metres with a reserve less than 13,5metres.*
- *Activity Number 10: The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres.*
- *Activity Number 12: The clearance of an area of 300m² 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.*
- *Activity Number 14: The development of (ii) infrastructure or structures with a physical footprint of 10m² or more, where such development occurs (a) within a watercourse or (c) if no development setback has been adopted within 32 metres of a watercourse, measured from the edge of the watercourse.*
- *Activity Number 18: The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.*
- *Activity Number 23: The expansion of (ii) infrastructure or structures where the physical footprint is expanded by 10m² or more (a) within a watercourse or (c) if no development setback has been adopted within 32 metres of a watercourse, measured from the edge of the watercourse.*

BASIC ASSESSMENT PROCESS AND TIMEFRAME

The Basic Assessment process and timeframe entail in very broad detail the following steps:

Actions	Timeframe
Step 1 <ul style="list-style-type: none"> Project Initiation Preliminary Sensitivity Screening Assessment 	November and December 2021
Step 2 <ul style="list-style-type: none"> Specialist Investigations Kick-off of Public Participation Process (onsite notification, newspaper advertisement, compilation of List of Interested & Affected Parties and distribution of Background Information Document) 	February-April 2022
Step 3 <ul style="list-style-type: none"> Compilation of Draft Basic Assessment Reports 	April-May 2022
Step 4 <ul style="list-style-type: none"> Distribution of Draft Basic Assessment Reports for Review to registered IAPs (30-day commenting period) 	May-June 2022
Step 5 <ul style="list-style-type: none"> Submission of Final Basic Assessment Reports to DFFE for consideration of Environmental Authorisation 	July-August 2022
Step 6 <ul style="list-style-type: none"> Obtain Environmental Authorisation from DFFE (57 days review period) IAPs Notification of DFFE decision and appeal process 	October 2022

Additional Relevant Legislation

- Water Use Authorisation issued by the Department of Water & Sanitation could be required in terms of the **National Water Act, 1998 (Act Nr 36 of 1998)**. Section 21(c) '*impeding or diverting the flow of water in a watercourse*' and Section 21(i) '*altering the beds, banks, course or characteristics of a watercourse*' could be applicable – and more activities could be relevant. The relevant applications for Water Use Authorisation will be made with the Department of Water & Sanitation (DWS).
- The National Heritage Resources Act, 1999 (Act No 25 of 1999)** is triggered and relevant applications will be made with the South African Heritage Resources Authority (SAHRA).
- The **Subdivision of Agricultural Land Act (Act 70 of 1970)** is triggered and relevant applications will be made to the Department of Agriculture, Land Reform and Rural Development (DALRRD)

POTENTIAL IMPACT

Key negative impacts generally associated with solar farms that will be assessed in appropriate detail during the EIA process are the following:

- Loss of Agricultural Land
- Impact on Terrestrial and Aquatic Ecology and Wetlands
- Avi-faunal Impact
- Heritage Impact (Archaeology and Palaeontology)
- Visual Impact
- Socio-economic impact

Specialist input to be included in the Basic Assessment Reports will include the following:

- Fauna & Flora Impact Assessment
- Aquatic Impact Assessment
- Avi-fauna Impact Assessment & Monitoring
- Bat Impact Assessment Statement Letter
- Heritage Impact Assessment & Paleontology
- Visual Impact Assessment
- Socio-economic Impact Assessment
- Agricultural Study
- Traffic Impact Assessment
- High Level Risk Assessment
- RFI Assessment Statement Letter

REQUEST TO REGISTER AS A STAKEHOLDER AND PROVIDE INITIAL COMMENT

You are hereby invited to register as a stakeholder; confirm your interest in the proposed activity and provide your initial input by responding to the following:

Landscape Dynamics Environmental Consultants

info@landscapedynamics.co.za

Enquiries: Annelize Erasmus: Tel 082 566 4530 / Susanna Nel: Tel 082 888 4060

Your initial comments must reach Landscape Dynamics within 30-days (excluding public holidays) from the date of this notice, in other words not later than 3 May 2022 to ensure that they are included and addressed in the Draft Basic Assessment Reports to be prepared for each application for environmental authorisation. Note that this BID provides an overview of the seven proposed solar PV farms and the grid connection for each PV solar farm – a total of fourteen applications within the total assessment area. Each application will be handled in a separate report and you will be provided with the opportunity to comment on each of them, once it becomes available.