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DFFE Reference: 14/12/16/3/3/2/2527 Enquiries: Ms. Julliet Mahlangu

Telephone: (012) 399 9388 E-mail: JMMahlangu@dffe.gov.za

Mr. Alberto Gambacorta Biesjesvlei 4 (Pty) Ltd 5 Buitengracht Street 20th Floor, Portside Building Cape Town City Centre CAPE TOWN 8001

Telephone Number: (021) 202 1230

Email Address:

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 DEVELOPMENT OF THE UP TO 1200MWh BIESJESVLEI BATTERY ENERGY STORAGE SYSTEM AND ASSOCIATED INFRASTRUCTURE (i.e., BIESJESVLEI BESS 1) NEAR SMITHFIELD, WITHIN THE MOHOKARE LOCAL MUNICIPALITY IN THE FREE STATE PROVINCE

With reference to the above application, please be advised that the Department has decided to grant authorisation. The Environmental Authorisation (EA) and the 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 from 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 the 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.









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@dffe.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@dffe.gov.za.

Yours faithfully

Dr. Sabelo Malaza

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

Date: =4

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@destea.gov.za / mokoenad@destea.gov.za
	Mr. MJ Kanwendo	Mohokare Local Municipality	Email: info@mohokare.gov.za / kanwendoi@gmail.com

Batho pele- putting people first



Environmental Authorisation

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

The development of the up to 1200MWh Biesjesvlei Battery Energy Storage System and associated infrastructure (i.e., Biesjesvlei BESS 1) near Smithfield, within the Mohokare Local Municipality, Free State Province

Xhariep District Municipality

Authorisation register number:	14/12/16/3/3/2/2527
Last amended:	First issue
Holder of authorisation:	Biesjesvlei 4 (Pty) Ltd
Location of activity:	Biesjesvlei BESS 1 and associated infrastructure:
	Farm Klein Badfontein 369 – Portion 0
	Farm Paalland 373 – Portion 0
	Access Road Option A:
	Farm Salpetervlei 756
	Farm Paalland 373
	Access Road Option B:
	Farm Benoni 534
	Farm Klein Badfontein 369
	Farm Paalland 373
	Access Road Option C:



Remaining Extent of Farm Biesjespoort 521

Farm Benoni 534

Farm Klein Badfontein 369

Farm Paalland 373

Intersection Widening:

Farm Benoni 534 - Portion 0

Remaining Extent of Farm Biesjespoort 521 - Remaining

Extent

Portion 1 of Farm Biesjespoort 521 - Portion 1

Remaining Extent of Farm Elizabethfontein 374 -

Remaining Extent

Farm Klein Badfontein 369 - Portion 0

Farm Salpetervlei 756 - Portion 0

Remaining Extent of Klein Sevenfontein 156 -

Remaining Extent

Within ward 41603006 of Mohokare Local Municipality

Xhariep District 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



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 4 (PTY) LTD

(hereafter referred to as the holder of the authorisation)

with the following contact details -

Mr. Alberto Gambacorta

Biesjesvlei 4 (Pty) Ltd

5 Buitengracht Street

20th Floor, Portside Building

Cape Town City Centre

CAPE TOWN

8001

MI

Telephone Number:

021 202 1230

Email Address:

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

Activity number	Activity description
Listing Notice 1, Item 11	
"The development of facilities or infrastructure for the	The proposed project will entail the construction of
transmission and distribution of electricity	an Independent Power Producer (IPP) Substation
(i) outside urban areas or industrial complexes with a	for the Battery Energy Storage System (BESS),
capacity of more than 33 but less than 275 kilovolts."	which will be maintained by the IPP. This is referred
	to as the BESS IPP Substation, which will have a
	capacity stepping up from 33kV to 132kV. This
	constitutes facilities for the distribution and
	transmission of electricity.
	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.
Listing Notice 1, Item 12	
"The development of-	The proposed project will entail the construction of
(ii) infrastructure or structures with a physical footprint	various infrastructure and structures (such as, but
of 100 square metres or more;	not limited to, the BESS facility; units; laydown
where such development occurs-	area; BESS IPP Substation; laydown area for the
(a) within a watercourse;	BESS IPP Substation; BESS Operational and
(c) if no development setback exists, within 32 metres	Maintenance (O&M) Office, including Ablutions;
of a watercourse, measured from the edge of a	access roads; internal roads; various MV to HV
watercourse."	cables; fencing and security; and parking area etc.).

Activity number	Activity description
	Where existing or new access roads cross drainage
	features, new culverts, bridges or crossing
	structures will also be required. Such infrastructure
	across the drainage features will have a minimum
	footprint of 150m ² .
	The total footprint of the BESS facility extends
	approximately 10ha, within which the various
	infrastructure and structures will be constructed.
	These infrastructure and structures will exceed a
	footprint of 100m2, and some occur within small
	drainage features, watercourses, and wetlands,
	and within 32m of these aquatic features, which
	have been delineated by the aquatic specialist.
	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.
Listing Notice 1, Item 19	
"The infilling or depositing of any material of more than	The proposed project will entail the excavation,
10 cubic metres into, or the dredging, excavation,	removal and moving of more than 10m3 of soil,
removal or moving of soil, sand, shells, shell grit,	sand, pebbles or rock from nearby small drainage
pebbles or rock of more than 10 cubic metres from a	features, watercourses, and wetlands. The
watercourse".	proposed project will also entail the infilling of more
	than 10m3 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 BESS
	facility and associated infrastructure, including the

Activity number	Activity description
	development of access roads and internal roads,
	and drainage line crossings.
Listing Notice 1, Item 24	
"The development of a road -	Where existing or new access roads cross drainage
(ii) with reserve wider than 13,5 meters, or where no	features, new culverts, bridges or crossing
reserve exists where the road is wider than 8 meters."	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 5.5m and will have
	approximately 3m wide gabion mattresses on either
	side. Hence the structure will have a minimum width
	of 11 to 12m.
Listing Notice 1, Item 27	
"The clearance of an area of 1 hectares or more, but	The proposed BESS facility, which will contain
less than 20 hectares of indigenous vegetation."	various sub-components and associated
	infrastructure, will have a footprint in excess of 1ha
	but less than 20ha (i.e. total footprint o
	approximately 10ha). As a result, approximately
	10ha of indigenous vegetation will be removed fo
	the construction of the proposed BESS facility and
	associated infrastructure. According to Mucina 8
	Rutherford (2006, as amended), the study area and
	proposed project falls within Aliwal North Dry
	Grassland (Gh2) vegetation type.
Listing Notice 1, Item 28	
"Residential, mixed, retail, commercial, industrial or	The proposed project will take place outside of a
institutional developments where such land was used	urban area. It will be constructed on various affecte
for agriculture, game farming, equestrian purposes or	farm portions, north-west of the town of
afforestation on or after 01 April 1998 and where such	Smithfield, in the Mohokare Local Municipality an
development:	Xhariep District Municipality, in the Free Stat
(ii) will occur outside an urban area, where the total land	Province. The land within the study area is current
to be developed is bigger than 1 hectare."	being used for livestock grazing and agriculture.



Environmental Authorisation Reg. No. 14/12/16/3/3/2/2527 Activity number Activity description	
Activity number	
	The proposed BESS facility, which is considered a
	commercial/industrial development, will have a
	footprint in excess of 1ha (total footprint of
	approximately 10ha). The proposed project will also
	entail the construction of various infrastructure and
	structures (such as the BESS facility; units; laydowr
	area; BESS IPP Substation; laydown area for the
	BESS IPP Substation; BESS Operational and
	Maintenance (O&M) Office, including ablutions
	access roads;
	internal roads; various MV to HV cables; fencing
	and security; and parking area etc.). This wi
	constitute infrastructure with a physical footprint o
	more than 1ha.
Listing Notice 1, Item 48	
"The expansion of-	The proposed project study area can be accessed
(i) infrastructure or structures where the physical	

- (i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more;
 where such expansion occurs-
- (a) within a watercourse;
- (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse."

The proposed project 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 project 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.

The Traffic Specialist has noted that the N6, S1262, and S119 roads leading to the study area are of a sufficient width to accommodate truck movement,

Activity number	Activity description
	however widening will be required at localised
	positions (i.e. intersections). Such widening is
	discussed below:
	• Intersection S1262 and S119: Road widening
	by approximately 9m (at the widest point)
	(approximately 400m²) will be required at this
	intersection.
	Intersection S119 and Access Route Option
	A: Road widening by approximately 14m (at the
	widest point) (approximately 800m²) will be
	required at this intersection.
	Intersection S119 and Access Route Option
	B: Road widening by approximately 7m (at the
	widest point) (approximately 200m²) will be
	required at this intersection.
	Intersection S119 and Access Route Option
	C: Road widening by approximately 14m (at the
	widest point) (approximately 450m²) will be
	required at this intersection.
	Therefore, the intersection widening is regarded as
	expansion of infrastructure by more than 100m ² .
	In addition, the existing cement bridge along
	Access Route Option A is approximately 3m wide.
	The bridge structure will need to be widened to
	approximately 15m (including gabion structures),
	which is regarded as expansion of infrastructure by
	more than 100m ² .
	The intersection widening and bridge widening will
	occur within small drainage features, watercourses,
	and wetlands, and within 32m of these aquatic



Activity number	Activity description
	features, which have been delineated by the
	aquatic specialist.
Listing Notice 1, Item 56	
"The widening of a road by more than 6 metres, or the	The proposed project study area can be accessed
lengthening of a road by more than 1 kilometre-	via various existing main roads and gravel roads.
(i) where the existing reserve is wider than 13.5	Specifically, three access route options have been
meters."	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 project 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.
	The Traffic Specialist has noted that the N6, S1262,
	and S119 roads leading to the study area are of a
	sufficient width to accommodate truck movement,
	however widening will be required at localised
	positions (i.e. intersections). Such widening is
	discussed below:
	Intersection S1262 and S119: Road widening
	by approximately 9m (at the widest point)
	(approximately 400m²) will be required at this
	intersection.
	Intersection S119 and Access Route Option
	A: Road widening by approximately 14m (at the
	widest point) (approximately 800m²) will be
	required at this intersection. The road widening
	will exceed 6m in this regard.

Activity number	Activity description
	 Intersection S119 and Access Route Option B: Road widening by approximately 7m (at the widest point) (approximately 200m²) will be required at this intersection. The road widening will exceed 6m in this regard. Intersection S119 and Access Route Option C: Road widening by approximately 14m (at the widest point) (approximately 450m²) will be required at this intersection. The road widening will exceed 6m in this regard. In addition, the existing cement bridge along Access Route Option A is approximately 3m wide. The bridge structure will need to be widened to approximately 15m (including gabion structures), which is regarded as road widening by more than 6m. No road will need to be lengthened by more than 1km at these access routes.
Listing Notice 3. Item 10 "The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres; (b) In the Free State; (i) Areas outside urban areas; (hh) Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland."	The construction and operational phases of the proposed BESS Facility will require dangerous goods such as chemicals, fuels, oils, fubricants and solvents for general activities. This does not apply to the actual BESS Facility, as a solid state BESS is proposed. Therefore, infrastructure for the storage and handling of dangerous goods of 30m³ or more but not exceeding 80m³ is proposed. Dangerous goods will be stored on site within designated areas such as laydown areas. The laydown area is located within 100m of small drainage features, watercourses, and wetlands,



Activity number	Activity description
	which have been delineated by the aquatic
	specialist.
Listing Notice 3, Item 12	
"The clearance of an area of 300 square metres or	The proposed BESS facility and associated
more of indigenous vegetation,	infrastructure will have an estimated footprint of
(b) In the Free State;	approximately 10ha and will take place in the Free
(iv) Areas within a watercourse or wetland; or within	State. The proposed project will entail the
100 metres from the edge of a watercourse or wetland."	construction of various infrastructure and structures (such as, but not limited to, the BESS facility; units laydown area; BESS IPP Substation; laydown area for the BESS IPP Substation; BESS Operationa and Maintenance (O&M) Office, including Ablutions access roads;
	internal roads; various MV to HV cables; fencing and security; and parking area etc.). Where existing or new access roads cross drainage features, new culverts, bridges or crossing structures will also be required. Some of these infrastructure and structures will occur within small drainage features watercourses, and wetlands, and within 100m of these aquatic features, which have been delineated by the aquatic specialist.
	As a result, more than 300m ² of indigenous vegetation will be removed from these areas for the construction of the proposed BESS Facility and associated infrastructure.
Listing Notice 3, Item 18	
"The widening of a road by more than 4 metres, or the	The proposed project will take place on various
lengthening of a road by more than 1 kilometre.	affected farm portions, outside of an urban area,
(b) In the Free State;	north-west of the town of Smithfield, in the
(i) Outside urban areas;	



Activity	number
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(hh) Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland."

Activity description

Mohokare Local Municipality and Xhariep District Municipality, in the Free State Province.

The proposed project 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 project 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.

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

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



Activity number	Activity description
	required at this intersection. The road widening
	will exceed 4m in this regard.
	Intersection S119 and Access Route Option
	B: Road widening by approximately 7m (at the
	widest point) (approximately 200m²) will be
	required at this intersection. The road widening
	will exceed 4m in this regard.
	Intersection S119 and Access Route Option
	C: Road widening by approximately 14m (at the
	widest point) (approximately 450m²) will be
	required at this intersection. The road widening
	will exceed 4m in this regard.
	In addition, the existing cement bridge along Access Route Option A is approximately 3m wide. The bridge structure will need to be widened to approximately 15m (including gabion structures) which is regarded as road widening by more than 4m. No road will need to be lengthened by more than 1km at these access routes.
	The intersection widening and bridge widening will occur within small drainage features, watercourses and wetlands, and within 100m of these aquatic features, which have been delineated by the aquatic specialist.

As described in the Environment Impact Assessment Report (EIAr) dated September 2024 at:



Farm portions and SG codes for the Study Area

Farm Portion	SG Code
Farm Benoni 534	F0310000000053400000
Remaining Extent of Farm Biesjespoort 521	F0310000000052100000
Farm Biesjesvlei 372	F0310000000037200000
Farm Klein Badfontein 369	F0310000000036900000
Farm Modderkuil 396	F0310000000039600000
Farm Paalland 373	F0310000000037300000
Remaining Extent of Farm Pompoenfontein 118	F0310000000011800000
Portion 1 of Farm Pompoenfontein 118	F0310000000011800001
Farm Ronde Bult 408	F0310000000040800000
Farm Salpetervlei 756	F0310000000075600000
Portion 1 of Farm Schoemanskraal 34	F0310000000003400001

Affected Farm Properties for the Biesjesvlei BESS 1 and associated infrastructure (Project 4):

Farm Portion	21-digit Surveyor General code
BESS and associated infrastructure	
Farm Klein Badfontein 369	F0310000000036900000
Farm Paalland 373	F0310000000037300000
Access Road Option A	
Farm Salpetervlei 756	F0310000000075600000
Farm Paalland 373	F0310000000037300000
Access Road Option B	J.
Farm Benoni 534	F0310000000053400000
Farm Klein Badfontein 369	F0310000000036900000
Farm Paalland 373	F0310000000037300000
Access Road Option C	
Remaining Extent of Farm Biesjespoort 521	F0310000000052100000
Farm Benoni 534	F0310000000053400000
Farm Klein Badfontein 369	F0310000000036900000
Farm Paalland 373	F0310000000037300000
Widening of Existing Road Intersections	
Farm Benoni 534	F0310000000053400000
Remaining Extent of Farm Biesjespoort 521	F0310000000052100000



Farm Portion	21-digit Surveyor General code
Portion 1 of Farm Biesjespoort 521	F0310000000052100001
Remaining Extent of Farm Elizabethfontein 374	F03100000000037400000
Farm Klein Badfontein 369	F03100000000036900000
Farm Salpetervlei 756	F0310000000075600000
Remaining Extent of Klein Sevenfontein 156	F0310000000015600000

Co-ordinates for the Biesjesvlei BESS 1 and associated infrastructure (Project 4):

Co-ordinate Point	Degrees, Minutes, Seconds	
	Latitude (S)	Longitude (E)
BESS and associated infrastructure		
Corner Point 1	30° 06' 47.98111320" S	26° 21' 55.12966200" E
Corner Point 2	30° 06' 48.03963840" S	26° 22' 07.27367160" E
Corner Point 3	30° 06' 58.75833733" S	26° 22' 07.20550808" E
Corner Point 4	30° 06' 58.53711849" S	26° 21' 55.06217450" 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′ 51.41037600″ S	26° 22' 07.25223720" 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' 51.41037600" S	26° 22' 07.25223720" E
Access Road Option C		I
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' 51.41037600" S	26° 22' 07.25223720" E
Widening of Existing Road Intersections	III	
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 the up to 1200MWh Biesjesvlei Battery Energy Storage System (BESS) and associated infrastructure (Biesjesvlei BESS 1) near Smithfield, within the Mohokare Local Municipality in the Free State Province, hereafter referred to as "the property".

The key components of the development are as follows:

- BESS units;
- BESS laydown area;
- BESS IPP Substation;
- Laydown area for the BESS IPP Substation;
- BESS O&M Office, including ablutions;
- External access roads;
- Internal roads:
- Internal cables:
- Stormwater infrastructure;
- · Fencing and security; and
- Parking area.

Below is a table of the description of the components for the Biesjesvlei BESS 1 and Associated Infrastructure (Project 4):

Component Description	Component Description
Battery Energy Storage System (BESS)	
BESS Area/Facility	Technology: Lithium-Ion BESS
	Estimated Capacity: Maximum 1 200 MWh
	■ Total Footprint: Approximately 10 ha
	■ <u>Height</u> : Between 5 m and 10 m
	The BESS area will include the following sub- components:
	o BESS Units;



	Component Description
	o BESS Laydown Area;
	o BESS IPP Substation;
	 Laydown area for the BESS IPP Substation;
	o BESS Operational and Maintenance (O&M
	Office, including Ablutions;
	o Access Roads;
	 Internal Roads;
	 MV cables between BESS Units;
	 Transformer at the BESS IPP Substation;
	o Internal cables; and
	Overhead cables at the BESS IPP
	Substation;
	 Fencing and Security; and
	o Parking Area.
	an area of approximately 6 ha, and height up to
	E
RESS Laudown Area	5 m.
BESS Laydown Area	Footprint: Approximately 1.25 ha
BESS Laydown Area BESS IPP Substation	
	 Footprint: Approximately 1.25 ha Footprint: Approximately 1 ha
	 Footprint: Approximately 1.25 ha Footprint: Approximately 1 ha Height: Up to 15 m
	 Footprint: Approximately 1.25 ha Footprint: Approximately 1 ha Height: Up to 15 m Capacity: 33 kV to 132 kV
BESS IPP Substation	 Footprint: Approximately 1.25 ha Footprint: Approximately 1 ha Height: Up to 15 m Capacity: 33 kV to 132 kV This will be maintained by the IPP
BESS IPP Substation Laydown Area for the BESS IPP Substation	 Footprint: Approximately 1.25 ha Footprint: Approximately 1 ha Height: Up to 15 m Capacity: 33 kV to 132 kV This will be maintained by the IPP Footprint: Approximately 0.5 ha



Component Description	Component Description
External Access Roads	 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.
	 The Traffic Specialist has noted the following (additional detail is provided in Section 2.7 of Chapter 2 of the Final EIA Report dated September 2024):
	o 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



Component Description	Component Description
	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:
	 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.
	 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.

Component Description	Component Description
	 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	 <u>Details</u>: New internal gravel roads will need to be established within the BESS facility area. <u>Width</u>: Up to 4 m
Medium Voltage (MV) cables between the BESS Units	 Placement: Buried/Ducted Capacity: Ranges from 1 kV up to 33 kV Depth: Up to 2 m
Transformer at the BESS IPP Substation	 <u>Capacity</u>: Ranges above 33 kV <u>Depth/Height</u>: Up to 2 m
Internal cables in the BESS facility	 Placement: Buried / ducted Capacity: Ranges from 1 kV up to 33 kV Depth: Up to 2 m
Overhead cables at the BESS IPP Substation	 Placement: Overhead Capacity: Ranges above 33 kV Height: Up to 12 m
Fencing of the BESS Facility and Security	 <u>Type</u>: Palisade or mesh or fully electrified <u>Height</u>: Up to 5 m

Component Description	Component Description
	 Security: Access to the BESS Facility will be managed and monitored by an appointed security service provider.
Parking Area	 A parking area will be established at the BESS Facility for staff
Storm water channels	 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.
Water Requirements	 Approximately 350 m³ to 450 m³ of water is estimated to be required per year for the construction phase.
	 Approximately 200 m³ to 300 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	■ 12 - 24 months
Operational Period	 Once the commercial operation date is achieved, the proposed BESS will store and dispatch electricity for a minimum period of 20 to 30 years.



Conditions of this Environmental Authorisation

Scope of authorisation

- The development of the up to 1200MWh Biesjesvlei Battery Energy Storage System (BESS) and associated infrastructure (i.e., Biesjesvlei BESS 1) near Smithfield, within Ward 41603006 of the Mohokare Local Municipality in the Free State Province, is approved as per the geographic coordinates cited in the tables 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 must 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 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.
- 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.
- This activity must commence within a period of ten (10) years from the date of issue of this Environmental Authorisation. If the 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 the lapsing of the above-mentioned 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.



 Commencement with one activity listed in terms of this environmental authorisation constitutes commencement of all authorised activities.

Notification of authorisation and right to appeal

- 10. 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.
- 11 The notification referred to must
 - 11.1. specify the date on which the authorisation was issued;
 - 11.2. inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014:
 - 11.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
 - 11.4. Give the reasons of the Competent Authority for the decision.

Commencement of the activity

12. The authorised activity must 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

- 13. The combined project layout plan attached as Figure A 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 development of the up to 1200MWh Battery Energy Storage System (BESS) and associated infrastructure (i.e., Biesjesvlei BESS 1) which forms part of the "Biesjesvlei PV Facilities, BESS and EGI Cluster," is approved.
- 14. The Environmental Management Programme (EMPr) for the up to 1200MWh Biesjesvlei Battery Energy Storage System (BESS) and associated infrastructure (i.e., Biesjesvlei BESS 1), submitted as part of the EIAr dated September 2024 is approved and must be implemented and adhered to.



- 15. The Generic Environmental Management Programme (EMPr), "for the development and expansion of substation infrastructure for the transmission and distribution of electricity" for the up to 132kV BESS IPP Substation Hub/Complex, specifically Part C: Site Specific Environmental Attributes, dated 10 September 2024 submitted as part of the EIAr, is approved and must be implemented and adhered to.
- 16. The EMPrs must be implemented and strictly enforced during all phases of the project. They shall be seen as dynamic documents and shall be included in all contract documentation for all phases of the development when approved.
- 17. Changes to the approved EMPrs must be submitted in accordance with the EIA Regulations applicable at the time.
- 18. The Department reserves the right to amend the approved EMPrs should any impacts that were not anticipated or covered in the EIAr be discovered.

Frequency and process of updating the EMPr

- 19. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 26 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.
- 20. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
- 21. 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, before submission of the updated EMPr to the Department for approval.
- 22. In assessing whether to approve 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.
- 23. 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.

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Monitoring

- 24. 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 EMPrs.
 - 24.1. The ECO must be appointed before the commencement of any authorised activities.
 - 24.2. Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of the Department.
 - 24.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
 - 24.4. 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

- 25. 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.
- 26. The holder of the environmental authorisation must, for the period during which the environmental authorisation and EMPrs remain valid, ensure that project compliance with the conditions of the environmental authorisation and the EMPrs are audited and that the audit reports are submitted to the *Director: Compliance Monitoring* of the Department.
- 27. The frequency of auditing and submission of the environmental audit reports must be as per the frequency indicated in the EMPrs, considering the processes for such auditing as prescribed in Regulation 34 of the NEMA EIA Regulations, 2014 as amended.
- 28. 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.
- 29. The environmental audit reports must be compiled in accordance with Appendix 7 of the NEMA 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 EMPrs.



30. 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

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

32. 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

33. 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

- 34. No activities, which require a water use license, must be allowed to encroach into a water resource without a water use authorisation being in place from the Department of Water and Sanitation.
- 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.
- 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. 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 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.

39. 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 stormwater run-off.

40. An integrated waste management approach must be implemented that is based on waste minimisation

and must incorporate reduction, recycling, reuse, 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

41. A copy of this Environmental Authorisation, the audit and compliance monitoring reports, and the

approved EMPrs must be made available for inspection and copying-

41.1. at the site of the authorised activity;

41.2. to anyone on request; and

41.3. Where the holder of the Environmental Authorisation has a website, on such publicly accessible

website.

42. 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: 25/11/2024

Dr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations

Department of Forestry, Fisheries & the Environment

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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 -

- The listed activities as applied for in the amended application form received by the Department on 02 August 2024.
- b) The information contained in the final EIAr dated September 2024.
- c) The comments received from interested and affected parties as included in the final EIAr dated September 2024.
- d) Mitigation measures as proposed in the final EIAr dated September 2024 and the EMPrs.
- e) The information contained in the specialist input contained within the Appendices of the final ElAr dated September 2024.
- f) The findings of the site visit undertaken on 07 November 2024.

2. Key factors considered in making the decision

All information presented to the Department was considered 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 input conducted and their recommended mitigation measures.
- b) The need for the project stems from the provision of electricity to the national grid.
- c) The final EIA, dated September 2024, identified all legislation and guidelines that were considered in its preparation.
- d) The location of the proposed up to 1200MWh Biesjesvlei Battery Energy Storage System and associated infrastructure (i.e., Biesjesvlei BESS 2) which forms part of the "Biesjesvlei PV Facilities, BESS and EGI Cluster."
- e) The methodology used in assessing the potential impacts identified in the final ElAr dated September 2024 and the specialist input have been adequately indicated.
- f) A sufficient public participation process was undertaken, and the applicant has satisfied the minimum requirements as prescribed in the NEMA EIA Regulations, 2014 as amended for public involvement.



3. Findings

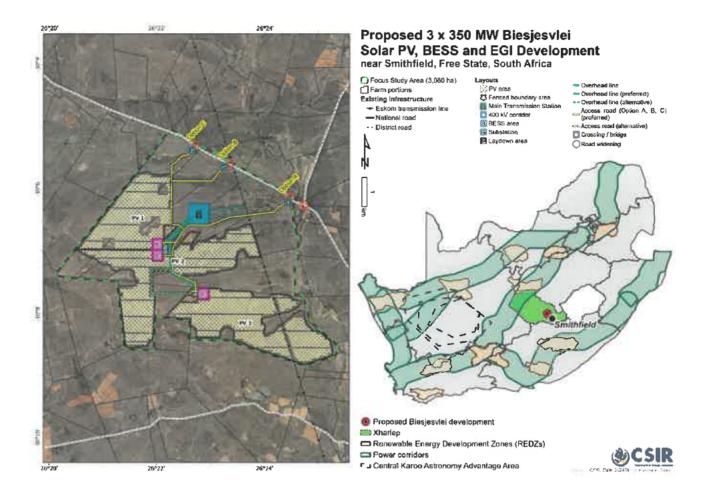
After consideration of the information and factors listed above, the Department made the following findings -

- a) The identification and assessment of impacts are detailed in the final EIAr dated September 2024and 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 final EIAr 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) EMPr measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the final EIAr 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.

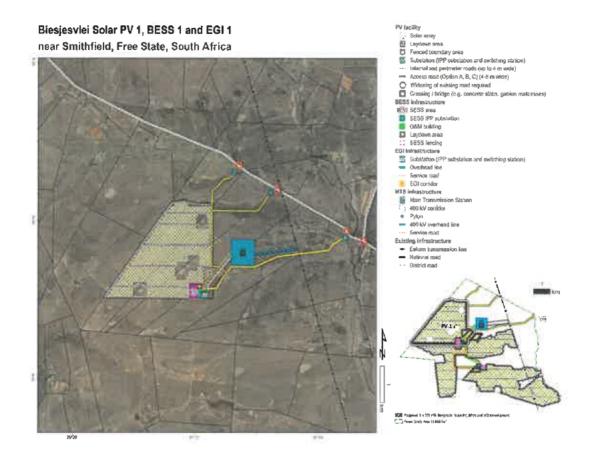


Annexure 2: Locality Map, Biesjesvlei Solar PV Facilities 1 to 3; Biesjesvlei BESS 1 to 3; Biesj





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)





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

