



forestry, fisheries & the environment

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

Private Bag X 447· PRETORIA 0001· Environment House 473 Steve Biko Road, Arcadia, · PRETORIA

DFFE Reference: 14/12/16/3/3/2/2526

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Mr Alberto Gambacorta
Biesjesvlei 1 (Pty) Ltd
5 Buitengracht St,
20th Floor, Portside Building,
Cape Town City Centre
CAPE TOWN
8001

Telephone Number: 021 202 1230

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PER EMAIL / MAIL

Dear Mr Gambacorta

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, ACT NO. 107 OF 1998, AS AMENDED: FOR THE PROPOSED DEVELOPMENT OF THE UP TO 350MWdc SOLAR PHOTOVOLTAIC (PV) FACILITY 1 AND ASSOCIATED INFRASTRUCTURE (BIESJESVLEI PV1); NEAR SMITHFIELD, WITHIN THE MOHOKARE LOCAL MUNICIPALITY, XHARIEP DISTRICT MUNICIPALITY, FREE STATE.

With reference to the above application, please be advised that the Department has decided to grant authorisation. The Environmental Authorisation (EA) and reasons for the decision are attached herewith.

In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations, 2014, as amended (the EIA Regulations), you are instructed to notify all registered interested and affected parties, in writing and within fourteen (14) days of the date of the decision as well as the provisions regarding the submission of appeals that are contained in the Regulations.

In terms of the Promotion of Administrative Justice Act, Act No. 3 of 2000, you are entitled to the right to fair, lawful and reasonable administrative action; and to written reasons for administrative action that affects you negatively. Further your attention is drawn to the provisions of the Protection of Personal Information Act, Act No. 4 of 2013 which stipulate that the Department should conduct itself in a responsible manner when collecting, processing, storing, and sharing an individual or another entity's personal information by holding the Department accountable should the Department abuse or compromise your personal information in any way.

Your attention is drawn to Chapter 2 of National Environmental Management Act, Act No. 107 of 1998 National Appeal Regulations published under Government Notice R993 in Government Gazette No. 38303 dated 08 December 2014 (National Appeal Regulations, 2014), which prescribes the appeal procedure to be followed.



Batho pele- putting people first



The processing of personal information by the Department of Forestry, Fisheries and the Environment is done lawfully and not excessive to the purpose of processing in compliance with the POPI Act, any codes of conduct issued by the Information Regulator in terms of the POPI Act and / or relevant legislation providing appropriate security safeguards for the processing of personal information of others.

Kindly include a copy of this document (National Appeal Regulations, 2014) with the letter of notification to interested and affected parties in this matter.

Should any person wish to lodge an appeal against this decision, he/she must submit the appeal to the appeal administrator, and a copy of the appeal to the applicant, any registered interested and affected party, and any organ of state with interest in the matter within 20 days from the date that the notification of the decision was sent to the registered interested and affected parties by the applicant; or the date that the notification of the decision was sent to the applicant by the Department, whichever is applicable.

Appeals must be submitted in writing in the prescribed form to:

The Director: Appeals and Legal Review of this Department at the below mentioned addresses.

By email: appeals@dfef.gov.za

By hand: Environment House
473 Steve Biko
Arcadia
Pretoria
0083

or

By post: Private Bag X447
Pretoria
0001

Please note that in terms of Section 43(7) of the National Environmental Management Act, Act No. 107 of 1998, as amended, the lodging of an appeal will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged, you may not commence with the activity until such time that the appeal is finalised.

To obtain the prescribed appeal form and for guidance on the submission of appeals, please visit the Department's website at https://www.environment.gov.za/documents/forms#legal_authorisations or request a copy of the documents at appeals@dfef.gov.za

Yours faithfully



Dr Sabelo Malaza
Chief Director: Integrated Environmental Authorisations
Department of Forestry, Fisheries and the Environment
Date: 10/11/2024

cc:	Mr Paul Lochner	Council for Scientific and Industrial Research (CSIR)	
	Ms. Grace Mkhosana	Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs	Email: mkhosana@desitea.gov.za / mokoerad@desitea.gov.za
	Mr. MJ Kanwendo	Mohokare Local Municipality	Email: info@mohokare.gov.za / kanwendoj@gmail.com

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DFFE Reference: 14/12/16/3/3/2/2526

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, ACT NO. 107 OF 1998, AS AMENDED: FOR THE PROPOSED DEVELOPMENT OF THE UP TO 350MWdc SOLAR PHOTOVOLTAIC (PV) FACILITY 1 AND ASSOCIATED INFRASTRUCTURE (BIESJESVLEI PV1); NEAR SMITHFIELD, WITHIN THE MOHOKARE LOCAL MUNICIPALITY, XHARIEP DISTRICT MUNICIPALITY, FREE STATE



forestry, fisheries & the environment

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of Regulation 25 of the Environmental Impact Assessment Regulations, 2014, as amended.

The development of the up to 350 MWdc solar photovoltaic (PV) facility 1 and associated infrastructure (Biesjesvlei PV1); near Smithfield, within the Mohokare Local Municipality, Free State.

Xhariep District Municipality

Authorisation register number:	14/12/16/3/3/2/2526
Last amended:	First issue
Holder of authorisation:	Biesjesvlei 1 (Pty) Ltd
Location of activity:	Remaining Extent of Farm Biesjespoort 521, Farm Benoni 534, Farm Klein Badfontein 369 ,Farm Paalland 373, Farm Salpetervlei 756, Portion 1 of Farm Biesjespoort 521, Remaining Extent of Farm Elizabethfontein 374, Remaining Extent of Klein Sevenfontein 156, Within Ward 41603006 of Mohokare Local Municipality, Free State Province

This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.

MJS

Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this Environmental Authorisation, that the applicant should be authorised to undertake the activities specified below.

Non-compliance with a condition of this Environmental Authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, Act No. 107 of 1998, as amended and the EIA Regulations, 2014, as amended.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

Activities authorised.

By virtue of the powers conferred on it by the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment Regulations, 2014, as amended, the Department hereby authorises –

BIESJESVLEI 1 (PTY) LTD

(hereafter referred to as the **holder of the authorisation**)

with the following contact details –

Mr Alberto Gambacorta
Biesjesvlei 1 (Pty) Ltd
5 Buitengracht St
20th Floor, Portside Building,
Cape Town City Centre
CAPE TOWN
8001

Telephone Number: 021 202 1230

Email Address: [REDACTED]

to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notice (LN) 1, Listing Notice (LN) 2 and Listing Notice 3 of the EIA Regulations, 2014 as amended:

Activity number	Activity description
<p><u>Listing Notice 1, Item 9</u></p> <p><i>The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water:</i></p> <p><i>(i) with an internal diameter of 0,36 metres or more; or</i></p> <p><i>(ii) with a peak throughput of 120 litres per second or more;</i></p>	<p>The proposed project will include the development of stormwater infrastructure that will exceed 1 km in length with an internal diameter of more than 0.36 m and a throughput of more than 120 litres/second. The stormwater infrastructure will have a minimum width of 0.5 m and minimum length of 1250 m. In addition, the peak throughput of the stormwater infrastructure will be higher than 120 litres per second.</p> <p>The proposed project will take place outside of an urban area. It will be constructed on various affected farm portions, north-west of the town of Smithfield, in the Mohokare Local Municipality and Xhariep District Municipality, in the Free State Province.</p>
<p><u>Listing Notice 1, Item 11:</u></p> <p><i>The development of facilities or infrastructure for the transmission and distribution of electricity –</i></p> <p><i>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts.</i></p>	<p>The proposed project will entail the construction of an Independent Power Producer (IPP) Substation at the PV Facility, which will be maintained by the IPP. This will include all the high voltage infrastructure leading up to the Point of Connection (i.e. the Project Applicant's section of the proposed on-site substation, which is also referred to the PV Facility IPP Substation). The PV Facility IPP Substation will have a capacity stepping up from 33 kV to 132</p>

	<p>kV. This constitutes facilities for the distribution and transmission of electricity.</p> <p>The proposed project will take place outside of an urban area. It will be constructed on various affected farm portions, north-west of the town of Smithfield, in the Mohokare Local Municipality and Xhariep District Municipality, in the Free State Province</p>
<p><u>Listing Notice 1, Item 12</u></p> <p><i>The development of:</i></p> <p><i>(ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs:</i></p> <p><i>(a) within a watercourse;</i></p> <p><i>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;</i></p>	<p>The proposed project will entail the construction of various infrastructure and structures (such as, but not limited to, the solar field, on-site substation, laydown area, internal roads (i.e. new roads within the fenced off area of the PV Facility), new access roads (new roads leading to the PV Facility within the study area, where existing roads are not followed), and various ancillary infrastructure such as Operation and Maintenance (O&M) control centre, offices, warehouse/workshop, bathrooms/ablutions, inverters, guard house, etc.).</p> <p>Where existing or new access roads cross drainage features, new culverts, bridges or structures may be required. Additional detail regarding this will be provided in the EIA Phase. These infrastructure and structures will exceed a footprint of 100 m² and some may occur within small drainage features, watercourses, and wetlands, and within 32 m of these aquatic features, which have been delineated by the aquatic specialist.</p>

	<p>The proposed project will take place outside of an urban area. It will be constructed on various affected farm portions, north-west of the town of Smithfield, in the Mhokare Local Municipality and Xhariep District Municipality, in the Free State Province</p>
<p><u>Listing Notice 1, Item 19</u></p> <p><i>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</i></p>	<p>The proposed project may entail the excavation, removal and moving of more than 10 m³ of soil, sand, pebbles or rock from nearby small drainage features, watercourses, and wetlands. The proposed project may also entail the infilling of more than 10 m³ of material into the nearby aquatic features. The aquatic features have been delineated by the aquatic specialist. This will occur as a result of development of the proposed Solar PV Facility and associated infrastructure, including the development of access roads and internal roads, and drainage line crossings.</p>
<p><u>Listing Notice 1, Item 24</u></p> <p><i>The development of a road-</i> <i>(ii) with a reserve wider than 13.5 metres, or where no reserve exists where the road is wider than 8 metres;</i></p>	<p>Where existing or new access roads cross drainage features, new culverts, bridges or crossing structures will also be required along Access Route Option A, Access Route Option B and Access Route Option C. The concrete slab of the bridge / structure will be a minimum of 5.5 m and will have approximately 3 m wide gabion mattresses on either side. Hence the structure will have a minimum width of 11 to 12 m.</p>
<p><u>Listing Notice 1, Item 28</u></p> <p><i>Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for</i></p>	<p>The proposed project will take place outside of an urban area. It will be constructed on various affected farm portions, north-west of the town of</p>

<p><i>agriculture or afforestation on or after 1998 and where such development</i></p> <p><i>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare.</i></p>	<p>Smithfield, in the Mohokare Local Municipality and Xhariep District Municipality, in the Free State Province.</p> <p>The land within the study area is currently being used for livestock grazing and agriculture.</p> <p>The proposed Solar PV Facility, which is considered a commercial/industrial development, will have a footprint in excess of 1 ha (maximum footprint of the fenced off area approximately 600 ha). The proposed project will also entail the construction of various infrastructure and structures (such as, but not limited to, the solar field, on-site substation, laydown area, internal roads (i.e. new roads within the fenced off area of the PV Facility), new access roads (new roads leading to the PV Facility within the study area, where existing roads are not followed), and various ancillary infrastructure such as Operation and Maintenance (O&M) control centre, offices, warehouse/workshop, bathrooms/ablutions, inverters, guard house, etc.). This will constitute infrastructure with a physical footprint of more than 1 ha.</p>
<p><u>Listing Notice 1, Item 48</u></p> <p><i>The expansion of:</i></p> <p><i>(i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more;</i></p> <p><i>where such expansion occurs –</i></p> <p><i>(a) within a watercourse;</i></p> <p><i>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;</i></p>	<p>The proposed project study area can be accessed via various existing main roads and gravel roads. Specifically, three access route options are being considered: Access Route Option A, Option B and Option C, which is routed along the N6; S1262; and S119. Options A, B and C have different access points off the S119. Direct access to the proposed projects will</p>

be taken from the S119 along an existing farm access point, and thereafter new access roads will be developed within the study area, where they do not align with existing roads, or existing roads will be used where possible. Existing roads will be used as far as practically achievable.

The Traffic Specialist has noted that, based on preliminary investigations, the N6, S1262, and S119 roads leading to the study area are of a sufficient width to accommodate truck movement, however widening may be required at localised positions as required (i.e. intersections). Such widening is discussed below:

- Intersection S1262 and S119: Road widening by approximately 9 m (at the widest point) will be required at this intersection.
- Intersection S119 and Access Route Option A: Road widening by approximately 14 m (at the widest point) will be required at this intersection.
- Intersection S119 and Access Route Option B: Road widening by approximately 7 m (at the widest point) will be required at this intersection.
- Intersection S119 and Access Route Option C: Road widening by approximately 14 m (at the widest point) will be required at this intersection.

The intersection widening is regarded as expansion of infrastructure by more than 100 m²

	<p>The intersection widening may occur within small drainage features, watercourses, and wetlands, and within 32 m of these aquatic features, which have been delineated by the aquatic specialist.</p>
<p><u>Listing Notice 1, Item 56</u> <i>The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre</i> <i>(i) where the existing reserve is wider than 13,5 meters:</i></p>	<p>The proposed project study area can be accessed via various existing main roads and gravel roads. Specifically, three access route options are being considered: Access Route Option A, Option B and Option C, which is routed along the N6; S1262; and S119. Options A, B and C have different access points off the S119. Direct access to the proposed projects will be taken from the S119 along an existing farm access point, and thereafter new access roads will be developed within the study area, where they do not align with existing roads, or existing roads will be used where possible. Existing roads will be used as far as practically achievable.</p> <p>The Traffic Specialist has noted that, based on preliminary investigations, the N6, S1262, and S119 roads leading to the study area are of a sufficient width to accommodate truck movement, however widening may be required at localised positions as required (i.e. intersections). Such widening is discussed below:</p> <ul style="list-style-type: none">• <u>Intersection S1262 and S119:</u> Road widening by approximately 9 m (at the widest point) will be required at this intersection. The road widening will exceed 6 m in this regard.

	<ul style="list-style-type: none"> • <u>Intersection S119 and Access Route Option A</u>: Road widening by approximately 14 m (at the widest point) will be required at this intersection. The road widening will exceed 6 m in this regard. • <u>Intersection S119 and Access Route Option B</u>: Road widening by approximately 7 m (at the widest point) will be required at this intersection. The road widening will exceed 6 m in this regard. • <u>Intersection S119 and Access Route Option C</u>: Road widening by approximately 14 m (at the widest point) will be required at this intersection. The road widening will exceed 6 m in this regard. No road will need to be lengthened by more than 1 km at these access routes <p>In addition, the existing cement bridge along Access Route Option A is approximately 3 m wide. The bridge structure will need to be widened to approximately 15 m (including gabion structures), which is regarded as road widening by more than 6 m.</p> <p>No road will need to be lengthened by more than 1 km at these access routes</p>
<p><u>Listing Notice 2, Item 1</u></p> <p><i>The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more.</i></p>	<p>The proposed project is a Solar PV Facility (i.e., facility for the generation of electricity from a renewable resource) with a capacity of up to 350 MWdc (more than 20 MW).</p> <p>The proposed project will take place outside of an urban area. It will be constructed on various</p>

	<p>affected farm portions, north-west of the town of Smithfield, in the Mohokare Local Municipality and Xhariep District Municipality, in the Free State Province</p>
<p><u>Listing Notice 2, Item 15</u> <i>The clearance of an area of 20 hectares or more of indigenous vegetation.</i></p>	<p>The proposed Solar PV Facility will have a footprint in excess of 20 ha (maximum footprint of the fenced off area approximately 600 ha). As a result, more than 20 ha of indigenous vegetation will be removed for the construction of the proposed Solar PV Facility. According to Mucina & Rutherford (2006, as amended), the study area and proposed project falls within Aliwal North Dry Grassland (Gh2) vegetation type.</p>
<p><u>Listing Notice 3, Item 10</u> <i>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</i></p> <p><i>b. Free State</i> <i>i. outside urban areas</i> <i>hh. Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland.</i></p>	<p>The construction and operational phases of the proposed Solar PV Facility will require dangerous goods such as chemicals, fuels, oils, lubricants and solvents. Therefore, infrastructure for the storage and handling of dangerous goods of 30 m³ or more but not exceeding 80 m³ is proposed. Dangerous goods will be stored on site within designated areas such as laydown areas. The laydown area is located within 100 m of small drainage features, watercourses, and wetlands, which have been delineated by the aquatic specialist.</p>
<p><u>Listing Notice 3, Item 12</u> <i>The clearance of an area of 300 square metres or more of indigenous vegetation....</i></p> <p><i>b. Free State</i> <i>iv. Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland</i></p>	<p>The proposed Solar PV Facility will have an estimated footprint in excess of one hectare and will take place in the Free State. The proposed project will entail the construction of various infrastructure and structures (such as, but not limited to, the solar field, on-site substation,</p>

	<p>laydown area, internal roads (i.e. new roads within the fenced off area of the PV Facility), new access roads (new roads leading to the PV Facility within the study area, where existing roads are not followed), and various ancillary infrastructure such as Operation and Maintenance (O&M) control centre, offices, warehouse/workshop, bathrooms/ablutions, inverters, guard house, etc.). These infrastructure and structures may occur within small drainage features, watercourses, and wetlands, and within 100 m of these aquatic features, which have been delineated by the aquatic specialist.</p> <p>As a result, more than 300 m² of indigenous vegetation could be removed from these areas for the construction of the proposed Solar PV Facility and associated infrastructure.</p>
<p><u>Listing Notice 3, Item 18</u></p> <p><i>The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre</i></p> <p><i>b. Free State</i></p> <p><i>i. Outside urban areas:</i></p> <p><i>(hh) Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland</i></p>	<p>The proposed project will take place on various affected farm portions, outside of an urban area, north-west of the town of Smithfield, in the Mohokare Local Municipality and Xhariep District Municipality, in the Free State Province.</p> <p>The proposed project study area can be accessed via various existing main roads and gravel roads. Specifically, three access route options are being considered: Access Route Option A, Option B and Option C, which is routed along the N6; S1262; and S119. Options A, B and C have different access points off the S119. Direct access to the proposed projects will be taken from the S119 along an existing farm</p>

access point, and thereafter new access roads will be developed within the study area, where they do not align with existing roads, or existing roads will be used where possible. Existing roads will be used as far as practically achievable.

The Traffic Specialist has noted that, based on preliminary investigations, the N6, S1262, and S119 roads leading to the study area are of a sufficient width to accommodate truck movement, however widening may be required at localised positions as required (i.e. intersections). Such widening is discussed below:

- Intersection S1262 and S119: Road widening by approximately 9 m (at the widest point) (approximately 400 m²) will be required at this intersection. The road widening will exceed 4 m in this regard.
- Intersection S119 and Access Route Option A: Road widening by approximately 14 m (at the widest point) (approximately 800 m²) will be required at this intersection. The road widening will exceed 4 m in this regard.
- Intersection S119 and Access Route Option B: Road widening by approximately 7 m (at the widest point) (approximately 200 m²) will be required at this intersection. The road widening will exceed 4 m in this regard.
- Intersection S119 and Access Route Option C: Road widening by approximately 14 m (at the widest point) (approximately 450 m²) will be required at this intersection.

	<p>In addition, the existing cement bridge along Access Route Option A is approximately 3 m wide. The bridge structure will need to be widened to approximately 15 m (including gabion structures), which is regarded as road widening by more than 4 m.</p> <p>No road will need to be lengthened by more than 1 km at these access routes.</p> <p>The intersection widening and bridge widening will occur within small drainage features, watercourses, and wetlands, and within 100 m of these aquatic features, which have been delineated by the aquatic specialist.</p>
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as described in the Environmental Impact Assessment Report (EIAR) dated September 2024.

Farm Portion	21-digit Surveyor General code
PV Facility and associated infrastructure within the fenced off area	
Remaining Extent of Farm Biesjespoort 521	F03100000000052100000
Farm Benoni 534	F03100000000053400000
Farm Klein Badfontein 369	F03100000000036900000
Farm Paalland 373	F03100000000037300000
Access Road Option A	
Farm Salpetervlei 756	F03100000000075600000
Farm Paalland 373	F03100000000037300000
Access Road Option B	
Farm Benoni 534	F03100000000053400000
Farm Klein Badfontein 369	F03100000000036900000
Farm Paalland 373	F03100000000037300000
Access Road Option C	
Remaining Extent of Farm Biesjespoort 521	F03100000000052100000
Farm Benoni 534	F03100000000053400000
Farm Klein Badfontein 369	F03100000000036900000

Farm Portion	21-digit Surveyor General code
Farm Paalland 373	F03100000000037300000
Widening of Existing Road Intersections	
Farm Benoni 534	F03100000000053400000
Remaining Extent of Farm Biesjespoort 521	F03100000000052100000
Portion 1 of Farm Biesjespoort 521	F03100000000052100001
Remaining Extent of Farm Elizabethfontein 374	F03100000000037400000
Farm Klein Badfontein 369	F03100000000036900000
Farm Salpetervlei 756	F03100000000075600000
Remaining Extent of Klein Sevenfontein 156	F03100000000015600000

Coordinates:

Co-ordinate Point	Degrees, Minutes, Seconds	
	Latitude (S)	Longitude (E)
PV Facility and associated infrastructure within the fenced off area		
Corner Point 1	30° 05' 47.15256480" S	26° 22' 16.72621320" E
Corner Point 2	30° 05' 46.49089560" S	26° 21' 37.22958000" E
Corner Point 3	30° 06' 57.35132280" S	26° 20' 31.97019840" E
Corner Point 4	30° 06' 58.53907440" S	26° 21' 55.06216200" E
Corner Point 5	30° 06' 58.19694480" S	26° 22' 18.39752040" E
Corner Point 6	30° 06' 38.54952000" S	26° 22' 29.47524240" E
PV Facility IPP Substation		
Corner Point 1	30° 06' 53.72469720" S	26° 22' 07.23751713" E
Corner Point 2	30° 06' 53.75160359" S	26° 22' 12.84253580" E
Corner Point 3	30° 06' 58.78531799" S	26° 22' 12.81060340" E
Corner Point 4	30° 06' 58.75833733" S	26° 22' 07.20550808" E
Access Road Option A		
Start-Point	30° 06' 07.76702867" S	26° 24' 27.88519696" E
Mid-Point	30° 06' 34.83470520" S	26° 22' 58.07583840" E
End-Point	30° 06' 53.72786520" S	26° 22' 07.91011920" E
Access Road Option B		
Start-Point	30° 05' 35.98065095" S	26° 23' 18.84049168" E
Mid-Point	30° 06' 14.57332301" S	26° 22' 16.19768272" E
End-Point	30° 06' 53.72786520" S	26° 22' 07.91011920" E

Co-ordinate Point	Degrees, Minutes, Seconds	
	Latitude (S)	Longitude (E)
Access Road Option C		
Start-Point	30° 05' 18.02546520" S	26° 22' 41.92812120" E
Mid-Point	30° 06' 02.85712442" S	26° 22' 16.27186086" E
End-Point	30° 06' 53.72786520" S	26° 22' 07.91011920" E
Widening of Existing Road Intersections		
Mid-Point (S1262/S119 intersection)	30° 06' 15.24592316" S	026° 24' 44.49527212" E
Mid-Point (S119/Option A)	30° 06' 07.94659649" S	026° 24' 27.87105360" E
Mid-Point (S119/Option B)	30° 05' 36.22530598" S	026° 23' 19.43109165" E
Mid-Point (S119/Option C)	30° 05' 18.20510587" S	026° 22' 42.00993312" E

-For the development of up to 350 MWdc solar photovoltaic (PV) facility 1 and associated infrastructure (Biesjesvlei PV1); near Smithfield, within the Mohokare Local Municipality, Free State, hereafter referred to as "the property". (coordinates above).

The proposed Solar PV Facility will consist of the following key components:

- Solar field consisting of the PV array and panel mounting structures;
- Building infrastructure (such as Offices; Operational and maintenance (O&M) control centre; Warehouse / workshop; Ablution facilities; Converter / Inverter stations; and Guard Houses);
- PV Facility Independent Power Producer (IPP) Substation;
- On-site internal cables / power lines / cable trays;
- External access roads;
- Internal roads;
- Fencing;
- Panel maintenance and cleaning area;
- Storm water channels; and
- Laydown area

Technical details of the project will include:

Component	Description
Solar Field	
Type of Technology	Solar Photovoltaic (PV) Technology
Generation Capacity (Maximum Installed)	<ul style="list-style-type: none"> ▪ Up to 350 MWdc
Total footprint that includes all associated infrastructure within the fenced off area of the PV facility (excluding access roads)	<ul style="list-style-type: none"> ▪ Maximum 450 ha
PV Panel Structure (with the following possible tracking and mounting systems): <ul style="list-style-type: none"> ▪ Single Axis Tracking structures (aligned north-south); ▪ Fixed Axis Tracking (aligned east-west); ▪ Dual Axis Tracking (aligned east-west and north-south); ▪ Fixed Tilt Mounting Structure; or ▪ Bifacial Solar Modules. 	<ul style="list-style-type: none"> ▪ Height: Approximately 10 m (maximum)
Building Infrastructure	
Offices	<ul style="list-style-type: none"> ▪ Maximum height: 7 m ▪ Footprint: 1000 m²
Operational and maintenance (O&M) control centre	<ul style="list-style-type: none"> ▪ Maximum height: 7 m ▪ Footprint: 500 m²
Warehouse / workshop	<ul style="list-style-type: none"> ▪ Maximum height: 7 m ▪ Footprint: 500 m²
Ablution facilities	<ul style="list-style-type: none"> ▪ Maximum height: 7 m ▪ Footprint: 50 m²
Converter / Inverter stations	<ul style="list-style-type: none"> ▪ Height: 2.5 m to 7 m (maximum) ▪ Footprint: 2500 m²
Guard Houses	<ul style="list-style-type: none"> ▪ Height: 3 m ▪ Footprint: 40 m²
On-site substation and/or switching station. This will include the section that will be maintained by the Independent Power Producer (IPP).	<ul style="list-style-type: none"> ▪ Footprint of the IPP Substation: Approximately 10 000 m² ▪ Height: 10 m

<u>Component</u>	<u>Description</u>
	<ul style="list-style-type: none"> ▪ Capacity: 132 kV ▪ This section includes all the high voltage infrastructure leading up to the Point of Connection (i.e. the Project Applicant's section of the proposed on-site substation, which is also referred to the PV Facility IPP Substation).
Associated Infrastructure	
On-site medium voltage internal cables / power lines	<ul style="list-style-type: none"> ▪ Placement: Underground or above ground ▪ Capacity: 33 kV ▪ Depth (if underground): Maximum depth of 1.6 m ▪ Height (if aboveground): Maximum height of 9 m
Underground low voltage cables or cable trays	<ul style="list-style-type: none"> ▪ Depth: Maximum depth of 1.4 m
External Access Roads	<ul style="list-style-type: none"> ▪ The study area can be accessed via various existing main roads and gravel roads. Specifically, three access route options have been considered: Access Route Option A, Option B and Option C, which are routed along the N6; S1262; and S119. Access Route Options A, B and C have different access points off the S119. Direct access to the proposed projects will be taken from the S119 along an existing farm access point, and thereafter new access roads will be developed within the study area, where they do not align with existing roads, or existing roads will be used where possible. Existing roads will be used as far as practically achievable. ▪ New Access Roads: Where new access roads are required within the study area, these will be 4 - 8 m wide. ▪ Existing Access Roads: Where existing roads are used within the study area, they may need to be upgraded, as described below.

<u>Component</u>	<u>Description</u>
	<ul style="list-style-type: none">▪ The Traffic Specialist has noted the following (additional detail is provided in Section 2.7 of this report):<ul style="list-style-type: none">○ The N6, S1262, and S119 are of a sufficient width to accommodate truck movement, however widening by more than 4 m or more than 6 m will be required at localised positions (i.e. intersections). Specifically, road widening by approximately 9 m will be required at the S1262 and S119 intersection. In addition, the N6 and S1262 intersection will need to be widened by approximately 2 m on the western side of the intersection and by approximately 2 m on the eastern side of the intersection.○ Existing internal farm roads (local farm roads within the farm property boundaries) will need to be upgraded to accommodate the abnormal loads as required. This includes the following:<ul style="list-style-type: none">• Intersection S119 and Access Route Option A: Road widening by approximately 14 m (at the widest point) will be required.• Intersection S119 and Access Route Option B: Road widening by approximately 7 m (at the widest point) will be required.• Intersection S119 and Access Route Option C: Road widening by approximately 14 m (at the widest point) will be required.• The existing bridge on the S119 will also need to be inspected by a Structural Engineer.



<u>Component</u>	<u>Description</u>
	<ul style="list-style-type: none"> • The existing bridge on the existing internal farm road along Access Route Option A will need to be rebuilt/upgraded or realigned to minimise the turns that the abnormal loads need to navigate, if this access route is used for the proposed projects. • A new bridge will need to be developed along Access Route Option B, if this option is used for the proposed projects. • A new bridge will need to be developed along Access Route Option C, if this option is used for the proposed projects.
Internal roads	<ul style="list-style-type: none"> ▪ Details: New internal gravel roads will need to be established within the fenced off area of the PV facility. ▪ Width: Up to 4 m
Fencing around the PV Facility Perimeter	<ul style="list-style-type: none"> ▪ Type: Palisade or mesh or fully electrified ▪ Security: Access points will be managed and monitored by an appointed security service provider. ▪ Height: Between 2 - 3 m
Panel maintenance and cleaning area	<ul style="list-style-type: none"> ▪ A dedicated panel maintenance and cleaning area will be required on site during the operational phase.
Storm water channels	<ul style="list-style-type: none"> ▪ Details to be confirmed once the Engineering, Procurement and Construction (EPC) contractor has been selected and the design is finalised. Where necessary, a detailed storm water management plan would need to be developed.
Work area during the construction phase (i.e. laydown area)	<ul style="list-style-type: none"> ▪ Footprint: Up to 13 ha.

Component	Description
Water Requirements	<ul style="list-style-type: none">▪ Approximately 8 520 m³ to 12 000 m³ of water is estimated to be required per year for the construction phase.▪ Approximately 10 000 m³ to 16 000 m³ of water is estimated to be required per year for the operational phase.▪ Water requirements during the decommissioning phase are expected to be the same as the construction phase.▪ Potential sources: Existing boreholes on site or from the Local Municipality via trucks.
Construction Period	<ul style="list-style-type: none">▪ 12 – 24 months
Operational Period	<ul style="list-style-type: none">▪ Once the commercial operation date is achieved, the proposed facility will generate electricity for a minimum period of 20 to 30 years.

Conditions of this Environmental Authorisation

Scope of authorisation

1. The development of up to 350MWdc solar photovoltaic (PV) facility 1 and associated infrastructure (Biesjesvlei PV1); near Smithfield within Ward 41603006 of Mohokare Local Municipality, Free State is approved as per the geographic coordinates 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.
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.
4. The activities authorised may only be carried out at the property as described above.
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 affected. 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.
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.
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.
8. Construction must be completed within five (05) years of the commencement of the activity on site. The continuation of any such activities after this period may trigger one or more listed and/or specified activities, including activity 32 of LN1. Such continuation without the required environmental authorisation will constitute an offence or offences in terms of section 49A(1)(a) read with section 24F(1)(a) of NEMA."

Notification of authorisation and right to appeal

9. The holder of the authorisation must notify every registered interested and affected party, in writing and within 14 (fourteen) calendar days of the date of this Environmental Authorisation, of the decision to authorise the activity.
10. The notification referred to must –
 - 10.1. specify the date on which the authorisation was issued;
 - 10.2. inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014;
 - 10.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
 - 10.4. give the reasons of the Competent Authority for the decision.

Commencement of the activity

11. The authorised activity shall not commence until the period for the submission of appeals has lapsed as per the National Appeal Regulations, 2014, and no appeal has been lodged against the decision. In terms of Section 43(7), an appeal under Section 43 of the National Environmental Management Act, Act No. 107 of 1998, as amended will suspend the Environmental Authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity until such time that the appeal has been finalised.

Management of the activity

12. The combined project layout plan attached as Figure D in Appendix D of the final EIAr and labelled "*Final Layout Map for the proposed Biesjesvlei Solar PV Facility 1; Biesjesvlei BESS 1; and Biesjesvlei EGI 1 (including the Biesjesvlei MTS and LILO for context), near Smithfield in the Free State*" for the up to 350MWdc Biesjesvlei Solar PV Facility 1 and associated infrastructure(Biesjesvlei PV1), is approved.
13. The facility Environmental Management Programme (EMPr) for the Biesjesvlei Solar Photovoltaic Facility 1 and associated infrastructure(Biesjesvlei PV 1), submitted as part of the EIAr dated September 2024 is approved and must be implemented and adhered to.
14. The Generic Environmental Management Programme (EMPr), "*for the development and expansion for overhead electricity transmission and distribution infrastructure* " for the up to **132kV PV Facility IPP Substation Hub/Complex**, specifically Part C: Site Specific Environmental Attributes, dated 10

September 2024 submitted as part of the final EIA, is approved and must be implemented and adhered to.

15. 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.
16. Changes to the approved EMPr must be submitted in accordance to the EIA Regulations applicable at the time.
17. The Department reserves the right to amend the approved EMPr should any impacts that were not anticipated or covered in the BAR be discovered.

Frequency and process of updating the EMPr

18. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 25 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.
19. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
20. 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.
21. 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.
22. 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.

Monitoring

23. The holder of the authorisation must appoint an experienced Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this environmental authorisation are implemented and to ensure compliance with the provisions of the approved EMPr.
- 23.1. The ECO must be appointed before commencement of any authorised activities.
- 23.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department.
- 23.3. The ECO must keep record of all activities on site, problems identified, transgressions noted, and a task schedule of tasks undertaken by the ECO.
- 23.4. The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.

Recording and reporting to the Department

24. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this environmental authorisation, must be submitted to the *Director: Compliance Monitoring* of the Department.
25. The holder of the environmental authorisation must, for the period during which the environmental authorisation and EMPr remain valid, ensure that project compliance with the conditions of the environmental authorisation and the EMPr are audited, and that the audit reports are submitted to the *Director: Compliance Monitoring* of the Department.
26. The frequency of auditing and of submission of the environmental audit reports must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of the EIA Regulations, 2014 as amended.
27. The holder of the authorisation must, in addition, submit environmental audit reports to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and a final environmental audit report within 30 days of completion of rehabilitation activities.
28. The environmental audit reports must be compiled in accordance with Appendix 7 of the EIA Regulations, 2014 as amended and must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the approved EMPr.
29. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Notification to authorities

30. A written notification of commencement must be given to the Department no later than fourteen (14) days prior to the commencement of the activity. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number.

Operation of the activity

31. A written notification of operation must be given to the Department no later than fourteen (14) days prior to the commencement of the activity operational phase.

Site closure and decommissioning

32. Should the activity ever cease or become redundant, the holder of the authorisation must undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and Competent Authority at that time.

Specific conditions

33. No activities will be allowed to encroach into a water resource without a water use authorisation being in place from the Department of Water and Sanitation.
34. The 19m buffer zone identified by the Aquatic Specialist must be applied between the main PV layouts and delineated wetlands to ensure that these watercourses are avoided.
35. A permit must be obtained from the relevant Department for the removal or destruction of indigenous, protected, or endangered plant or animal species (if any) and a copy of such permit/s must be submitted to the Department for record keeping.
36. No exotic plants may be used for rehabilitation purposes. Only indigenous plants of the area may be utilised.
37. Foundations and trenches must be backfilled with originally excavated materials as much as possible. Excess excavation materials must be disposed of only in approved areas or, if suitable, stockpiled for use in reclamation activities.
38. The washing of panels during maintenance must be done with biodegradable soaps to avoid soil contamination.

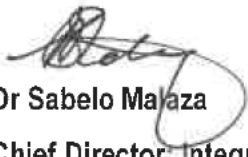
39. The two small cemeteries (at waypoints 345 & 1643) must be fenced with a farm-style fence and pedestrian gate at least 5m from all grave dressings.
40. All heritage sites within 50m of the footprint areas must be marked with no-go signage.
41. If any evidence of archaeological sites or remains (e.g., remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell, and charcoal/ash concentrations), unmarked human burials, fossils or other categories of heritage resources are uncovered during construction, work in the immediate area must be halted, and the Heritage Authorities must be alerted immediately, and a professional archaeologist or palaeontologist (depending on the nature of the finds) must be contacted as soon as possible to inspect the findings.
42. Ensure that the necessary permits or approvals from the relevant road authority are in place for the widening of identified intersections to accommodate the turning movements of the abnormal load vehicles.
43. Construction must include 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
44. 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).

General

45. A copy of this Environmental Authorisation, the audit and compliance monitoring reports, and the approved EMPr, must be made available for inspection and copying:
 - 45.1. at the site of the authorised activity.
 - 45.2. to anyone on request.
 - 45.3. where the holder of the Environmental Authorisation has a website, on such publicly accessible website.

46. 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.

Date of Environmental Authorisation: 10/11/2024



Dr Sabelo Malaza
Chief Director: Integrated Environmental Authorisations
Department of Forestry, Fisheries and the Environment

Annexure 1: Reasons for Decision

1. Information considered in making the decision.

In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The listed activities as applied for in the amended application form received on 02 August 2024.
- b) The information contained in the EIAr dated September 2024.
- c) The recommendations made by the EAP in the EIAr dated September 2024.
- d) Mitigation measures as proposed in the EIAr and the EMPs.
- e) The information contained in the specialist studies contained within the appendices of the EIAr dated September 2024 and as appears below:

Key factors considered in making the decision.

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

- a) The findings of all the specialist studies conducted and their recommended mitigation measures.
- b) In terms of the economic development requirements of the REIPPPP, the project will commit benefits to the local community in the form of job creation, localisation, and community ownership.
- c) The EIAr dated September 2024 identified all legislation and guidelines that have been considered in the preparation of the EIAr.
- d) The location of the proposed up to 350MWdc Biesjesvlei Solar Photovoltaic Facility 1 and associated infrastructure (Biesjesvlei PV1) which forms part of the "Biesjesvlei PV Facilities, BESS and EGI Cluster."
- e) The methodology used in assessing the potential impacts identified in the EIAr dated September 2024 and the specialist studies have been adequately indicated.
- f) A sufficient public participation process was undertaken, and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2014 as amended for public involvement.

2. Findings

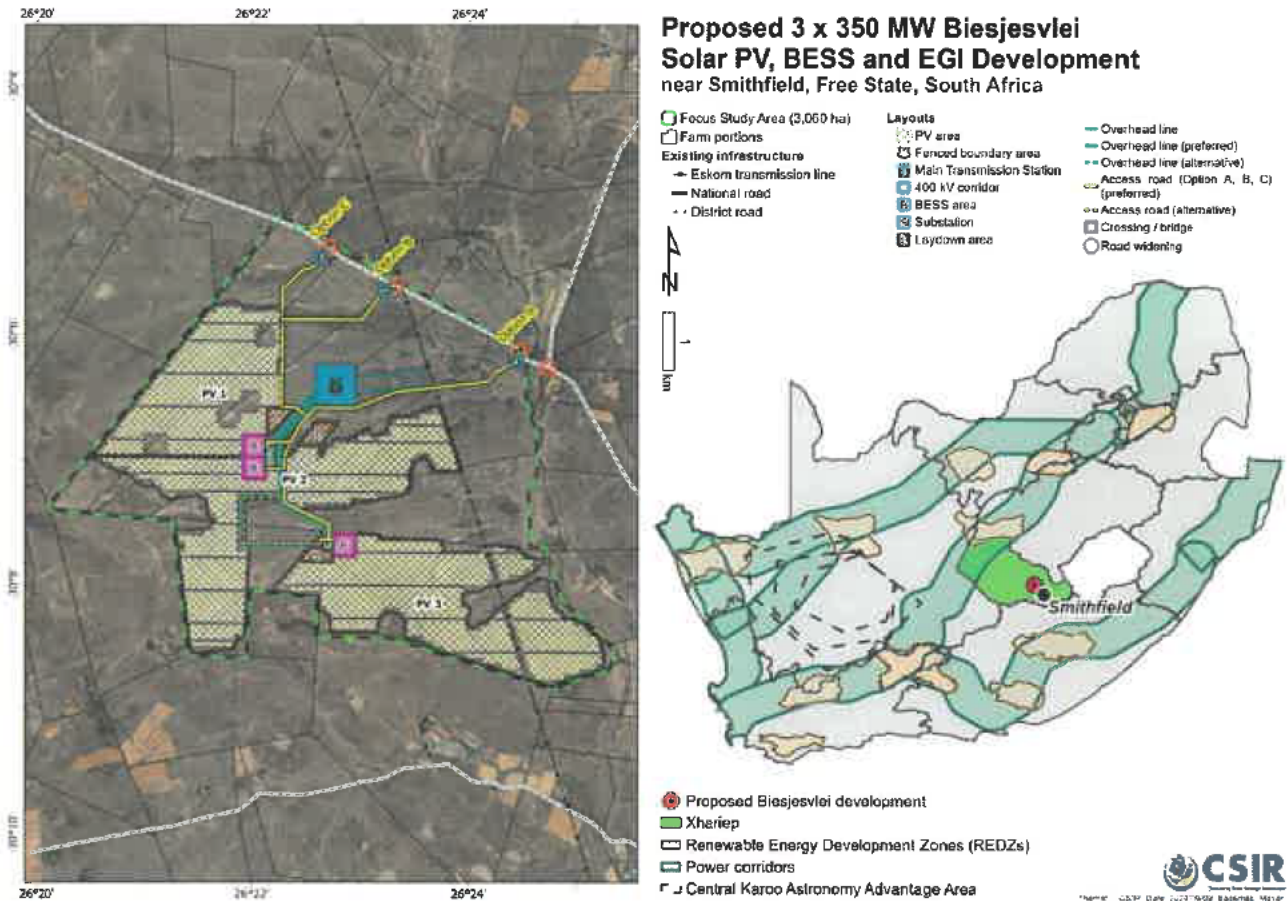
After consideration of the information and factors listed above, the Department made the following findings -

- a) The identification and assessment of impacts are detailed in the EIA dated September 2024 and sufficient assessment of the key identified issues and impacts have been completed.

- b) The procedure followed for impact assessment is adequate for the decision-making process.
- c) The information contained in the EIA dated September 2024 is deemed to be accurate and credible.
- d) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- e) The findings of the site inspection held on 07 November 2024
- f) EMPr measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the EIA and will be implemented to manage the identified environmental impacts during the construction phase.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the authorised activities will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the authorised activities can be mitigated to acceptable levels. The environmental authorisation is accordingly granted.

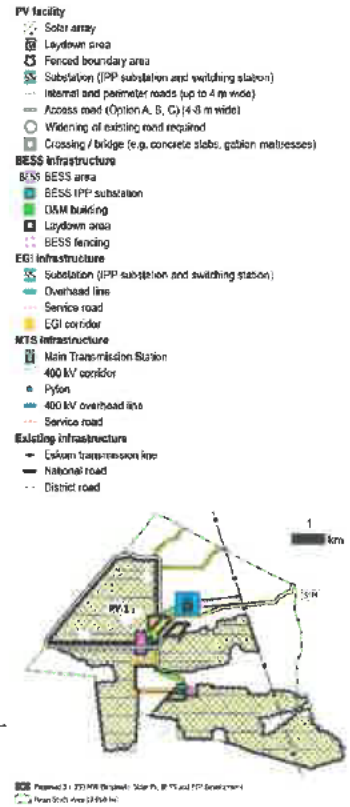
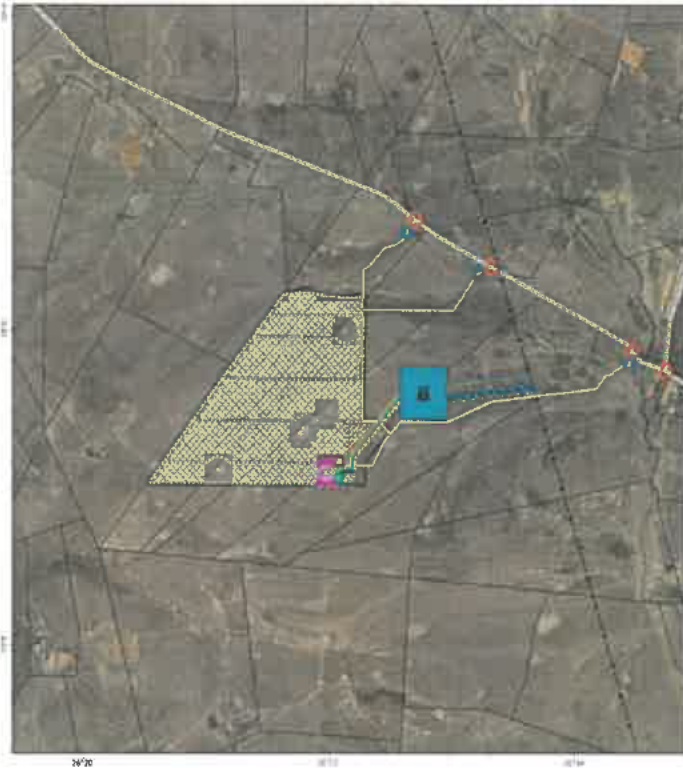
Annexure 2: Locality Map, Biesjesvlei Solar PV Facilities 1 to 3; Biesjesvlei BESS 1 to 3; Biesjesvlei EGI 1 to 3; and Biesjesvlei MTS and LILO



MS

Annexure 3: Final Layout Map for the proposed Biesjesvlei Solar PV Facility 1; Biesjesvlei BESS 1; and Biesjesvlei EGI 1 (including the Biesjesvlei MTS and LILO for context)

**Biesjesvlei Solar PV 1, BESS 1 and EGI 1
 near Smithfield, Free State, South Africa**



MS

Annexure 4: Final Layout Map for the proposed Biesjesvlei Solar PV Facility 1 near Smithfield in the Free State.

**Proposed 350 MW Biesjesvlei Solar PV 1 facility
 near Smithfield, Free State, South Africa**



- PV facility**
- Solar array
 - ▭ Fenced boundary area
 - ▭ Substation* (PPP substation and switching station)
 - Internal and perimeter roads (up to 4 m wide)
 - Access road (Option A, B, C) (4-8 m wide)
 - Widening of existing road required
 - ▭ Crossing / bridge (e.g. concrete slabs, gazco mattresses)
* Including O&M building
- Existing infrastructure**
- Estorn transmission line
 - National road
 - District road



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