

# Basic Assessment for the proposed construction of a 132kV power line associated with the 75MW Concentrating Photovoltaic (CPV)/ Photovoltaic (PV) Plant on the Farm Droogfontein (PV 2) in Kimberley, Northern Cape Province

**SIVEST**



NEAS Ref: DEA/EIA/0001334/2012

DEA Ref No for PV 2 Powerlines: 14/12/16/3/3/1/508/1

## INTRODUCTION

Eskom intend to provide infrastructure for the electricity generated from the proposed Concentrating Photovoltaic (CPV) / Photovoltaic (PV2) Plant being developed by South Africa Mainstream Renewable Power Droogfontein PV 2 (Pty) Ltd on the farm Droogfontein in Kimberley. An Environmental Impact Assessment (EIA) was conducted for the CPV/PV Plant, however this EIA had not included the above proposed 132kV power line, and hence a Basic Assessment (BA) application process needs to be followed specific to the above power line.

According to the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended, a Basic Assessment process is required for the construction of the proposed power lines as several listed activities are triggered which require investigation.

## PURPOSE OF THIS DOCUMENT

The purpose of this Background Information Document (BID) is to inform interested and/or affected parties (I&APs) about the Basic Assessment (BA) that is being conducted for the proposed development specific to the CPV/PV2 132 kV power line.

In addition to supplying information about the proposed project and the BA process, this BID will also provide I&APs with the opportunity to:

- better understand the proposed project in order to provide comments and raise issues of concern;
- understand the environmental authorisation process in order to participate effectively;
- raise issues of concern and/or submit suggestions related to this application to enhance the proposed project;
- contribute local knowledge; and
- comment on the specialist studies that will be conducted.

on the outskirts of the town of Kimberley (adjacent to the Riverton Road).

## Proposed Route Alternatives

There are 4 proposed PV 2 powerline route alternatives that will be assessed during the Basic Assessment. These are as follows:

- Alternative 1A - approximately 6.2 km (purple)
- Alternative 1B – approximately 8.6 km (blue)
- Alternative 2A – approximately 7.3 km (green)
- Alternative 2B - approximately 8.2 km (orange)

These proposed alignment alternatives are indicated on the locality map on page 2 (Figure 1 for CPV/PV 2 power lines).

## PROPOSED CONSTRUCTION SCHEDULE AND METHODOLOGY FOR CONSTRUCTING THE POWERLINES

## OBJECTIVE OF THE PROJECT

The proposed power line is required for the transmission of electricity from the Droogfontein CPV/PV2 plant that will generate electricity to feed into the Eskom's national electricity grid.

## PROJECT INFORMATION

The proposed project consists of:

- Construction of 1 x 132 kV overhead power line from the proposed Droogfontein CPV/PV 2 substation and will loop-in to the existing Macfarlane-Kimberley/Macfarlane-Winsorton 132 kV power line to be agreed with Eskom.
- Construction of an access track along the power line servitude.

## Location of the Proposed Power line

The site falls within the boundaries of the Sol Plaatje Local Municipality and in the greater Francis Baard District Municipality,

## Timeframe

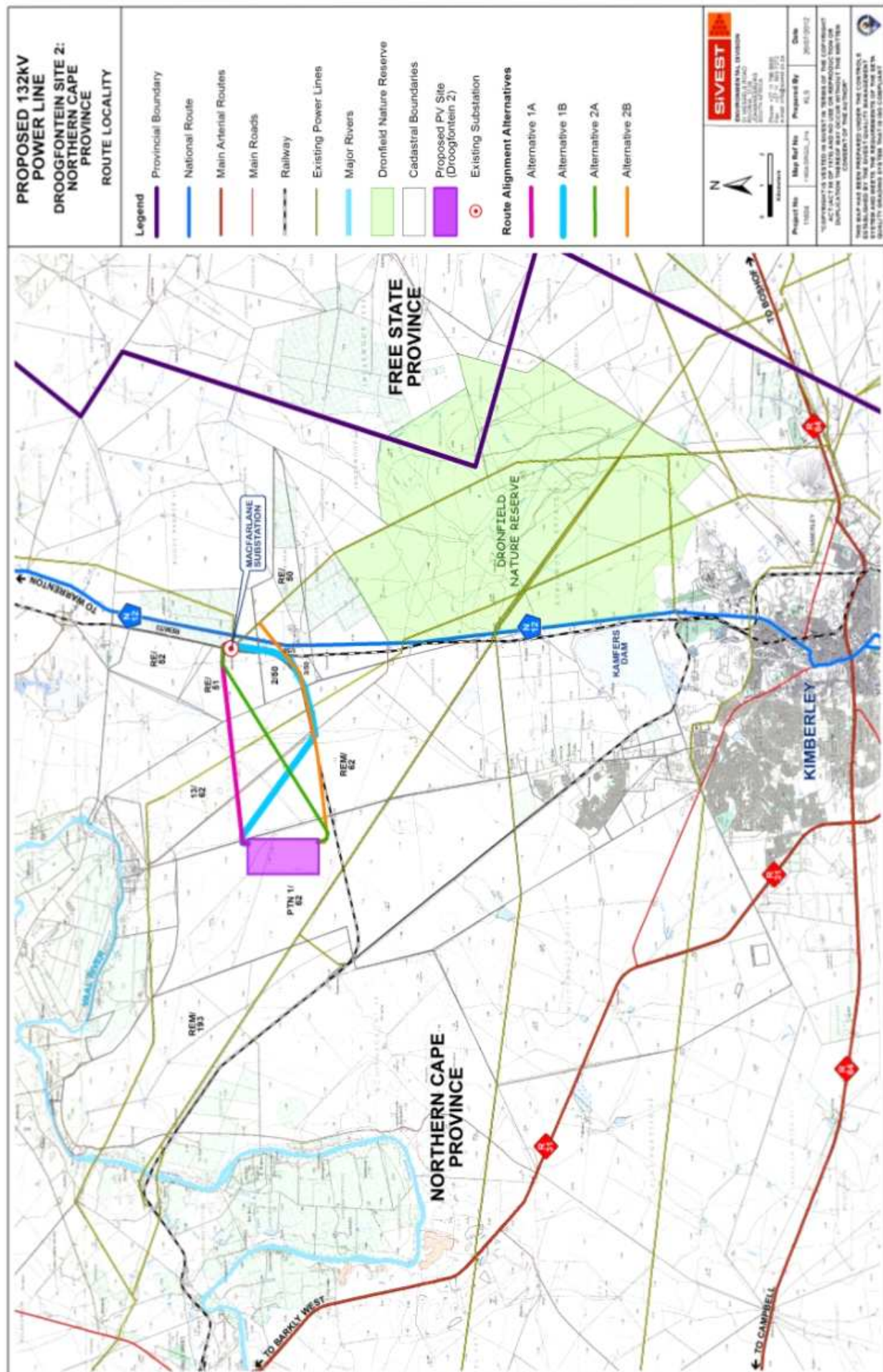
Depending on the issuing date of the Environmental Authorisation (EA), should it be granted by Department of Environmental Affairs (DEA), it is proposed that construction will commence in 2013. The construction period is estimated to be six (6) months in total. This includes the clearing of the servitude, construction of the towers, stringing of the conductors, and commissioning of the powerlines.

## Rehabilitation of servitude after construction

A Construction Environmental Management Programme (CEMP) will be established which will, amongst other requirements, detail the rehabilitation of any disturbed areas resulting from construction works.

The appointed Environmental Control Officer (ECO) on site will ensure that all disturbed areas are stabilised as soon as possible after construction and the area is rehabilitated as close to the original condition as possible, as per the CEMP. Rehabilitated areas that are susceptible to erosion due to their position in the landscape will be adequately protected by soil conservation measures.

**Figure 1: Locality Map for Droogfontein CPV/PV 2 132kV Powerline route alternatives**



The power lines will consist of a series of towers located approximately 200m apart, depending on the terrain and soil conditions. It is proposed that the Steel Monopole Suspension tower type (e.g. ESKOM D-DT 7611 & D-DT 7612) will be used for the proposed power lines. This tower is between 16m and 22m in height and each tower will have a footprint of between 1.21m<sup>2</sup> and 16.81m<sup>2</sup>. A diagram of the proposed tower is included in Figure 2 below.

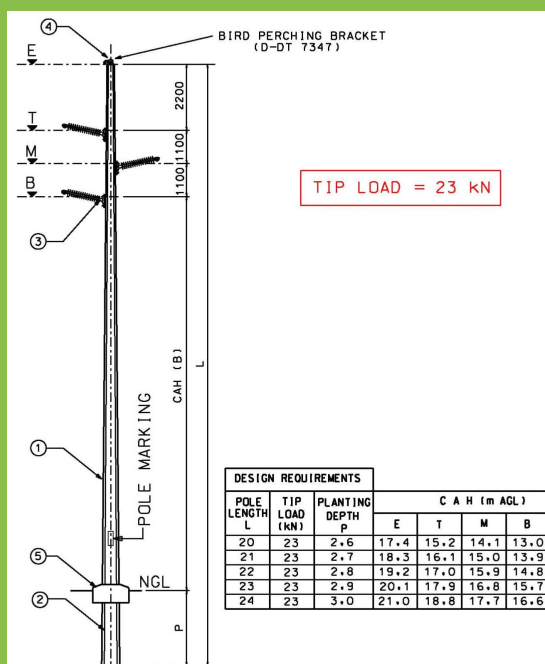


Figure 2:  
Tower  
Type

## Employment opportunities during construction

A contractor will be appointed for the construction of the proposed powerlines and should any local labour force be required, the appointed contractor will source the labour force through established structures, for example, the Local Municipality.

- Power lines: As the construction of power lines requires highly skilled personnel, and are mainly constructed by the utilisation of specialized machinery, it is not envisaged that additional labour force will be required for this proposed project.
- Ancillary (additional) infrastructure: The construction/ temporary erection of ancillary infrastructure might require the use of local labour and as mentioned above, construction workers will be sourced locally, as far as possible.

## Health (Possible Impacts of Electro-Magnetic Fields – EMFs)

Power lines are designed and built to comply with the Occupational Health and Safety (OHS) Act (Act 85 of 1993). As long as activities under the power line comply with the servitude conditions, they are safe to undertake. EMF effects decrease as distance from the powerline increases and any living quarters outside the servitude will not be affected by the powerline as radiation from the power line is nil at the edge of the servitude. A report on EMFs is available on Eskom's website ([www.eskom.co.za/c/25/facts-figures/](http://www.eskom.co.za/c/25/facts-figures/)) should further clarity be sought on this subject.

## BASIC ASSESSMENT PROCESS

### What is a Basic Assessment?

A Basic Assessment (BA) is a process of collecting, organising analysing, interpreting and communicating information that is relevant for the consideration of a particular application. BAs, as opposed to full Environmental Impact Assessments (EIAs), are

undertaken where the impacts are less likely to have significant impacts on the receiving environment.

BAs are used by planning authorities/developers to obtain an independent and objective view of the potential environmental (biophysical and social) impacts that could arise during the construction and operation of the proposed development. This information needs to provide the Competent Authority with a sound basis for their decision-making. Environmental management and mitigation measures are also identified through the BA process.

## National Environmental Management Act (NEMA)

The Basic Assessment process, as presented in Figure 2, will be conducted in accordance with the Environmental Impact Assessment (EIA) Regulations 2010 promulgated in terms of Sections 24 (5) read with section 44 of the National Environmental Management Act (No. 107 of 1998) (NEMA), as amended, in Government Notice (GN) No. R543.

The proposed project triggers activities in terms of Government Notice (GN) No. 544 (18 June 2010): Listing Notice 1:

Government Notice	Activity Number	Activity Description
R. 544 (18 June 2010)	10	The construction 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
R. 544 (18 June 2010)	11	The construction of: (xi) infrastructure or structures covering 50 square metres or more  where such construction occurs within a water course or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.
R. 544 (18 June 2010)	13	The construction of facilities or infrastructure 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 but not exceeding 500 cubic metres
R. 544 (18 June 2010)	22	The construction of a road, outside urban areas, ii. where no reserve exists where the road is wider than 8 metres
R. 544 (18 June 2010)	24	The transformation of land bigger than 1000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this schedule such land was zoned open space, conservation or had an equivalent zoning.
Government Notice R544 (18 June 2010)	38	The expansion of facilities for the transmission and distribution of electricity where the expanded capacity will exceed 275 kilovolts and the development footprint will increase.



## Competent Authority

The Competent Authority, as described according to the EIA Regulations, for this proposed project is the National Department of Environmental Affairs (DEA).

The Basic Assessment Process to be followed is illustrated in Figure 3 below:

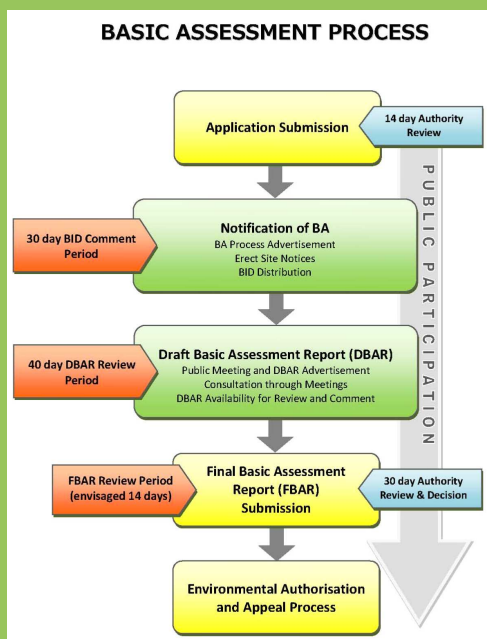


Figure 3:  
Basic Assessment  
Process  
Diagram

## Environmental Issues to be Investigated during the BA

Environmental issues to be investigated during the BA include the following:

- Ecology (Flora and Fauna)
- Avifauna
- Surface Water
- Agriculture and Soils
- Visual Impact
- Heritage

- Geotechnical
- Social

## THE PUBLIC PARTICIPATION PROCESS

The key objective of public participation during this BA will be to provide I&APs with sufficient and relevant information and to conduct a transparent consultation process on an on-going basis, in order to ensure effective participation throughout the BA process. As part of this public participation process you will also be provided with the opportunity to comment on the environmental findings as per the BA Report, which will be made available for public review and comment during the process.

You will receive personal notification by-mail, facsimile and/or sms of all documents available for comment, and due dates for comment at every stage.

### How to become involved

- Respond (by phone, fax or e-mail) to our invitation for your participation, which has been advertised in the printed media.
- Mail, fax or e-mail the attached Registration and Comment Form to SiVEST.
- Contact us telephonically should you have a query, comment or require further project information.
- Review the draft Basic Assessment Report within the review periods that will be stipulated in the advertisement.

By completing and submitting the accompanying Registration and Comment Form, you automatically register yourself as an I&AP for this proposed project, ensuring that your comments and/or concerns raised regarding the proposed project will be noted.

The public participation consultants will respond to all comments and queries received during the course of the project.

Please be informed that all relevant public documents can be downloaded from the SiVEST's website ([www.sivest.co.za/Downloads](http://www.sivest.co.za/Downloads) - select Droogfontein PV 2 Power Lines Basic Assessment)

***We look forward to your contributions.***

## COMMENTS AND QUERIES

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