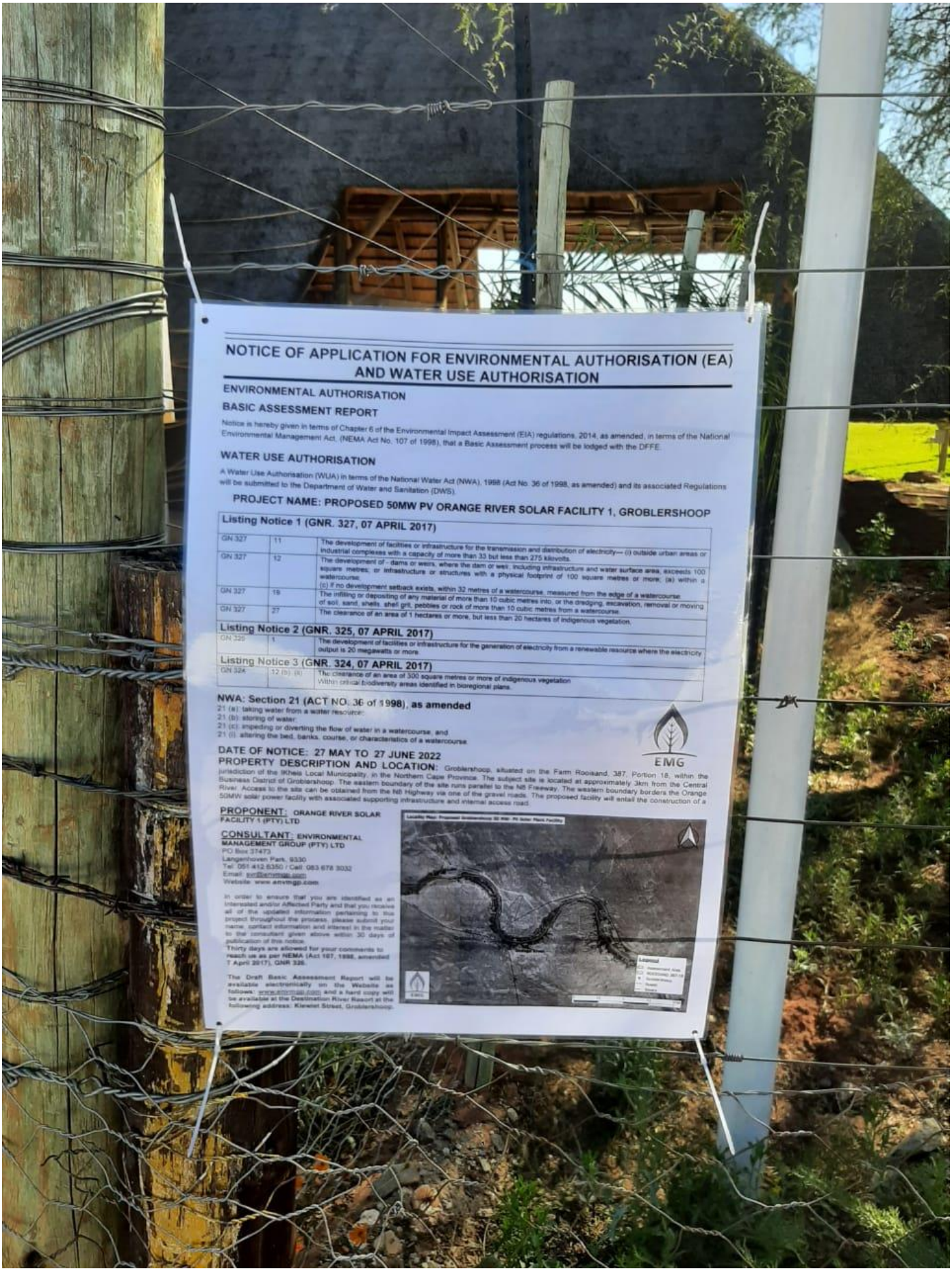


NOTICE OF APPLICATION FOR ENVIRONMENTAL AUTHORISATION (EA) AND WATER USE AUTHORISATION

ENVIRONMENTAL AUTHORISATION

BASIC ASSESSMENT REPORT

Notice is hereby given in terms of Chapter 6 of the Environmental Impact Assessment (EIA) regulations, 2014, as amended, in terms of the National Environmental Management Act, (NEMA Act No. 107 of 1998), that a Basic Assessment process will be lodged with the DFFE.

WATER USE AUTHORISATION

A Water Use Authorisation (WUA) in terms of the National Water Act (NWA), 1998 (Act No. 36 of 1998, as amended) and its associated Regulations will be submitted to the Department of Water and Sanitation (DWS).

PROJECT NAME: PROPOSED 50MW PV ORANGE RIVER SOLAR FACILITY 1, GROBLERSHOOP

Listing Notice 1 (GNR. 327, 07 APRIL 2017)		
GN 327	11	The development of facilities or infrastructure for the transmission and distribution of electricity--- (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts.
GN 327	12	The development of - dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or infrastructure or structures with a physical footprint of 100 square metres or more; (a) within a watercourse; (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.
GN 327	19	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.
GN 327	27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation.
Listing Notice 2 (GNR. 325, 07 APRIL 2017)		
GN 325	1	The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more.
Listing Notice 3 (GNR. 324, 07 APRIL 2017)		
GN 324	12 (b) (ii)	The clearance of an area of 300 square metres or more of indigenous vegetation Within critical biodiversity areas identified in bioregional plans.

NWA: Section 21 (ACT NO. 36 of 1998), as amended

21 (a): taking water from a water resource;
21 (b): storing of water;
21 (c): impeding or diverting the flow of water in a watercourse; and
21 (i): altering the bed, banks, course, or characteristics of a watercourse.

EMG

DATE OF NOTICE: 27 MAY TO 27 JUNE 2022

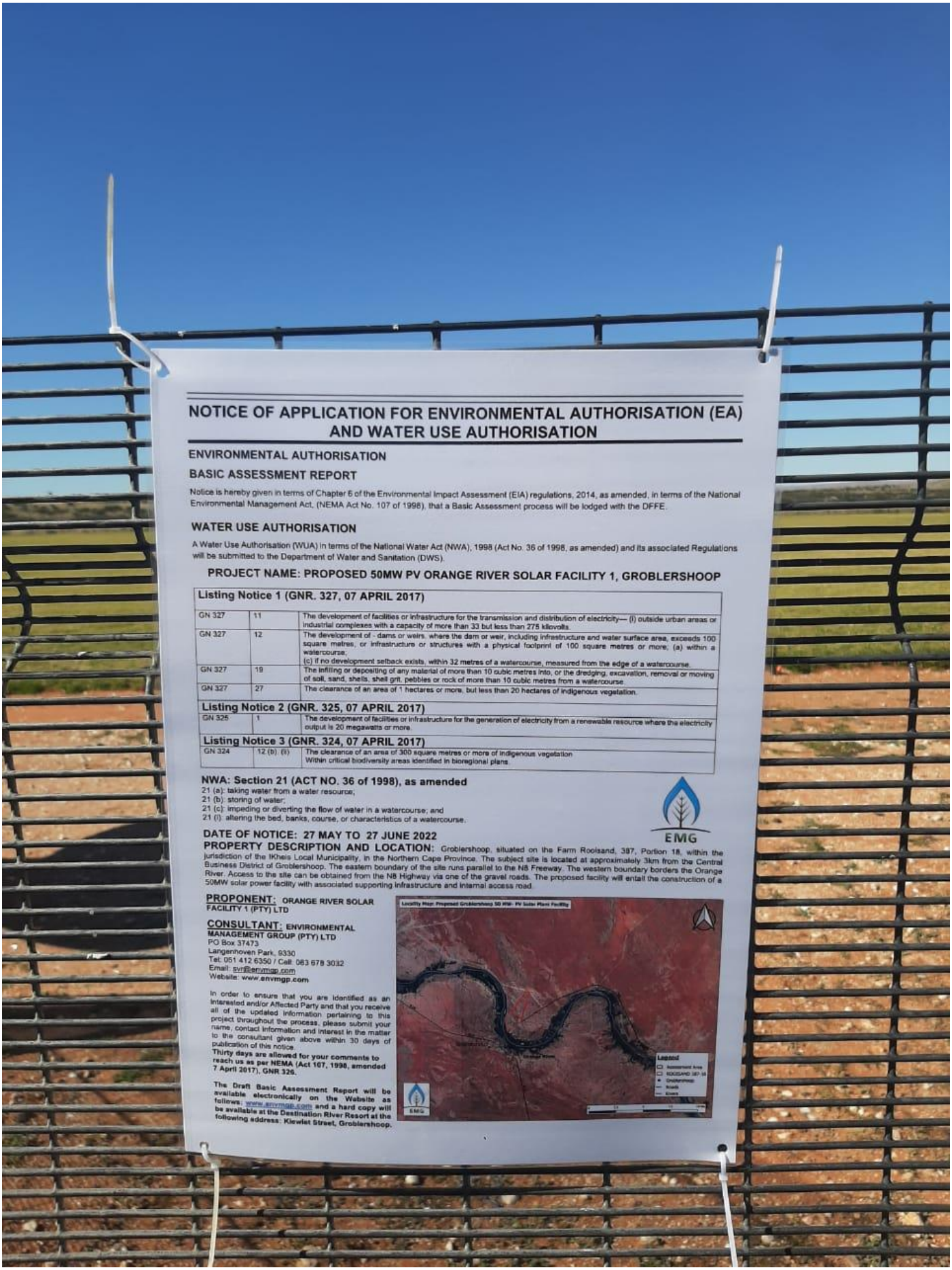
PROPERTY DESCRIPTION AND LOCATION: Groblershoop, situated on the Farm Rooikand, 387, Portion 18, within the jurisdiction of the !Kheis Local Municipality, in the Northern Cape Province. The subject site is located at approximately 3km from the Central Business District of Groblershoop. The eastern boundary of the site runs parallel to the N8 Freeway. The western boundary borders the Orange River. Access to the site can be obtained from the N8 Highway via one of the gravel roads. The proposed facility will entail the construction of a 50MW solar power facility with associated supporting infrastructure and internal access road.

PROPONENT: ORANGE RIVER SOLAR FACILITY 1 (PTY) LTD

CONSULTANT: ENVIRONMENTAL MANAGEMENT GROUP (PTY) LTD
PO Box 37473
Langenhoven Park, 9330
Tel: 051 412 8350 / Cell: 083 678 3032
Email: enr@envmgp.com
Website: www.envmgp.com

In order to ensure that you are identified as an Interested and/or Affected Party and that you receive all of the updated information pertaining to this project throughout the process, please submit your name, contact information and interest in the matter to the consultant given above within 30 days of publication of this notice.
Thirty days are allowed for your comments to reach us as per NEMA (Act 107, 1998, amended 7 April 2017), GNR 326.

The Draft Basic Assessment Report will be available electronically on the Website as follows: www.envmgp.com and a hard copy will be available at the Destination River Resort at the following address: Klewer Street, Groblershoop.



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PO Box 37473
Langenhoven Park, 9330
Tel: 051 412 6350 / Cell: 083 678 3032
Email: svr@envmgp.com
Website: www.envmgp.com

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ENERGY
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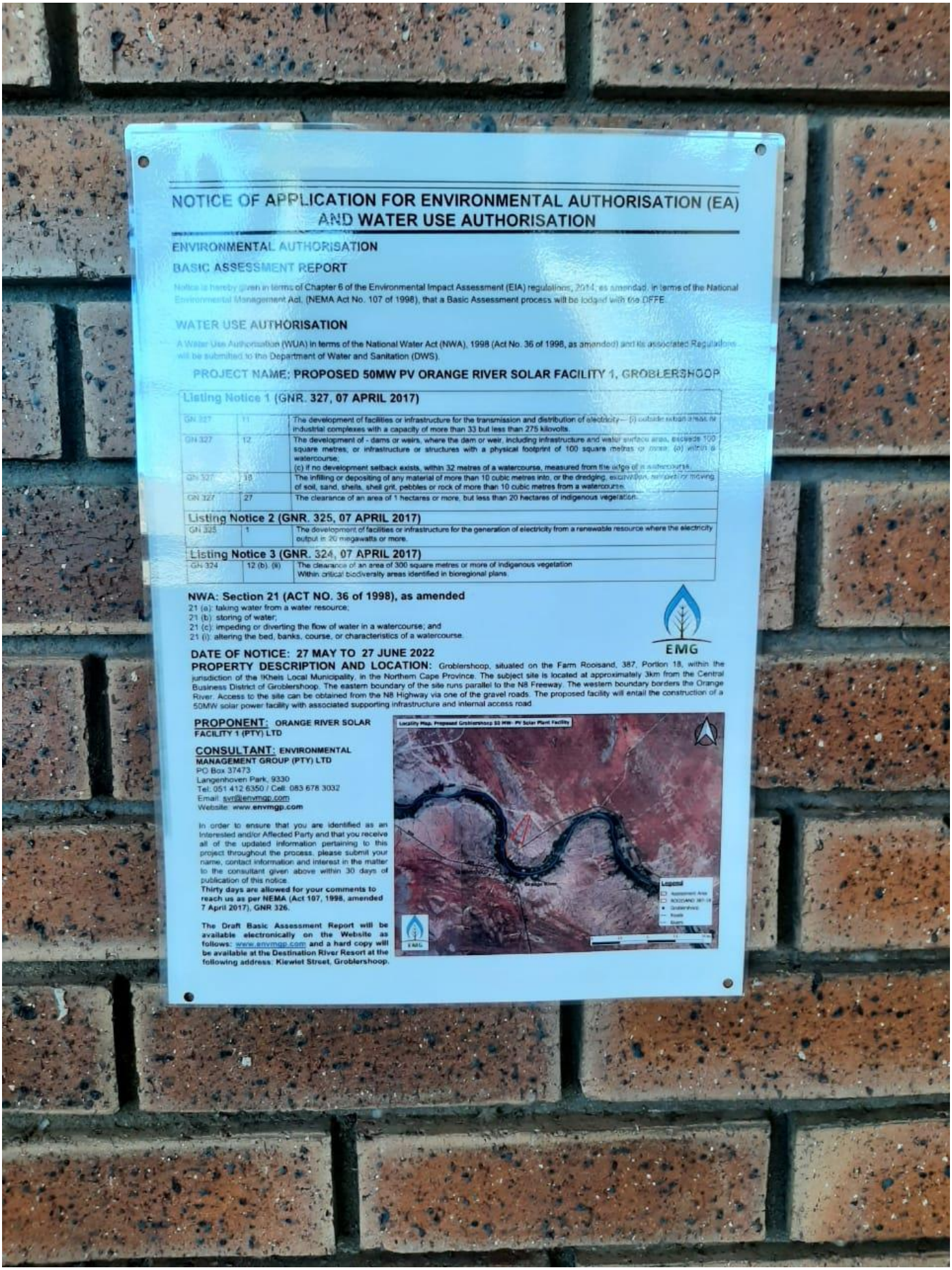
FASTEST INTERNET IN DIGBLESHOOP
PLAY TO W


Welcome To
D
DESTINATION RIVER RESORT
GROBLERSHOOP



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Thirty days are allowed for your comments to reach us as per NEMA (Act 107, 1998, amended 7 April 2017), GNR 326.

The Draft Basic Assessment Report will be available electronically on the Website as follows: www.envmgp.com and a hard copy will be available at the Destination River Resort at the following address: Kiewiet Street, Groblershoop.

3.3. DISTRIBUTION OF BACKGROUND INFORMATION DOCUMENT:

For notification of I&APs about the proposed project, a BID, shown below was compiled, and it was sent to the identified I&APs.

Proposed 50MW PV Orange River Solar Facility 1, Solar Plant, Groblershoop

ENVIRONMENT MANAGEMENT GROUP (PTY) LTD

CHRISTIEN KRUGER
Background Information Document

Background Information Document for the Proposed 50MW PV Orange River Solar Facility 1, Solar Plant, Groblershoop

May 2022

INTRODUCTION

Environmental Management Group (Pty) Ltd is the Professional Service Provider applying for all applicable Environmental Applications for the proposed 50MW PV Groblershoop solar plant facility.

LOCALITY

The site for the proposed solar facility is on Portion 18 of the Farm Rooisand 387, located within the jurisdiction of the !Kheis Local Municipality and within the ZF Magcawu District Municipality,, which is in Ward 3 of the Municipality in the Northern Cape Province.
The site is located approximately 3km from the Central Business District of Groblershoop. The eastern boundary of the site runs parallel to the N8 Freeway. The western boundary borders the Orange River, however, the solar facility will not be constructed near the Orange River. Access to the site can be obtained from the N8 Highway via one of the gravel roads.

ENVIRONMENTAL AUTHORISATION

Prior to the commencement of the proposed facility, Environmental Authorisation in terms of the National Environmental Management Act (NEMA), (Act No. 107 of 1998), Environmental Impact Assessment (EIA) Regulations as amended 7 April 2017 is required from the competent authority Department of Forestry, Fisheries and Environment (DFFE).

According to the National Environmental Management Act (Act No. 107 of 1998) as amended 7 April 2017, Listing Notice 1 - R327, Listing Notice 2 - R325 and Listing Notice 3 - R324 – the following activities are applicable to this proposed project:

Listing Notice 1 (GNR. 327, 07 APRIL 2017)

- GN 327 11 The development of facilities or infrastructure for the transmission and distribution of electricity— (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts.
- GN 327 12 The development of - dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or infrastructure or structures with a physical footprint of 100 square metres or more;
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- GN327 27 The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation.

Listing Notice 2 (GNR. 325, 07 APRIL 2017)

- GN 325 1 The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more.

PURPOSE OF THIS DOCUMENT

EMG has prepared this document to inform you about:

- The proposed project.
- The current understanding of the baseline environmental and social conditions.
- Possible environmental impacts and proposed specialist studies.
- How you can have input into the Environmental Authorisation and Water Use Authorisation Processes.

YOU'RE ROLE

You have been identified as an Interested and/or Affected Party (I&AP) who may want to be informed about the proposed Groblershoop 50MW PV solar plant facility and have input into the processes and environmental reports.
You have an opportunity to review this document and provide your initial comments to us for incorporation in the process. You will also be given the opportunity to provide input at the public meeting, if the need arises. And to review and comment on some reports.
Comments will be recorded and included in the reports submitted to the relevant authorities for decision-making.

HOW TO RESPOND

If you are interested in receiving further information on the project, please register your details with the person listed below. Responses to this document can be submitted by means of the attached comments sheet and/or through communication with the persons listed below.
Christien Kruger
Tel: 051 412 6350
E-mail: ckruger@envmgp.com

Listing Notice 3 (GNR. 324, 07 APRIL 2017)

- GN 324 12 (b).(ii) The clearance of an area of 300 square metres or more of indigenous vegetation. Within critical biodiversity areas identified in bioregional plans.

In addition to this, the proposed project will also require authorisation in terms of the National Water Act (NWA), (Act No. 36 of 1998), as amended, with the Department of Water and Sanitation as the competent authority.
According to the NWA, the following Section 21 Water Uses have been identified for this project:

- 21 (a): taking water from a water resource;
- 21 (b): storing of water;
- 21 (c): impeding or diverting the flow of water in a watercourse; and
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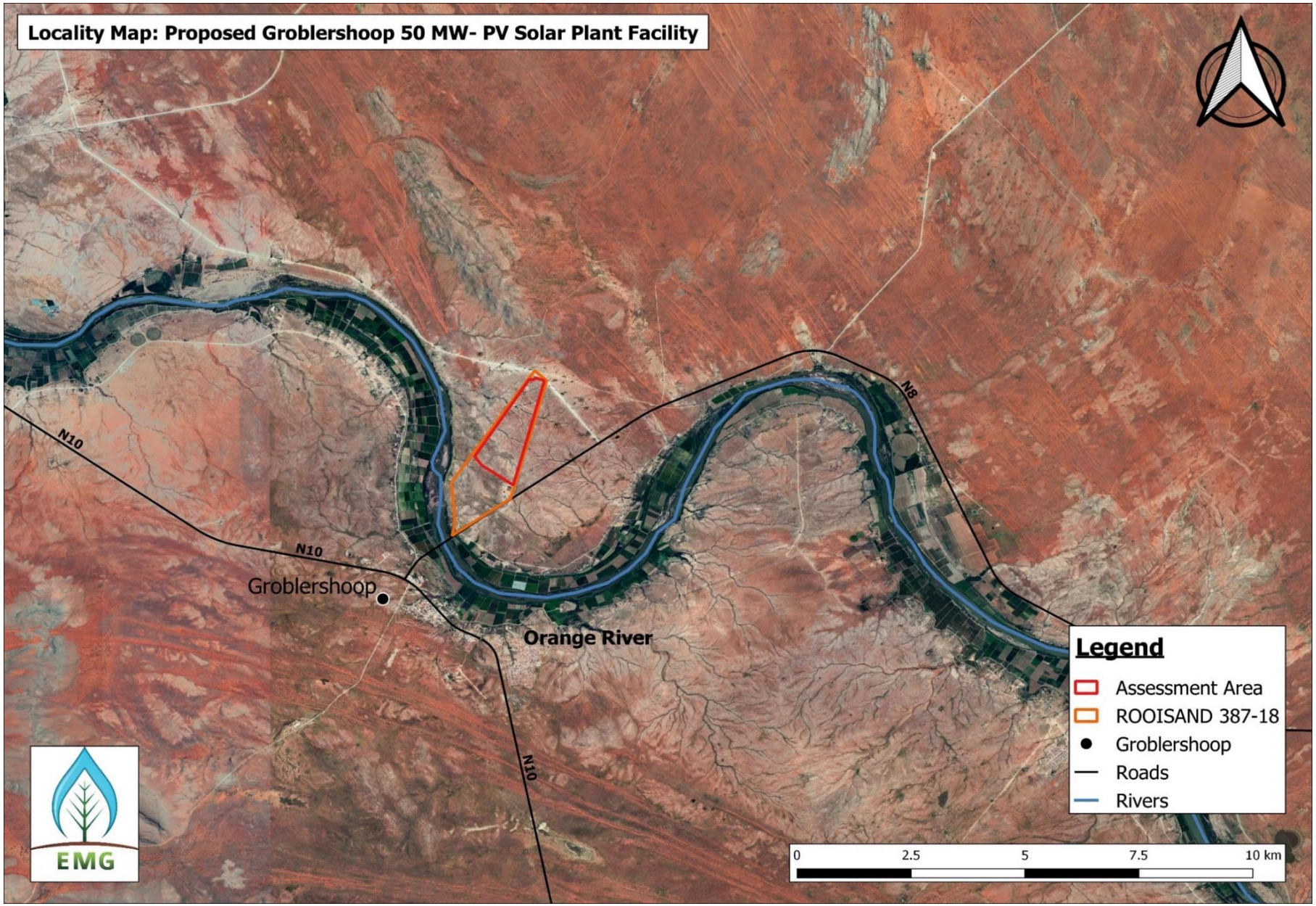

Locality Map: Proposed Groblershoop 50 MW- PV Solar Plant Facility
N10
N10
N10
N8
Groblershoop
Orange River
EMG
Legend
Assessment Area
ROOISAND 387-18
Groblershoop
Roads
Rivers
0
2.5
5
7.5
10 km

PROJECT DESCRIPTION

Orange River Solar Facility 1 (PTY) Ltd has initiated the process to construct a proposed 50MW photovoltaic solar plant on Portion 18 of the Farm Rooisand 387, located near Groblershoop, Northern Cape Province.

The plant will constitute the construction of the solar plant and associated supporting infrastructure such as an Eskom substation, inverter stations, an Operation and Maintenance building and an internal access road on approximately 178ha of vacant land, which is situated on Portion 18 of the Farm Rooisand 387. The footprint of the solar facility infrastructure is approximately 44ha.

PUBLIC PARTICIPATION

Public Participation provides Stakeholders and I&APs the opportunity to raise issues of concern and comment on the proposed construction of the solar plant in Groblershoop. Notify other regulatory authorities and I&APs of the proposed project (via newspaper advertisements, site notices and this BID document).

Public meeting with I&APs and regulatory authorities (if required)
Submit application to DFFE (14 days)
Submit Draft BAR to the DFFE
Public & authority review of Draft BAR (30 calendar days)
Update the Draft BAR with comments received during the review period
Submit updated Final BAR to the DFFE
Review of the Final BAR by the DFFE (107 calendar days)

Submit WUL technical report and application forms to DWS
Circulate decision to I&APs on the project database.

PARTIES INVOLVED IN THE APPLICATION PROCESSES

IAPs

- Surrounding landowners, land users and communities
- Parastatals

KEY STAKEHOLDERS

- Department Transport, Safety and Liaison
- Depart of Mineral Resources and Energy
- Northern Cape Heritage Authority
- Telkom
- Transnet
- Department of Health
- National Energy Regulator South Africa
- Department of Water and Sanitation.
- Department of Cooperative Governance, Human Settlements and Traditional Affairs (NC)
- Department of Roads and Public Works
- South African Heritage Resource Agency
- Department of Agriculture, Land Reform
- SANRAL
- Eskom

LOCAL AUTHORITIES

- ZF Mgcawu District Municipality - Municipal Manager
- Kheis Local Municipality - Executive Mayor
- Kheis Local Municipality – Municipal Manager
- !Kheis Local Municipality– Ward Councillor 3

Please let us know if there are any additional parties that should be involved.

Turnaround times for WULA's		
No	**Step**	**Mines and industry**
0	Pre-application site inspection and compilation of application (reports + PP)	0
1	Submit application and supporting documents	1
2	Accept or reject application	3
3	Preliminary Assessment	6
4	Specialist comments	33
5	Final Assessment	11
6	WUAAC presentation and recommendation	7
7	Recommendation (Director IE/Equivalent at CMA)	6
8	Recommendation (CEO at CMA) / RH	6
9	Preparing Decision Documents for signature	3
10	Consideration and decision (Regional Head)	6
11	Post decision admin	8
Total		**90**

PROCESS STEPS (in accordance with GN326)	RESPONSIBLE PARTY	TIMEFRAME
1. Initial communication to clarify the application with the Authorising Department.	EAP	1 day
2. EAP to conduct a site investigation	EAP	1 day
3. EAP to submit Application for Environmental Authorisation to the competent authority.		1 day
4. Competent authority Accepts Application.	DFFE	14 day
5. EAP to compile a Basic Assessment Report subjected to 30 days Public Participation Process.	EAP	90 day
6. EAP to submit Final Basic Assessment Report inclusive of comments to competent authority.	EAP	1 day
7. Competent authority to grant or decline Approval for Environmental Authorisation.	DFFE	107 day
8. Environmental Authorisation subject to 20 day appeal process.	EAP	20 day
9. Final Approval of Environmental Authorisation.	DFFE	1 day

Proposed 50MW PV Orange River Solar Facility 1, Solar Plant, Groblershoop Registration and Response Form for Interested and Affected Parties (I&AP)

Date	

Particulars of the I&AP

Name	
Postal Address & Code	
Street Address & Code	

Telephone number		Cell Phone Number	
Fax Number		E-Mail Address	

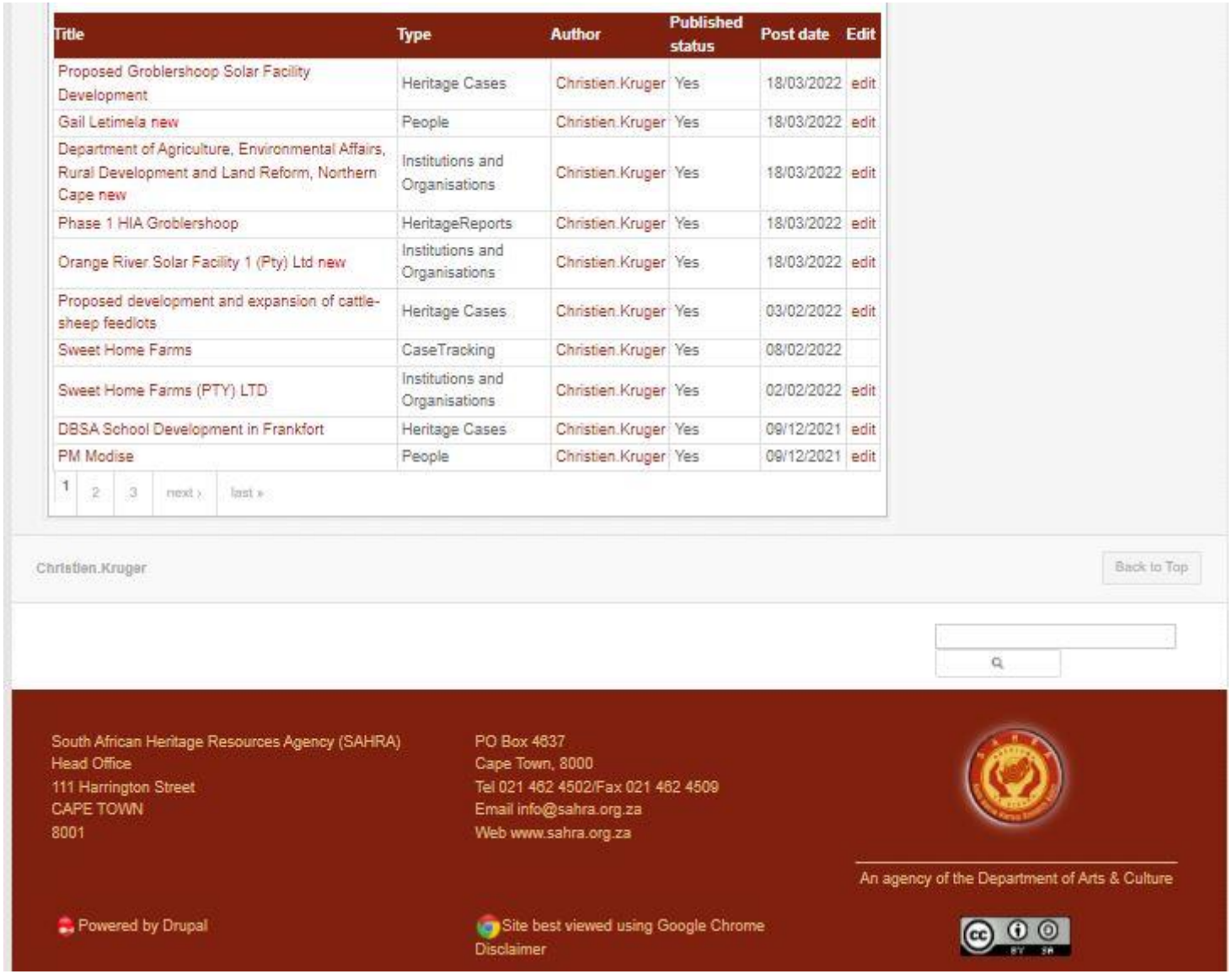
Please Identify your Interest in the Proposed Project:

Please write your comments and questions here:

Please return completed form prior to 30 days lapsing:

Christien Kruger
Tel: 051 412 6350
Email: ckruger@envmgp.com
Website: www.envmgp.com

4 HERITAGE REPORT UPLOADED TO SOUTH AFRICAN HERITAGE RESOURCES AGENCY



Title	Type	Author	Published status	Post date	Edit
Proposed Groblershoop Solar Facility Development	Heritage Cases	Christien.Kruger	Yes	18/03/2022	edit
Gail Letimela new	People	Christien.Kruger	Yes	18/03/2022	edit
Department of Agriculture, Environmental Affairs, Rural Development and Land Reform, Northern Cape new	Institutions and Organisations	Christien.Kruger	Yes	18/03/2022	edit
Phase 1 HIA Groblershoop	HeritageReports	Christien.Kruger	Yes	18/03/2022	edit
Orange River Solar Facility 1 (Pty) Ltd new	Institutions and Organisations	Christien.Kruger	Yes	18/03/2022	edit
Proposed development and expansion of cattle-sheep feedlots	Heritage Cases	Christien.Kruger	Yes	03/02/2022	edit
Sweet Home Farms	CaseTracking	Christien.Kruger	Yes	08/02/2022	
Sweet Home Farms (PTY) LTD	Institutions and Organisations	Christien.Kruger	Yes	02/02/2022	edit
DBSA School Development in Frankfort	Heritage Cases	Christien.Kruger	Yes	09/12/2021	edit
PM Modise	People	Christien.Kruger	Yes	09/12/2021	edit

5 LIST OF I&AP'S

List of Stakeholders and I&AP's					
Department / Organisation	**SG number**	**Contact Person**	**E-Mail Address**	**Address**	**Contact Nr**
Department Transport, Safety and Liaison		Ms Lizell Wolfe	acrouch@ncpg.gov.za, amontwedi@ncpg.gov.za, mrattle@ncpg.gov.za		053 839 1700 / 053 839 1773
Department of Environment and Nature Conservation (DENC)		Mr D Paulse	davidpaulse@gmail.com		082 457 9851
Depart of mineral resources & energy		Mr Ndlelenhle Zindela, Ms Ntombi Mayekiso	Ndlelenhle.zindela@dmr.gov.za, ntombi.mayekiso@dmr.gov.za	41 Schmidtsdrift street, Telkom Building, KIMBERLEY, 8300	(053) 807 1700
Northern cape heritage authority			rtimothy@nbkb.org.za	1 Monridge Office Park, c/o Kekewich Drive & Memorial Road, Kimberley,	0790369695
Transnet			enquiries@transnet.net	138 Eloff Street Braamfontein JOHANNESBURG 2000	011 308 3000
Dept of health		Ms.L Smith	lizelsmith@ncpg.gov.za	James Exum Building, Du Toit Span Road, Kimberley	053 830 2100
National energy regulator South Africa		Mr Charles Hlebela	charles.hlebela@nersa.org.za	Kulawula House, 526 Madiba (Former Vermeulen) Street, Arcadia, Pretoria	083 646 8280
Department of Water and Sanitation		Ms Vhonani Ramugondo, Ms Alexia Hlengani, Mr Shaun Cloete	ramugondov@dws.gov.za, HlenganiA@dws.gov.za, CloeteS@dws.gov.za	28 Central Road, Beaconsfield, Kimberley	0538367699, 0836333642, 0543340205

Department of Cooperative Governance, Human Settlements and Traditional Affairs (NC)		Mr Mbuyisilo Madyo	rgladile@ncpg.gov.za		053 830 9513
Department of Roads and Public Works		Mr K Nogwili (HOD)	drpw-info@ncpg.gov.za, KNogwili@ncpg.gov.za, CRobertson@ncpg.gov.za, BSlingers@ncpg.gov.za		(053)839 2241 (053)839 2291
ZF Mgcawu District Municipality - Municipal Manager		Mr JG Lategan	gilazfm-dm.gov.za	cnr Hill and Le Roux Street, UPINGTON	054 337 2800
Kheis Local Municipality - Executive Mayor		Cllr. RVM Christie	rvmchristie@gmail.com	97 Oranje Street, Groblershoop, 8850	054 833 9500
Kheis Local Municipality – Municipal Manager		Mr F Van Eck	Fvaneck3@gmail.com, ronellizzet@fmail.com	97 Oranje Street, Groblershoop, 8850	054 833 9500
!Kheis Local Municipality– Ward Councilor 3		Mr P Vries	Paulvries10@gmail.com		0631323788
Department of Agriculture, Land Reform		Mr Wonders Mothibi (HOD)	rslaters@ncpg.gov.za, pamnc@vodamail.co.za		(053)838 9102
SANRAL		Ms Nicole Abrams	abrahamsn@nra.co.za		0219574602
Eskom		Ms Lebohang Motoai	lebohang.motoai@eskom.co.za, mzwandile.madodonke@eskom.co.za , motlatsi.makhari@eskom.co.za,		051 404 2582
Company Mega Boloka (PTY) LTD		Fortune Boloka	fortunefortune639@gmail.com		073 811 1405
Kalahari Kid Cooperation		Hannes - Judith	Hannes@kalaharikid.co.za / Judith@kalaharikid.co.za		060 506 2020
		Mr J Van Zyl			0834070252
Northern Cape Department of Agriculture,		Samantha De la Fontaine (Pr.Sci.Nat.)	sdelafontaine@gmail.com	Evelina de Bruin Building C/o Rivier & Nelson Mandela Road	054 338 4800

Environmental Affairs, Rural Development and Land Reform (Environmental Research and Development)				Upington 8800	
SA Civil Aviation Authority		Mr Sandile Ngcongo	Ngcongos@caa.co.za	Ikhaya Lokundiza,16 Treur Close, Waterfall Park, Bekker Street, Midrand, JOHANNESBURG, 1685	011 545 1330 083 461 6438

6.COMMENT AND RESPONSE REGISTER

Person	Comment	Response
Mr Fortune Boloka	I'm a contractor (civil engineering) and i would like to receive info about the project, where to apply so that I can be on the database for Orange river Solar facility 1.	Good day Fortune, We will upload you onto our database. Christien will provide you with all the necessary information pertaining to the project. Please note that we are in the initial phase of the project and will circulate relevant documents once they are complete. Regards, Sampie
Samantha De la Fontaine (Pr.Sci.Nat.) Production Scientist Grade A: District Ecologist Northern Cape Department of Agriculture, Environmental Affairs, Rural Development and Land Reform (Environmental Research and Development) Evelina de Bruin Building C/o Rivier & Nelson Mandela Road Upington 8800 Tel.: 054 338 4800 E-mail: sdelafontaine@gmail.com 22 Feb 2022	Dear Sampie Kindly register me as an I&AP for the said development as per the email subject. Please note that the property proposed for the facility falls within a CBA 2 as per the Northern Cape CBA map (2016). Cumulative impacts of the developments within the area should be taken into consideration; given the fact that the development is proposed within the buffer of the Orange River and its associated riverine habitat. What is the size of the surface area that the proposed development will encompass?	I am the Environmental Consultant assisting with this project. Kindly note that my colleague: Christien Kruger (Public Participation Consultant, cc'd above) has registered you as an Interested and Affected Party (I&AP) for the proposed Groblershoop solar facility. She will keep you informed regarding progress of the application. Please refer to my comments in red below. Trust that you find the above in order. Please note that the property proposed for the facility falls within a CBA 2 as per the Northern Cape CBA map (2016). Cumulative impacts of the developments within the area should be taken into consideration; given the fact that the development is proposed within the buffer of the Orange River and its associated riverine habitat. Yes, the property does fall within a Critical Biodiversity Area (CBA) and this will be further assessed in the specialist studies conducted and in the Environmental Impact Assessment Phase. What is the size of the surface area that the proposed development will encompass? The study area for the proposed solar facility is approximately 174ha. Regards Dashentha
Natasha Higgitt nhiggitt@sahra.org.za 22 Feb 2022	Good morning, Please note that all development applications are processed via our online portal, the South African Heritage Resources Information System (SAHRIS) found at the following link: http://sahra.org.za/sahris/. We do not accept emailed, posted, hardcopy, faxed, website links or DropBox links as official submissions.	Good Day Natasha Noted, thank you for your email. I will submit online and remove you from our email list. Have a nice day. Kind Regards / Vriendelike Groete Christien Kruger

	Please create an application on SAHRIS and upload all documents pertaining to the Environmental Authorisation Application Process. As per section 24(4)b(iii) of NEMA and section 38(8) of the National Heritage Resources Act, Act 25 of 1999 (NHRA), an assessment of heritage resources must form part of the process and the assessment must comply with section 38(3) of the NHRA. This assessment must be conducted by a qualified heritage practitioner. Once all documents including all appendices are uploaded to the case application, please ensure that the status of the case is changed from DRAFT to SUBMITTED. Please ensure that all documents produced as part of the EA process are submitted as part of the application.	
Jacoline Mans Chief Forester: NFA Regulations Department of Forestry, Fisheries and the Environment 26 Olien Street, Louisvaleroad, Upington, 8801 Cell 082 808 2737 / 060 973 1660 (w) forestry, fisheries & the environment Department: Forestry, Fisheries and the Environment REPUBLIC OF SOUTH AFRICA	Dear Sampie / Dashentha May you please also register me as a Commenting Authority, representing the Forestry Branch in the Department of Forestry, Fisheries and the Environment (DFFE). Kindly ensure that the potential impacts on protected trees (National Forests Act, Act 84 of 1998) are assessed and quantified during the EIA process. Kind Regards, Jacoline Mans	Good Day Jacoline Trust that you are well? Thank you for you email. I hereby confirm that you are added to our registered i&AP list for the proposed Groblershoop solar facility project. You will receive all relevant correspondence and I will keep you informed regarding progress of the application. I attached to Background information document for your attention. I see you cc'd our Environmental Consultant Mrs. Dasehentha (project manager) in this email. She will get back to you regarding the protected trees. Kind Regards / Vriendelike Groete Christien Kruger
		Good Day Jacoline, Trust that you are well. Your email below regarding the proposed Groblershoop project is noted. Yes, there are protected trees on the site and they will be assessed accordingly during the EIA Phase of the project. Kind Regards Dashentha Moodley
Fanus van Eck <fvaneck3@gmail.com>	Received, thank you.	

Sandile Ngcongo CAT Z Aerodromes & Heliports Inspector Aviation Infrastructure Tel: 011 545 1330 | Cell: 083 461 6438 | Email: Ngcongos@caa.co.za | www.caa.co.za 04/07/2022	Good afternoon Christien Apologies for the late reply, I was out on inspections. Please note that the Groblershoop airfield is not registered with the SACAA and therefore we do not have their information on our database. Kind regards	

7. CONCLUSION

It is concluded that the methods incorporated in the public participation process to inform the surrounding landowners, organs of state and identified government authorities was adequate. All the identified I&APs were given an opportunity to give input regarding the proposed 50MW PV Orange River Solar Facility 1, Solar plant and no negative comments were received.

APPENDIX F: IMPACT ASSESSMENT

Environmental Management Group Pty (Ltd) Reg. No. 2017/077689/07 VAT Reg No: 4350278778
Managing Director: S. van Rooyen | 083 678 3032 | svr@envmgp.com
Director General: C.W. Vermeulen | 082 824 9308 | cwv@envmgp.com

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
Flora and Fauna			
Clearance of Vegetation and erosion control	***Direct impacts:***	MEDIUM	• Buffer zones in the riparian zones should be provided. • Construction to be contained within the approved boundaries and unnecessary disturbance adjacent to the site be avoided. • Designated roads should be used during construction. • Implement a monitoring program for the early detection of alien invasive plant species. The control program to combat declared alien invasive plant species should be continued during the operational phase. • Clearance of vegetation should be restricted to the absolute minimum required to facilitate construction activities to proceed. No protected plant species shall be removed without a permit. • Disturbance of topsoil and vegetation rootstock must be
	Indirect impacts:	LOW	
	Cumulative impacts:	LOW	

Activity	Impact summary	Significance	Proposed mitigation
			minimized as far as possible. • Appropriate drainage systems will be built to accommodate the surface water movement from the rain and wind. • Construction activities shall take place only within the approved demarcated area. Appropriate drainage facilities must be constructed to make sure water runs smoothly downstream. • Top soil layer will be kept to rehabilitate and will be adequately stored to protect it from erosion. • Areas where construction has been finished should immediately be re-vegetated.
Land transformation – Veldfire	***Direct impacts:***	LOW	The Developer will ensure that firefighting equipment is available onsite if an accidental fire should break out. Construction workers will not be allowed to make fires on the site.
	Indirect impacts:	LOW	
	Cumulative impacts:	LOW	

Activity	Impact summary	Significance	Proposed mitigation
			• Construction activities that generate heat or an open flame should be monitored and appropriate measure taken to prevent run away veld fires. • A Fire Management Plan must be present on site • The local fire station, landowner and neighbouring landowners must be alerted about potential of causing a fire.
Unauthorized vehicle movement	***Direct impacts:***	LOW-MODERATE	• Vehicles must stay to existing gravel roads during any maintenance activities. • Vehicle drives must be informed where it is safe to drive.
	Indirect impacts:	LOW	
	Cumulative impacts:	LOW	
Hunting and gathering of Fauna	***Direct impacts:***	LOW-MODERATE	• No animal life should be killed, and measure should be implemented to inform workers thereof. A specialist should be informed immediately if the animal does not willingly move from site or has a nesting ground on the designated area. • Any animals found onsite should be relocated
	Indirect impacts:	LOW	
	Cumulative impacts:	LOW	

Activity	Impact summary	Significance	Proposed mitigation
			• During maintenance special care should be given to any animals that re-occupied the site after construction has been completed. Accidental killing of animals with vehicles should be kept to a minimum.
Impact on animal life especially avifauna	***Direct impacts:***	MODERATE	• Construction footprint to be demarcated as per the construction phase conditions outlined. • Construction vehicles will be restricted to travel only on designated roadways to limit the ecological footprint of the proposed development. • The development area is defined as • The developer intends to practice sheep farming in between the solar panels. • Prevent mortality of avifauna: • A single perimeter fence should be used. • Wire fence lines must always remain stiffly torqued and topmost wires
	Indirect impacts:	LOW	
	Cumulative impacts:	LOW-MODERATE	

Activity	Impact summary	Significance	Proposed mitigation
			strands must not contain any barbs. • Prevent unnecessary displacement of avifauna by ensuring that contractors are aware of the requirements of the Construction Environmental Management Programme (CEMPr), as per Appendix 4 of the Avifaunal Impact Assessment. • Prevent displacement of avifauna: Buffer zones as stipulated in the Avifauna Impact Assessment; 200m from the pan and 100m from the identified seasonal wetlands must be strictly implemented and adhered to. • Prevent unnecessary displacement of avifauna by ensuring that the rehabilitation of transformed areas is implemented by an appropriately qualified rehabilitation specialist, according to the recommendations of the ecological

Activity	Impact summary	Significance	Proposed mitigation
			and wetland specialist studies: Develop a Habitat Restoration Plan (HRP) and ensure that it is approved. • Monitor rehabilitation via site audits and site inspections to ensure compliance. Record and report any non-compliance. • Prevention of ongoing electrocution of avifauna through reactive mitigation if necessary, depending on the gravity of the problem: Implementation of mitigation measures such as insulation of live parts to prevent further electrocutions. • Prevent unnecessary displacement of avifauna by ensuring that contractors are aware of the requirements of the CEMPr: A site-specific CEMPr must be implemented, which gives appropriate and detailed description of how construction activities must be

Activity	Impact summary	Significance	Proposed mitigation
			conducted. All contractors are to adhere to the CEMPr and should apply good environmental practice during construction. The CEMPr must specifically include the following: • No off-road driving. • Maximum use of existing roads. • Measures to control noise and dust according to latest best practice. • Restricted access to the rest of the property. • Strict application of all recommendations in the ecological and wetland specialist reports pertaining to the limitation of the footprint. • Implementation of buffer zones as stipulated in this report.
Heritage			
Archaeological and/or historical features or artifacts	***Direct impacts:***	MODERATE	• Solar facility is underlain by paleontologically insignificant metamorphic rocks. • There is no above ground evidence of prehistoric evidence,
	Indirect impacts:	LOW	

Activity	Impact summary	Significance	Proposed mitigation
	Cumulative impacts:	LOW	buildings older than 60 years, or material of cultural significance. • The proposed footprint and access road for the solar facility is not considered paleontologically or archeologically sensitive, therefore, the project is recommended to commence, however, it is recommended that archaeologist be involved during the planning, to monitor and map potentially rare stone age LCT occurrences during the construction phase.
	Indirect impacts:	LOW	
	Cumulative impacts:	LOW	
Water Resources			
Surface and ground water Quality	***Direct impacts:***	MODERATE	• Surface contamination of the soil through hazardous materials should be cleaned up immediately and disposed of properly. • All vehicles must be fitted with a drip tray and leaking vehicles must be repaired off site at a designated construction area. • It is recommended to use alternative substances to those
	Indirect impacts:	LOW	
	Cumulative impacts:	LOW-MODERATE	
	Indirect impacts:	NO IMPACT	

Activity	Impact summary	Significance	Proposed mitigation
			that are hazardous especially near sensitive areas such as the existing irrigation concrete canal within proximity of the area. • All spillages must be cleaned before leaving a site. • Implement suitable dust management and prevention measures during the operational phase of the proposed development. • Chemical toilets shall be used during the construction stage and a registered service provider shall be contracted to service the toilets regularly. • Suitable covered receptacles for waste shall be always available and conveniently placed for the disposal of waste. • Warehouse floors and workshop areas should be of concrete. Drainage from warehouse is collected separately with trap for oil or fuels oil. Trap containers when full will be removed,
	Cumulative impacts:	LOW-MODERATE	

Activity	Impact summary	Significance	Proposed mitigation
			properly stored and sent out to oil waste management company. • Refuelling, fuel loading/unloading, oil change-outs, waste storage and disposal activities must be carefully managed to prevent spillages. • Adequate toilets must be always available on site for use by construction staff. The digging of pit latrines for this purpose is not allowed under any circumstances. • Should chemical toilets be used, an appropriate contractor must be employed to service these facilities on an ongoing basis. • Spills or overflows from chemical or other toilets used by construction staff must be dealt with by a sanitation expert immediately. • Any effluents containing oil, grease or other industrial substances must be collected in a suitable receptacle and

Activity	Impact summary	Significance	Proposed mitigation
			treated prior to discharge or removed from the site for appropriate disposal at a recognised facility. • Responsible management of the site will be required to reduce risks/threats to groundwater and surface water.
Aesthetics			
Work within the watercourse	***Direct impacts:*** During the construction works and maintenance during the operational phase, contamination of the Orange River and pan by dust generation and emissions.	MODERTARE	• The recommended buffer zones must be adequately maintained, and no current or future development is allowed to encroach into the buffered zones over time. • It is recommended that the identified pan be adequately buffered out of the proposed development footprint area. • A minimum approximately 50 m buffer distance is proposed to be implemented around the pan edges. No current or future development is allowed to take
	Indirect impacts:	LOW	
	Cumulative impacts: A cumulative impact has already occurred through the main gravel road and private access roads on private land and excavating along	LOW	

Activity	Impact summary	Significance	Proposed mitigation
	the already disturbed areas will have a very small cumulative impact		place within this buffered zone. • The identified three flow paths/drainage lines be adequately buffered out of the proposed development footprint area. A minimum approximately 20 m buffer distance is proposed to be implemented on both sides of all the flow path/drainage line edges. • The eight identified watercourses need to be adequately buffered out of the proposed solar facility footprint area. A minimum buffer of approximately 35m distance is proposed to be implemented on both sides of all watercourse edges
	Indirect impacts:	LOW	
	Cumulative impacts:	LOW	
Noise and Air Quality			
Generation of noise	***Direct impacts:***	LOW-MODERATE	• No loud music at any construction sites. • Vehicles must be maintained in such a manner as to not cause excessive noise when operating them. • Selecting 'quiet' construction
	Indirect impacts:	LOW	

Activity	Impact summary	Significance	Proposed mitigation
	Cumulative impacts:	LOW	equipment and working method and avoiding unnecessary revving and hooting.
Air quality	***Direct impacts:***	LOW-MODERATE	• Confine vehicle movements on unpaved roads to demarcated areas only. • Set up water sprayers along haul roads to dampen dust and minimise dust loading to surrounding vegetation. • Speed control for all roads to limit dust generation.
	Indirect impacts:	LOW	
	Cumulative impacts:	LOW	
Visual			• Preparation of the solar field area (i.e., clearance of vegetation, grading, contouring, and compacting) and solar field construction should be phased in a way that makes practical sense to minimise the area of soil exposed and duration of exposure;

Activity	Impact summary	Significance	Proposed mitigation
			• Parking areas should be demarcated and strictly controlled so that vehicles are limited to specific areas only. • Night-time construction should be avoided where possible. • Night lighting of the construction sites should be minimised within requirements of safety and efficiency. • Dust and noxious weed control should be part of maintenance activities.
Job Creation	***Direct impacts:*** Local labour from the community will be employed by the developer. This will have a positive impact on the wellbeing of employees with a multiplier effect on households of the employed		• **No mitigation** • The solar plant will result in job creation and upliftment of the local community.
No-go option			
Activity will not proceed, and the	***Direct impacts:***	HIGH	If this project has been identified as a no-go option around 600 job opportunities will be lost

Activity	Impact summary	Significance	Proposed mitigation
environment is left as it is.	***Indirect impacts:***	MODERATE	to the local communities. The capex value of the project is estimated to cost around R 782 417 810.00.
	Cumulative impacts:	HIGH	
Waste Management Impacts			
Building construction rubble management	***Direct impacts:***	LOW	• Construction rubble should be disposed of in predetermined, demarcated spoil dumps that have been approved by the ECO. • During the construction phase the storage of potentially hazardous material must be controlled to reduce the risk of environmental contamination. • During the construction phase, cement and concrete must not be mixed directly on the ground, or during rainfall events when the potential for transport of pollutants to watercourses is the greatest. • All construction water and contaminated runoff
	Indirect impacts:		
	Cumulative impacts:		

Activity	Impact summary	Significance	Proposed mitigation
			must be directed away from drainage lines. • The area must be monitored by an ECO on a regular basis. • The visible remains of the batch and concrete, either solid, or from washings, must be physically removed immediately and disposed of as hazardous waste. • Washing of equipment shall be done in a container to prevent any runoff of contaminated washing water. • Extreme care must be taken to limit the amount of water contaminated by washing equipment. Water from concrete washing can be re-used in concrete mixes or must be stored in drums, then removed from the site and disposed of at a licensed municipal dump site.
Litter management		LOW	• Generation and disposal of hazardous waste by the proposed facility. • No littering or on-site burying or dumping

Activity	Impact summary	Significance	Proposed mitigation
			of any waste materials, vegetation, litter or refuse may occur. • All solid waste must be disposed of offsite at an approved landfill site in terms of section 20 of the Environment Conservation Act (Act No. 73 of 1989). The Contractor must supply the ECO with a certificate of disposal. • The Contractor must provide problem animal- and weatherproof bins with lids of sufficient number and capacity to store the solid waste produced daily. The lids must be always kept firmly on the bins. Bins must not be allowed to become overfull and must be emptied regularly. • Waste from bins may be temporarily stored on Site in a central waste area that is weatherproof and scavenger proof and which the Engineer and the ECO has approved. • All hazardous waste must be disposed of

Activity	Impact summary	Significance	Proposed mitigation
			at a registered hazardous waste disposal site and certificates of safe disposal must be obtained. • All waste generated during the decommissioning and reconstruction activities must be removed by the Contractor as soon as possible, and within the period specified in the EMP and disposed of at a registered landfill site. • The Contractor must make provision for workers to clean up the Contractor's camp and working areas daily so that no litter is left lying around and so that the site is in a neat and tidy state. The Contractor must remove from site the refuse collected at least once a week. • All sewage as well as any waste generated during the construction phase, should be collected, contained, and disposed of at the permitted and/or

Activity	Impact summary	Significance	Proposed mitigation
			licensed facilities of the Local Authority. Please note that proof of the agreement between the Applicant and the concerned Local Authority must be submitted to the Department of Water and Sanitation. • The disposal of general waste and that of hazardous waste must be carried out in an environmentally safe way as to prevent and/or minimise the potential for pollution of water resources and collection of which should be done by an accredited waste collector. All applicable Sections of the National Environmental Management: Waste Act (Act 59 of 2008) should be strictly adhered to.

APPENDIX G: ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)

Environmental Management Group Pty (Ltd) Reg. No. 2017/077689/07 VAT Reg No: 4350278778
Managing Director: S. van Rooyen | 083 678 3032 | svr@envmgp.com
Director General: C.W. Vermeulen | 082 824 9308 | cwv@envmgp.com

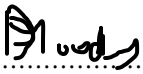
Environmental Management Program (EMPr)

50 MW PV ORANGE RIVER SOLAR FACILITY 1, GROBLERSHOOP, NORTHERN CAPE PROVINCE

Prepared By:
Environmental Management Group (Pty) Ltd
P.O. Box 37473
Langenhoven park, 9330
Tel: 051 412 6350
Fax: 086 556 2125
Contact Person:
SE van Rooyen

Prepared by:

Environmental Management Group (Pty) Ltd

Specialist:	Dashentha Moodley *Environmental Assessment Practitioner* *Environmental Management Group*  …… Signature
Date Reviewed:	5 July 2022
Reviewed and Approved by:	SE van Rooyen *Director & Environmental Assessment Practitioner* *Environmental Management Group*  …… Signature

Completion Date: 6 July 2022

Contents

TERMS AND ABBREVIATIONS

Audit - regular inspection and verification of construction activities for implementation of the EMP

Bund - enclosure under / around a storage facility to contain any spillage.

Batch plant - a concrete or plaster mixing facility and associated equipment and materials.

Contractor - the principal persons / company undertaking the construction of the development

Developer - The developer is the same person as the applicant or the client.

Development site - boundary and extent of development works and infrastructure.

Engineer - A person who represents the client and is responsible for enforcing the technical and contractual requirements of the project.

ECO - Environmental Site Agent: - Person responsible to applicant tasked with implementing and controlling the environmental requirements during construction.

RE – Resident Engineer: - Represents the Engineer on site

DEFINITIONS

Emergency – An incident, which potentially can significantly impact on the environment, and which, could cause irreparable damage to sensitive environmental features. Typical situations entails amongst others the:

- Spill of petroleum products and lubricants onto eco systems;
- Potential event of impeding the continuous flow of water to downstream water users dependant on the flow; and
- Dangerous situation where livestock and small children can be injured by any activity emanating from the construction or rehabilitation of the project implementation.

Alien Vegetation: alien vegetation is defined as undesirable plant growth which shall include, but not be limited to; all declared category 1 and 2 listed invader species as

set out in the Conservation of Agricultural Resources Act (CARA) regulations. Other vegetation deemed to be alien shall be those plant species that show the potential to occupy in number, any area within the defined construction area and which are declared to be undesirable.

Aspect: Element of an organisation's activities, products or services that can interact with the environment.

Auditing: A systematic, documented, periodic and objective evaluation of how well the environmental management plan is being implemented and is performing with the aim of helping to safeguard the environment by facilitating management control which would include meeting regulatory requirements. Results of the audit help the organisation to improve its environmental policies and management systems.

Built Environment: Physical surroundings created by human activity, e.g., buildings, houses, roads, bridges, and harbours

Contamination: Polluting or making something impure.

Corrective (or remedial) action: Response required addressing an environmental problem that conflicts with the requirements of the EMPr. The need for corrective action may be determined through monitoring, audits, or management review.

Degradation: The lowering of the quality of the environment through human activities, e.g., river degradation, soil degradation.

Ecology: The scientific study of the relationship between living things (animals, plants, and humans) and their environment.

Ecosystem: The relationship and interaction between plants, animals, and the non-living environment.

Environment: environment means the surroundings within which humans exist and that could be made up of –

- The land, water, and atmosphere of the earth;
- micro-organisms, plant, and animal life;
- any part or combination of (i) and (ii) and the interrelationships among and between them; and
- The physical, chemical, aesthetic, and cultural properties and conditions of the foregoing that influence human health and well-being.

Environmental aspect: an environmental aspect is any component of a contractor's construction activity that is likely to interact with the environment.

Environmental impact: an impact or environmental impact is the change to the environment, whether desirable or undesirable, that will result from the effect of a construction activity. An impact may be the direct or indirect consequence of a construction activity.

Environmental Authorisation: an environmental authorisation is a written statement from the Department of Forestry, Fisheries and Environment (DFFE) that records its approval of a planned undertaking to improve, upgrade or rehabilitate and the mitigating measures required to prevent or reduce the effects of environmental impacts during the life of a contract.

Hazardous waste: Waste, even in small amounts that can cause damage to plants, animals, their habitat, and the well-being of human beings, e.g., waste from factories, detergents, pesticides, hydrocarbons, etc.

Land use: The use of land for human activities, e.g., residential, commercial, industrial use.

Mitigation: Measures designed to avoid, reduce, or remedy adverse impacts

1 INTRODUCTION

The main purpose of this Environmental Management Plan or Programme (EMPr) is to prevent avoidable damage and/or minimise or mitigate unavoidable environmental damage associated with any construction, maintenance, or demolition work where there is a risk of environmental damage and to enhance positive benefits of the project. The EMPr constitutes one of the contractual obligations which must be committed to by all contractors/employees involved with construction maintenance or renovation operations. This document is compiled in accordance with the Integrated Environmental Management (IEM) philosophy which aims to achieve a desirable balance between conservation and development. IEM is a key instrument of the National Environmental Management Act [NEMA] (Act No. 107 of 1998). NEMA promotes the integrated environmental management of activities that may have a significant effect on the environment, while IEM prescribes a methodology for ensuring that environmental management principles are fully integrated into all stages of the development process. It advocates the use of several environmental management tools that are appropriate for the various levels of decision-making. One such tool is an EMPr. The IEM guidelines encourage a pro-active approach to sourcing, collating, and presenting information in a manner that can be interpreted at all levels. The basic principles underpinning IEM are that there be:

- informed decision-making;
- accountability for information on which decisions are taken;
- accountability for decisions taken;
- a broad meaning given to the term environment (i.e., one that includes physical, biological, Social, economic, cultural, historical, and political components);
- an open, participatory approach in the planning of proposals;
- consultation with interested and affected parties;
- due consideration of alternative options;
- an attempt to mitigate negative impacts and enhance positive aspects of proposals;
- an attempt to ensure that the 'social costs' of development proposals (those borne by society, rather than the developers) be outweighed by the 'social benefits' (benefits to society because of the actions of the developers);
- democratic regard for individual rights and obligations;
- compliance with these principles during all stages of the planning, implementation, and decommissioning of the proposals (i.e., from 'cradle to grave'); and.

The Environmental Impact Assessment Regulations that took effect in December 2014 regulate the procedures and criteria for the submission, processing, consideration, and decision on applications for environmental authorisation of listed activities.

The general principles contained within this document apply to all PLANNING PHASE, CONSTRUCTION PHASE, and OPERATIONAL PHASE activities regarding the road maintenance.

1.1 TERMS OF REFERENCE

Environmental Management Group Consultants (Pty) Ltd (EMG), as independent environmental managers and impact assessors, has been appointed by **Orange River Solar Facility 1 (Pty) Ltd** to compile and submit an Environmental Management Programme (EMPr) under the National Environmental Management Act (Act No. 107 of 1998), for the construction of the proposed 50MW photovoltaic solar plant on Portion 18 of the Farm Rooisand.

In terms of the special conditions of the contract (specifications) the EMP must include the following:

- Details of the EAP (Refer to Page ii of this document)
- Purpose of the EMP
- Legal requirements
- Management of possible impacts
- Institutional arrangements
- EMP operational & implementation procedures

1.2 PURPOSE OF THE EMP

The purpose of this Environmental Management Programme (EMP) is to give direction and guidance to all responsible parties, and binds all contractors, sub-contractors and other persons working on the site to adhere to the terms and conditions of the EMP during the construction and operational phase of the project. The implementation of the EMP is not an additional or "add on" requirement.

The overall aim of the EMP is to prevent avoidable damage and/or minimise or mitigate unavoidable environmental damage associated with the construction, and to a lesser degree the operational, phases of the proposed project.

The EMP is legally binding through NEMA. The proponent is to ensure that through the project tender process the EMP forms part of the Project Contract Document for the proposed construction to be incorporated in line with:

a. General project specifications; and
b. SANS 1200 A or SANS 1200 AA, as applicable

This EMP:

- identifies project activities that could cause environmental damage (risks) and provides a summary of actions required;
- identifies persons responsible for ensuring compliance with the EMP;
- provides standard procedures to avoid and/or minimise the identified negative environmental impacts and to enhance the positive impact of the project on the environment;