

Sediba Solar Power Plant (DFFE Ref.: 14/12/16/3/3/2/2086) – Split Matrix

**Please note that the information of the new amendment process is also indicated below. These changes will need to be included in the EA splits should the DFFE approve the requested amendments.*

Project information as per the Environmental Authorisation and all amendments to date		Splitting of the Environmental as per the following project components (relevance indicated in green):	
		Solar Facility and IPP Substation (i.e. on-site facility substation)	Overhead power line & switchyard (including the Eskom side of the on-site facility substation)
Location of the activity (page 1 of the EA)	Solar Power Plant: Remaining extent of the farm Kliprug No. 344	Relevant	
	Grid Connection Corridor: Remaining extent of the farm Kliprug No. 344, farm Klipbos No. 445, Ward 4, Ngwathe Local Municipality, Free State Province		Relevant
Details of the EA Holder (page 2 of the EA)	<p>Sediba Solar Power Plant (RF) (Pty) Ltd</p> <p>Mr. Dick Berlijn</p> <p>PO Box 785553</p> <p>Sandton</p> <p>2146</p> <p>Telephone number: +27 01 500 3680</p> <p>Cellphone number: +27 742 488 488</p> <p>Email: berlijn@subsolar.co.za</p>	Relevant	Relevant
Listed Activities Authorised (page 3-5 of the EA) – including the activity number and the activity description related to the authorised development	<p><u>GN R. 327 Item 11 (i)</u></p> <p>"The development of facilities or infrastructure for the transmission and distribution of electricity</p> <p>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts. "</p> <p><u>Activity description:</u> The proposed photovoltaic solar facility will transmit and distribute electricity of 132 kilovolts outside an urban area. The infrastructure required to be developed includes one 132kV power line and a 132kV on-site substation.</p>	Relevant	Relevant
	<p><u>GN R. 327 Item 14</u></p> <p>The development and related operation 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 cubic metres or more but not exceeding 500 cubic metres.</p> <p><u>Activity description:</u> The proposed development will need to develop infrastructure for the storage and handling of dangerous goods (diesel and oils) in closed containers to be located on bunded surfaces with a capacity of 80 cubic metres, to be located within the development footprint of the project.</p>	Relevant	Relevant
	<p><u>GN R. 327 Item 24 (ii)</u></p> <p>"The development of a road</p> <p>(ii) with reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 meters.</p> <p><u>Activity description:</u> The internal roads of the solar power plant will vary between 6 and 12 meters in width.</p>	Relevant	
	<p><u>GN R. 327 Item 28(ii)</u></p> <p>"Residential, mixed, retail, commercial industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 1998 and where such development</p> <p>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare. "</p>	Relevant	Relevant

<p><u>Activity description:</u> The portions of the affected farm have been previously used for grazing and the property will be re-zoned to "special" use. The development footprint of the project will be 245ha (which was assessed within a 270ha area within the affected property)</p>		
<p><u>GNR. 327. Item 56 (ii)</u> "The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre (ji) where no reserve exists, where the existing road is wider than 8 metres. <u>Activity description:</u> The existing access does not have a reserve and will need to be widened by more than 6 metres.</p>	Relevant	
<p><u>GN R. 325 Item 1:</u> "The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more. " <u>Activity description:</u> The photovoltaic solar facility will generate up to 150 megawatts electricity.</p>	Relevant	
<p><u>GN R. 325 Item 15:</u> "The clearance of an area of 20 hectares or more of indigenous vegetation." <u>Activity description:</u> In terms of vegetation type the preferred site falls within the Dry Highveld Grassland Bioregion, more precisely the Vredefort Dome Granite Grassland which is described by Mucina and Rutherford (2006) as 'endangered'. Activity 15 is triggered since portions of the site has not been lawfully disturbed during the preceding ten years; therefore, more than 20 hectares of indigenous vegetation will be removed. The development footprint of the project will be 245ha (which was assessed within a 270ha area within the affected property).</p>	Relevant	
<p><u>GN R. 324, Item 4 (b)(i)(ee)(gg):</u> The development of a road wider than 4 metres with a reserve less than 13,5 metres (b) in the Free State, (i) outside urban areas, within (ee) critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans and (gg) areas within 10 kilometres from national parks or world heritage sites" <u>Activity description:</u> The internal roads will vary between 6 and 12 meters in width and will not have a reserve of more than 13,5 metres. The project is located in the Free State Province, outside urban areas. A portion of the proposed power line corridor (Option 2) is located within a CBA 2, which will include a service road of 4-5 metres. The project is located within 10 km of the Vredefort Dome World Heritage Site.</p>	Relevant	Relevant
<p><u>GN R. 324, Item 10 (b)(i)(gg)(hh)</u> "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 (b) in the Free State, (i) outside urban areas, in (gg) areas within 10 kilometres form national parks or world heritage sites and (hh) areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland." <u>Activity description:</u> The proposed development will need to develop infrastructure for the storage and handling of dangerous goods (diesel and oils) in containers with a capacity of 80 cubic metres. The project is located within the Free State Province, within 10 km of the Vredefort Dome World Heritage Site and valley bottom wetlands are located in close proximity to the site. Therefore, the development will take place within 10 km of a World Heritage Site and within 100 m of the edge of a watercourse or wetland.</p>	Relevant	Relevant
<p><u>GN R. 324, Item 12 (b)(i)(ii)(vi):</u> The clearance of an area of 300 square metres or more of indigenous vegetation (b) in the Free State</p>	Relevant	Relevant

	<p>(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</p> <p>(ii) within critical biodiversity areas identified in bioregional plans and</p> <p>(vi) areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland."</p> <p><u>Activity description:</u> The proposed development is located in the Free State province and portions of the site has not been lawfully disturbed during the preceding ten years and therefore indigenous vegetation is present on the site. The site is located within the Vredefort Dome Granite Grassland which is classified as 'endangered'. A portion of the proposed power line corridor (Option 2) is located within a CBA 2. Valley bottom wetlands are located in close proximity to the site and located in the proposed power line corridor. Therefore, more than 300 square meters of indigenous vegetation, listed as endangered and which is classified as CBA 2, will be removed which is located within 100m of a watercourse. The development footprint of the project will be 245ha (which was assessed within a 270ha area within the affected property).</p>		
	<p><u>GN R. 324, Item 18 (b)(i)(gg)(hh):</u></p> <p>"The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre</p> <p>(b) in the Free State</p> <p>(i) outside urban areas</p> <p>(gg) areas within 10 kilometres form national parks or world heritage sites and</p> <p>(hh) areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland."</p> <p><u>Activity description:</u> The existing access road to the site will need to be widened by more than 4 metres. The project is located within the Free State Province, outside urban areas and within 10 km of the Vredefort Dome World Heritage Site. Valley bottom wetlands are located in close proximity to the site. Therefore, a road will be widened by more than 4 metres within 10 km of a World Heritage Site and within 100 m of a watercourse or wetland.</p>	Relevant	
Coordinates (page 6-7 of the EA)	Project Site	Relevant	
	Proposed Access	Relevant	Relevant
	<i>*AM1 requests two additional points to access the western portion of the PV facility, as well as the southern section of the eastern portion of the facility. This request is included as part of the Amendment Application Form as per Amendment 2</i>		
	On-site facility substation	Relevant	Relevant
	<i>*AM1 provides the coordinates of the IPP Substation and Eskom Substation that needs to be included in the respective EA. This request is included as part of the Amendment Application Form as per Amendment 1</i>		
	100m wide grid connection corridor (covers preferred grid connection point option 1)		Relevant
	Battery energy storage	Relevant	
21 SG Code (page 7 of the EA)	Solar Power Plant	Relevant	
	Remaining Extent of the farm Kliprug No. 344 – F0250000000034400000		
	Grid Connection Corridor Option 1 – Technically Preferred		Relevant
	Remaining Extent of the farm Kliprug No. 344 – F0250000000034400000		
	Farm Klipbos 445 – F0250000000044500000		
Technical details for the proposed facility (page 7 of the EA) – including the component and description / dimensions	Height of PV Panels = 6 meters	Relevant	
	Area of PV Array = 245 Hectares (development footprint) placed within an assessed area of 270ha	Relevant	
	Number of inverters required = Minimum 50	Relevant	
	Area occupied by inverter / transformer stations / substations / BESS = Central inverters +LV/MV trafo:20m ² HV/MV substation with switching station: 15 000m ²	Relevant (inverters, HV/MV substation with switching station, BESS)	Relevant (HV/MV substation with switching station)

	BESS: 4 000m ² <i>*AM1 requests the correction of the BESS size included above. Refer to Amendment 3 of the Amendment Application Form.</i>		
	Capacity of on-site sub- and switching station = Minimum 130MVA in HV/MV substation / 132kV	Relevant	Relevant
	Capacity of the power line = 132kV		Relevant
	Power Line servitude = 32m		Relevant
	Area occupied by both permanent and construction laydown areas = Permanent Laydown Area: 245ha Construction Laydown Area: ~2000m ² <i>*AM1 requests the correction of the extent included in the EA of the construction laydown area and inclusion of a second laydown area on the western portion of the PV facility. Refer to Amendments 3 and 5.</i>	Relevant (permanent, construction laydown and second laydown area)	Relevant (construction laydown and second laydown area)
	Area occupied by buildings = Security Room: ~60m ² Office: ~200m ² Staff Locker and Changing Room: ~200m ²	Relevant	Relevant
	Battery storage facility = Maximum height: 8m Maximum volume: 1740 m ³ Capacity: 500MW <i>*AM1 requests the correction of the BESS capacity included above. Refer to Amendment 4 of the Amendment Application Form.</i>	Relevant	
	Length of internal roads = approximately 20 km	Relevant	Relevant
	Width of internal roads = Between 6 and 12 meters	Relevant	Relevant
	Proximity to grid connection: Approximately 0.22km/220m (preferred grid connection corridor (Option 1), which will be a loop-in loop-out connection)		Relevant
	Height of fencing = Approximately 2.5 meters	Relevant	Relevant
Scope of authorisation (page 8-9 of the EA)	1. The proposed 150MW Sediba Photovoltaic Solar Power Plant to be located on the Remaining Extent of the farm Kliprug No. 344, the technically preferred 0.22km/220m long grid connection corridor (Option 1) located north-northeast of the project which will enable a connection from the proposed on-site substation to either the existing Parys Town - Scaffell 132kV power line or the existing Parys Rural - Parys Town 132kV power line, and the associated infrastructure are hereby approved as per the geographic coordinates cited in the table above.	Relevant The proposed 150MW Sediba Photovoltaic Solar Power Plant to be located on the Remaining Extent of the farm Kliprug No. 344, and the associated infrastructure are hereby approved as per the geographic coordinates cited in the table above.	Relevant The proposed grid connection corridor (Option 1), of 0.22km/220m in extent, located north-northeast of the 150MW Sediba Photovoltaic Solar Power Plant which will enable a connection from the proposed on-site substation to either the existing Parys Town - Scaffell 132kV power line or the existing Parys Rural - Parys Town 132kV power line, and the associated infrastructure are hereby approved as per the geographic coordinates cited in the table above.
	2. Authorisation of the activity is subject to the conditions contained in this Environmental Authorisation, which form part of the Environmental Authorisation and are binding on the holder of the authorisation	Relevant	Relevant
	3. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this Environmental Authorisation. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.	Relevant	Relevant
	4. The activities authorised may only be carried out at the property as described above.	Relevant	Relevant

	5. Any changes to, or deviations from, the project description set out in this Environmental Authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further Environmental Authorisation in terms of the regulations.	Relevant	Relevant
	6. The holder of an Environmental Authorisation must apply for an amendment of the Environmental Authorisation with the Competent Authority for any alienation transfer or change of ownership rights in the property on which the activity is to take place.	Relevant	Relevant
	7. This activity must commence within a period of ten (10) years from the date of issue of this Environmental Authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for Environmental Authorisation must be made in order for the activity to be undertaken.	Relevant	Relevant
	8. Construction must be completed within five (05) years of the commencement of the activity on site.	Relevant	Relevant
Notification of authorisation and right to appeal, commencement of the activity (page 9 of the EA)	Conditions 9-11 relates to the notification of registered I&APs of the decision and the appeals process, and the commencement of the activity, which may not commence until the period for the submission of appeals has lapsed. This is considered to be generic to an EA. It is assumed that these conditions will be included in each split EA.	Relevant	Relevant
Management of the activity (page 10-11 of the EA)	12. A final site layout plan for the PV facility, as determined by the detailed engineering phase and micro-siting, and all mitigation measures as dictated by the final site layout plan, must be submitted to the Department for approval prior to construction. A copy of the final site layout map must be made available for comments to registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final development layout map must be submitted to the Department for written approval, prior to commencement of the activity. All available biodiversity information must be used in the finalisation of the layout map. Existing infrastructure must be used as far as possible e.g., roads. The layout map must indicate the following: 12.1. The position of the solar PV panels; 12.2. All associated infrastructure; 12.3. The finalised access route; 12.4. The on-site and/or switching substation, indicating the Independent Power Producer's section and Eskom's section; 12.5. The specific position of the powerline route, with pylon structures and foundation footprints; 12.6. All sensitive features; and 12.7. All "no-go" and buffer areas.	Relevant, except for the power line requirements.	Relevant, except for the PV facility requirements
	13. The Generic Environmental Management Programme (EMPr) for the overhead electricity transmission and distribution infrastructure submitted as part of the EIAR is approved. The final micro-sited and pegged powerline route layout plan must be appended to Part B of the generic EMPr.		Relevant
	14. The generic Environmental Management Programme (EMPr) for the substation (the relevant section that will be maintained by the Independent Power Producer), submitted as part of the final EIAR dated December 2021, is approved. The final site layout plan of the on-site and/or switching substation, depicting the Independent Power Producer's section and Eskom's section, must be appended to Part B of the generic EMPr.	Relevant	Relevant
	15. The Environmental Management Programme (EMPr) for the PV facility, submitted as part of the EMPr is not approved and must be amended to include measures, as dictated by the final site lay-out map and micro-siting, and the provisions of this environmental authorisation. The EMPr must be made available for comments to registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments, Once amended, the final EMPr must be submitted to the Department for written approval prior to commencement of the activity.	Relevant	
	16. The EMPr amendment must include the following: 16.1. The requirements and conditions of this environmental authorisation;	Relevant	

	<p>16.2. All recommendations and mitigation measures recorded in the EIAr and the specialist reports as included in the final EIAr dated December 2021;</p> <p>16.3. A re-vegetation and habitat rehabilitation plan to be implemented during the construction and operation of the facility. Restoration must be undertaken as soon as possible after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats. This plan must ensure to include drainage features that will be infilled and or excavated;</p> <p>16.4 A storm water and wash water management plan to be implemented during the construction and operation of the facility. The plan must ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion. The plan must include the construction of design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off;</p> <p>16.5. An erosion management plan for monitoring and rehabilitating erosion events associated with the facility. Erosion mitigation must form part of this plan to prevent and reduce the risk of any potential erosion. This plan must ensure to include drainage features that will be infilled and or excavated;</p> <p>16.6. An effective monitoring system to detect any leakage or spillage of any hazardous substances during their transportation, handling, use or storage. This must include precautionary measures to limit the possibility of oil and other toxic liquids from entering the soil or storm water systems;</p> <p>16.7. A fire management plan to be implemented during the construction and operation of the facility; and</p> <p>16.8. The final site layout map.</p>		
	17. Once approved, the EMPr must be implemented and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development when approved.	Relevant	
	18. Changes to the approved EMPr must be submitted in accordance with the EIA Regulations applicable at the time.	Relevant	Relevant
	19. The Department reserves the right to amend the approved EMPr should any impacts that were not anticipated or covered in the EIAr be discovered.	Relevant	Relevant
Frequency and process of updating the EMPr (page 11-12 of the EA)	20. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 27 below, indicate insufficient mitigation of environmental impacts associated with the undertaking of the activity, or insufficient levels of compliance with the environmental authorisation or EMPr.	Relevant	Relevant
	21. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.	Relevant	Relevant
	22. The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of the EIA Regulations, 2014 as amended. The updated EMPr must have been subjected to a public participation process, which process has been agreed to by the Department, prior to submission of the updated EMPr to the Department for approval.	Relevant	Relevant
	23. In assessing whether to grant approval of an EMPr which has been updated as a result of an audit, the Department will consider the processes prescribed in Regulation 35 of the EIA Regulations, 2014 as amended. Prior to approving an amended EMPr, the Department may request such amendments to the EMPr as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.	Relevant	Relevant
	24. The holder of the authorisation must apply for an amendment of an EMPr, if such amendment is required before an audit is required. The amendment process is prescribed in Regulation 37 of the EIA Regulations, 2014, as amended. The holder of the authorisation must request comments on the proposed amendments to the impact management outcomes of the EMPr or amendments to the closure objectives of the closure plan from potentially interested and affected parties, including the competent authority, by using any of the methods provided for in the Act for a period of at least 30 days.	Relevant	Relevant
Monitoring (page 12 of the EA)	Conditions 25 relates to the appointment of an experienced Environmental Control Officer (ECO) for the construction phase. This is considered to be generic to an EA. It is assumed that these conditions will be included in each split EA.	Relevant	Relevant
Recording and reporting to the Department (page 13 of the EA)	Conditions 26-31 relates to audit reporting. This is considered to be generic to an EA. It is assumed that these conditions will be included in each split EA.	Relevant	Relevant

Notification to authorities (page 13 of the EA)	Condition 32 relates to the need for notifying the Department prior to commencement of the activity. This is considered to be generic to an EA. It is assumed that this condition will be included in each split EA.	Relevant	Relevant
Operation of the activity (page 13 of the EA)	Condition 33 relates to the need for notifying the Department prior to commencement of the activity operational phase. This is considered to be generic to an EA. It is assumed that this condition will be included in each split EA.	Relevant	Relevant
Site closure and decommissioning (page 14 of the EA)	Condition 34 relates to the requirements should the activity ever cease of become redundant. This is considered to be generic to an EA. It is assumed that this condition will be included in each split EA.	Relevant	Relevant
Specific conditions (page 14 of the EA)	35. The applicant must consult with the avifaunal specialist regarding the positions and designs of bird perching/nesting deterrents and power line markers.		Relevant
	36. The applicant must consult with the avifaunal specialist regarding the positions and designs of bird perching/nesting deterrents and power line markers.		Relevant
	37. Suitable bird repelling structures and bird diverters must be considered to avoid collision of birds with the PV facility.	Relevant	
	38. Monitoring of implementation of mitigation controls, along with reporting, must be undertaken at least quarterly throughout the construction phase, and bi-annually during the operational phase. Monitoring, at the minimum, should consist of: <ul style="list-style-type: none"> I. Quarterly monitoring of the PV array area for evidence of PV collisions. II. Quarterly monitoring of power line route for evidence of collisions or electrocutions. III. Bi-annual monitoring of the resident avifaunal population, including priority species, to compare the impacts to the baseline avifaunal community description in this report. 	Relevant (I and III)	Relevant (II)
	39. Should archaeologically sites or graves be exposed during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.	Relevant	Relevant
	40. The ECO must monitor all substantial surface clearance operations and excavations into sedimentary rocks for fossil remains on an on-going basis during the construction phase.	Relevant	Relevant
	41. Final walk-through to locate Species of Conservation Concern that can be trans-located or avoided must be undertaken with an experienced and qualified ecologist.	Relevant	Relevant
	42. Permits from relevant authorities must be obtained for the removal or disturbance of any TOPS, Red Data listed or nationally protected species.	Relevant	Relevant
General (page 15 of the EA)	43. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste must be disposed of at a landfill licensed in terms of Section 20 (b) of the National Environment Management Waste Act, 2008 (Act No.59 of 2008).	Relevant	Relevant
	44. A copy of this Environmental Authorisation, the audit and compliance monitoring reports, and the approved EMPr, must be made available for inspection and copying – <ul style="list-style-type: none"> 44.1. at the site of the authorised activity; 44.2 to anyone on request; and 44.3 where the holder of the Environmental Authorisation has a website, on such publicly accessible website. 	Relevant	Relevant
	45. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the holder of the authorisation or his/her successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the holder of the authorisation with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.	Relevant	Relevant