



## **SOUTH AFRICA MAINSTREAM RENEWABLE POWER DROOGFONTEIN PV 2 (PTY) LTD**

---

### **Proposed construction of a 75 MW Concentrating Photovoltaic (CPV)/ Photovoltaic (PV) plant on the Farm Droogfontein in Kimberley, Northern Cape Province**

Motivation for the Amendment of the Environmental  
Authorization - Ref #12/12/20/2024/1

Issue Date: 25 May 2012  
Revision No.: 1  
Project No.: 10273

<b>Date:</b>	25 May 2012
<b>Document Title:</b>	Construction of a 75MW CPV/PV Plant on the Farm Droogfontein in, Kimberley, Northern Cape Province: EA Amendment Application Motivation Report
<b>Author:</b>	Faith Kalibbala
<b>Revision Number:</b>	1
<b>Checked by:</b>	Rebecca Thomas
<b>Approved:</b>	Kelly Tucker
<b>Signature:</b>	
<b>For:</b>	SOUTH AFRICA MAINSTREAM RENEWABLE POWER DROOGFONTEIN PV 2 (PTY) LTD

COPYRIGHT IS VESTED IN SiVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR

The Independent Environmental Assessment Practitioner in terms of Regulation 17(1):

We, SiVEST Environmental, declare that we –

- act as the Independent Environmental Assessment Practitioners in this application for the proposed construction of a Concentrating Photovoltaic/ Photovoltaic (CPV/ PV) Plant on the farm Droogfontein in Kimberley, Northern Cape Province of South Africa.
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2010;
- have and will not have any vested interest in the proposed activity proceeding;
- have no, and will not engage in, conflicting interests in the undertaking of the activity; and
- will provide the competent authority with access to all information at our disposal regarding the application, whether such information is favourable to the applicant or not.

**SOUTH AFRICA MAINSTREAM DROOGFONTEIN PV 2 (PTY) LTD**

**PROPOSED CONSTRUCTION OF A CPV/ PV PLANT ON THE FARM  
DROOGFONTEIN IN KIMBERLEY, NORTHERN CAPE**

**MOTIVATION FOR AMENDMENT OF ENVIRONMENTAL  
AUTHORISATION**

**Executive Summary**

South Africa Mainstream Renewable Power (Pty) (hereafter referred to as Mainstream) Ltd obtained an Environmental Authorisation (EA) for the proposed construction of a 150MW CSP (Concentrating Solar Power) and a 50MW CPV/ PV (Concentrating Photovoltaic) plant in Kimberley, Northern Cape Province, South Africa (DEA Reference 12/12/20/2024/1) on 02 November 2011.

Following the environmental authorisation for the CSP plant it became evident to Mainstream that the CSP technology would no longer be viable due to financial viability and based on the criteria for the Bid process stipulated by the Department of Energy. Mainstream is therefore now proposing to replace the 150MW CSP plant with two 75MW PV plants. It is important to note that the environmental authorisation for the CSP was obtained in the development company name, that is, South Africa Mainstream Renewable Power (Pty). However for the amendment application each 75MW PV plant application has been assigned a Special Purpose Vehicle (SPV) name. The SPV name assigned to the first 75MW PV application is South Africa Mainstream Droogfontein PV 2 (Pty) Ltd (herein referred to as Droogfontein PV 2). The SPV name assigned to the second 75MW PV application is South Africa Mainstream Renewable Power Droogfontein PV 2 (Pty) Ltd (hereafter referred to as Droogfontein PV 3). This motivation focuses on Droogfontein PV 2. Droogfontein PV 3 is a separate application (DEA Reference: 12/12/20/2024/1/1) and is located adjacent to the Droogfontein PV2 site. A separate Amendment Application and Motivation will be submitted simultaneously for Droogfontein PV 3.

In terms of Condition 1.4 of the EA and section 39 of the Environmental Impact Assessment Regulations of June 2012, an applicant can apply to the relevant competent authority for the amendment of the EA if there is a material change in the circumstances which existed at the time of granting of the EA. After consultation with the DEA, a letter dated 30 April 2012 (Appendix 1) was issued from the DEA advising SiVEST of the procedure to be followed with regards to the submission of the amendment application and motivation report for a substantive amendment.

SiVEST on behalf of the applicant is therefore applying for amendment to the EA and has prepared this motivation report for the amendment in accordance to the request from the DEA dated 30 April 2012. This motivation report is an amendment to the final EIR dated (05 July 2011) and it serves to address the following in respect to the amendment being requested:

- Inclusion of all envisaged environmental impacts that may be caused by the proposed development;
- Revised specialist studies that have been conducted to reflect the change in technology and consider cumulative impacts;
- Conduct a Public Participation Process as referred to in Regulation 54 to bring the proposed amendment to the attention of potential Interested and Affected Parties;
- Consultation with various stakeholders including but not limited to the Northern Cape Department of Environmental and Nature Conservation (NC DENC), the South Africa Heritage Resource Agency (SAHRA), the National Department of Agriculture Forestry and Fisheries (DAFF), the Department of Water Affairs (DWA), Eskom Holdings (SOC) Limited, Local and District Municipalities and any other stakeholders which deal with environmental matters within the Province will be done and comments will be forwarded to the Department with the amendment application documentation;
- Proof of correspondence with the various stakeholders will be included in the final amendment application and motivation report submitted to the DEA. Should SiVEST be unable to obtain comments, proof will be submitted to the Department of the attempts that were made to obtain those comments.

In terms of Regulation 56 of the EIA Regulations (2010), an opportunity is now provided for registered interested and affected parties to submit written comment on the abovementioned amendment application.

The proposed project involves the construction of a CPV/ PV plant. Layout alternatives have been investigated and these relate to the location of the associated infrastructure on the site. These are illustrated below:

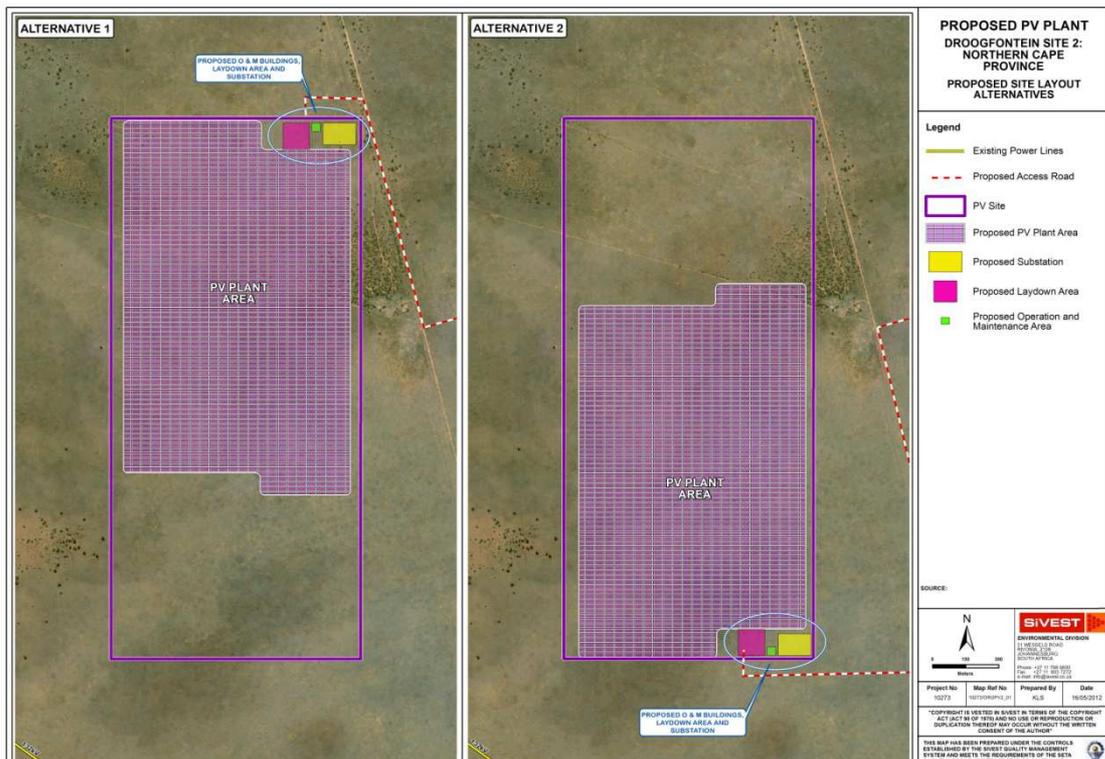


Figure i: Site layout alternatives for CPV/PV2

Kimberley falls within the bioregion described by Mucina *et al.*, 2006 as the Eastern Kalahari Bushveld Bioregion within the Savanna Biome.

Kimberley Thornveld is the only vegetation type present in the study area

Several specialist studies were revised for the motivation for amendment as requested by the DEA. These included:

- Biodiversity (including fauna, flora and avifauna) Assessment
- Surface Water Impact Assessment
- Groundwater Study
- Tourism Assessment
- Visual Impact Assessment
- Heritage Assessment
- Socio-economic Impact Assessment
- Geotechnical Assessment
- Stormwater Management Plan
- Compliance with Equator Principles

Table i: Summary of findings

<b>Environmental Parameter</b>	<b>Summary of major findings</b>	<b>Recommendations</b>
Biodiversity Impact Assessment	No fatal flaws are present on the site however some potentially sensitive areas are present namely the pans and thornveld areas. These areas exhibit sensitivities in terms of species present (Bullfrogs present, White backed vultures present). Very few if any Camel Thorn trees will be affected by the proposed development. The actual footprint is not an issue. Birds are the faunal grouping which could be affected the worst by the proposed development however suitable mitigation measures can reduce these impacts.	Strict mitigation measures must be in place and must be implemented. Monitoring is required
Surface Water Impact Assessment	No surface water features on site	No surface water features were identified on site and in the immediate area of the PV/CPV site therefore no

		impacts are expected.
Groundwater Impact Assessment	The proposed development has not been identified as a major risk to groundwater however minor risks associated with hydrocarbons are present which require management.	Stringent implementation of mitigation measures.
Visual Impact Assessment	It was established that the proposed development will have a moderate visual impact on motorists travelling along the Riverton road. Very Low visual impacts are expected along N12 highway as well as visitors using the self drive game routes within the Dronfield Nature Reserve. The proposed solar energy facility will have a negative low visual impact during construction and operation, with very few mitigation measures available	Mitigation measures suggested in the visual study must be implemented to reduce potential visual impacts.
Heritage Impact Assessment	No heritage features have been identified within the proposed PV site. Heritage sensitive areas are present in the surrounding area. Several Palaeontology features have been identified in the wider site	Strict implementation of mitigation and management measures. Consultation with SAHRA through a heritage specialist for the duration of construction.
Tourism Impact Assessment	The CPV/ PV is distant from a major tourist route (N12) and a major tourist destination (Dronfield Nature Reserve). It is anticipated that tourists travelling along N12 and those within the Nature Reserve will not view the proposed power plant in this area. Therefore the sensitivity of CPV/ PV plant is considered low. However Riverton road which is potentially utilised by tourists travelling to the Riverton Pleasure Resort on	Vegetation clearing should be minimised and the area rehabilitated as soon as possible to minimise visual impacts along Riverton road.

	<p>the banks of the Vaal River where a number of adventure and water sport activities take place. Visual impacts along Riverton road are considered moderate according to the visual study.</p>	
	<p>On a positive note, the impact of the proposed development on corporate demand for tourism facilities is anticipated to be minimal as the professional team on the project is expected to be small.</p>	<ul style="list-style-type: none"> <li>▪ Creating demand through appropriate marketing of tourism assets in the area.</li> <li>▪ Improvement of tourism infrastructure by establishing an up to date tourism information office so as to increase tourism demand.</li> <li>▪ Identification and Development of new tourist attractions</li> <li>▪ Creating demand through appropriate marketing of tourism assets in the area.</li> </ul> <p>The above recommendations are not be implemented by the proponent but rather by the respective tourism bodies in the study area</p>
<p>Socio-economic Impact Assessment</p>	<p>Some negative social impacts have been identified however these are able to be mitigated. Several positive impacts associated with the proposed development have also been identified such as a corporate social investment plan to address the high levels of poverty and unemployment in the local community. The proposed development is in line with the SDF and provides</p>	<p>Social issues identified during the EIA phase are addressed during construction. This could be done by engaging social specialists where necessary or by ensuring that ECOs used during construction have the necessary knowledge and skills to identify social problems and address these when necessary. Guidelines on managing possible social changes and impacts could be</p>

	<p>an opportunity for reviving the tourism environment of Kimberley.</p>	<p>developed for this purpose.</p> <p>Neighbouring landowners are informed beforehand of any construction activity that is going to take place in close proximity to their property. Prepare them on the number of people that will be on site and on the activities they will engage in.</p> <p>Employees are aware of their responsibility in terms of Mainstream's relationship with landowners and communities surrounding the site. Implement an awareness drive to relevant parts of the construction team to focus on respect, adequate communication and the 'good neighbour principle.'</p> <p>All mitigation measures in the SIA that are relevant to the construction phase are incorporated in the EMP to ensure that Mainstream and the contractor adhered to these</p>
--	--	--

These specialist studies were conducted to address the potential impacts relating to the proposed development that were identified. An impact assessment was conducted to ascertain the level of each identified impact, as well as mitigation measures which may be required. The potential positive and negative impacts associated within these studies have been evaluated and rated accordingly. The results of the specialist studies have indicated that no fatal flaws exist as a result of the proposed CPV/PV power plant and associated infrastructure.

Based on the findings of the specialist studies, there were no major environmental issues or concerns related to the proposed PV field alternatives as well as associated infrastructure alternatives. As such, all alternatives, except the No go alternative, are deemed to be equally preferable.

It is the opinion of the EAP that the proposed project be allowed to proceed provided that the recommended mitigation measures are implemented.