



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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Tel (+ 27 12) 399 9372

DEA Reference: 14/12/16/3/3/1/1754

Enquiries: Matthodi Mogorosi

Telephone: 012-399-9388 **E-mail:** mmogorosi@environment.gov.za

Mr CW Janse van Rensburg
Keren Energy Keimoes (Pty) Ltd
PO Box 73
SOMERSET MALL
7137

Tel No: 082 631 7496
E-mail: weyers@kerenenergy.com

PER MAIL / E-MAIL

Dear Mr Janse van Rensburg

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998: GN R. 982/983: CONSTRUCTION OF THE 5MW KEREN ENERGY KEIMOES SOLAR PHOTOVOLTAIC ENERGY FACILITY AND ASSOCIATED INFRASTRUCTURE ON ERF 666 KEIMOES, WITHIN THE KAI! GARIB LOCAL MUNICIPALITY, NORTHERN CAPE PROVINCE

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

In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations, 2014 (the Regulations), you are instructed to notify all registered interested and affected parties, in writing and within 14 (fourteen) days of the date of the EA, of the Department's decision in respect of your application as well as the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulations, and the provisions regarding the submission of appeals as contained in the Regulations.

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:

Mr Z Hassam, Director: Appeals and Legal Review of this Department at the below mentioned addresses.

By email: appealsdirector@environment.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, 1998, 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 appealsdirector@environment.gov.za.

Yours faithfully



Mr Sabelo Malaza
Chief Director: Integrated Environmental Authorisations
Department of Environmental Affairs

Date: 14/11/2019

CC:	Mr B. de Witt	Enviro Africa CC	Tel: 021-851-1616	Email: admin@enviroafrica.co.za
	Ms E. Botes	Northern Cape Department of Environment and Nature Conservation	Tel: 053-807-7300	Email: eia@half.ncape.go.za
	Mr J. McKay	Kai! Garib Local Municipality	Tel: 054-461-6400	Email: admin@kaigarib.gov.za



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of regulation 25 of the Environmental Impact Assessment Regulations, 2014

Construction of the 5MW Keren Energy Keimoes Solar Photovoltaic Energy Facility and associated infrastructure on Erf 666 Keimoes, within the Kail Garib Local Municipality, Northern Cape Province

ZF Mgcawu District Municipality

Authorisation register number:	<i>14/12/16/3/3/1/1754</i>
Last amended:	<i>First issue</i>
Holder of authorisation:	<i>KEREN ENERGY KEIMOES (PTY) LTD</i>
Location of activity:	<i>NORTHERN CAPE PROVINCE: On Erf 666 Keimoes, within the Kail Garib Local Municipality</i>

This environmental 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, 1998 and the EIA regulations.

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, 1998 (Act No.107 of 1998) and the Environmental Impact Assessment Regulations, 2014 the Department hereby authorises –

KEREN ENERGY KEIMOES (PTY) LTD

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

with the following contact details –

Mr CW Janse van Rensburg
Keren Energy Keimoos (Pty) Ltd
PO Box 73
SOMERSET MALL
7137

Cell: 082 631 7496

E-mail: weyers@kerenenergy.com

to undertake the following activities (hereafter referred to as “the activity”) indicated in Listing Notice 1 (GN R. 983):

Listed activities	Activity/Project description
<p><u>GN R. 983 Item 1:</u></p> <p><i>The development of facilities or infrastructure for the generation of electricity from a renewable resource where—</i></p> <p><i>(ii) the output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare.</i></p>	<p>The solar facility will be developed on a 20ha site and will supply 5MW of electricity to the national grid. The solar facility’s actual contracted electricity generation capacity will be 5.75MW.</p>
<p><u>GN R. 983 Item 12:</u></p> <p><i>The development of -</i></p> <p><i>(ii) infrastructure or structures with a physical footprint of 100 square metres or more;</i></p> <p><i>where such development occurs –</i></p> <p><i>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.</i></p>	<p>A portion of an intermittent natural drainage line lies towards the north-western boundary of the 20ha site.</p>
<p><u>GN R. 983 Item 27:</u></p> <p><i>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—</i></p> <p><i>(i) the undertaking of a linear activity</i></p>	<p>The development involves the clearance of part of the 20ha site (i.e. less than 20 ha will be cleared).</p>

as described in the Basic Assessment Report (BAR) dated July 2017 at:

Farm Name: Keimoes Erf. 666

21 Digit SG code:

C	0	2	8	0	0	0	0	0	0	0	0	0	0	6	6	6	0	0	0	0	0
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PV Facility (Preferred site)	Latitude	Longitude
Northern corner	28°41'7.672"S	20°59'1.524"E
Western corner	28°41'21.999"S	20°58'41.353"E
Southern corner	28°41'32.173"S	20°58'47.517"E
Eastern corner	28°41'12.077"S	20°59'6.023"E

with the location as indicated in the locality plan, attached as Annexure 2 of this authorisation.

- for the construction of the 5MW Keren Energy Keimoes Solar Photovoltaic Energy Facility and associated infrastructure on Erf 666 Keimoes, within the Kai! Garib Local Municipality, Northern Cape Province, hereafter referred to as "the property".

The Solar Photovoltaic Energy Facility will consist of the following components:

- A fenced construction area;
- A 3m x 6m maintenance shed;
- Three inverter-transformer stations on concrete pads;
- A switch panel for connection to the power grid;
- An office with septic tank ablutions; and
- A 22kV powerline from the development site to connect to Eskom's Taaiput Substation.

Technical details for the facility

Component	Description/ Dimensions
Technology	The development is an array of 18540 poly-crystalline solar photovoltaic (PV) modules grouped into tables or panels of 20 modules each, together with associated infrastructure for the generation of 5MW of electricity.
Generation capacity	Contracted capacity of 5MW (facility has a nameplate capacity of 5.75MW but will provide electricity to itself and will therefore evacuate a maximum of 5MW to the national grid).
Structure height	The PV tables will be raised approximately 500mm above ground level and have single axis tracking systems allowing maximisation of solar energy harvesting for conversion to electrical energy. The tallest structure of the development will

	be the 9m high overhead powerlines to evacuate power to the nearby Eskom sub-station.
Development footprint	The development footprint is an area of 20ha. Actual plant layout will occupy 10ha within the 20ha site, with permanent office and construction laydown areas.
Height of PV panels	The PV tables will be raised 500mm above ground level and have single axis tracking systems allowing maximisation of solar energy harvesting for conversion to electrical energy.
Area of PV Array	10ha
Number of inverters required	6
Area occupied by inverter / transformer stations / substations	3 x 60m ² inverter / transformer stations = 180m ²
Capacity of on-site substation	N/A (evacuation to existing nearby Eskom sub-station)
Area occupied by both permanent and construction laydown areas	<1000m ² within the 20ha site
Area occupied by buildings	420m ²
Length of internal roads	< 3km (includes perimeter firebreak/access)
Width of internal roads	Main perimeter firebreak access on site = 4m (but not wider than 8m); Internal access roads on site = 3,5m
Proximity to grid connection	Approximately 420m
Height of fencing	2,4m
Type of fencing	Diamond mesh

Conditions of this Environmental Authorisation

Scope of authorisation

1. The construction of the 5MW Keren Energy Keimoes Solar Photovoltaic Energy Facility and associated infrastructure on Erf 666 Keimoes, within the Kai! Garib Local Municipality, Northern Cape Province is approved, as per the geographic coordinates cited in the table above.
2. Authorisation of the activity is subject to the conditions contained in this environmental authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.
3. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.
4. The activities authorised may only be carried out at the property as described above.
5. Any changes to, or deviations from, the project description set out in this environmental authorisation must be approved, in writing, by the Department before such changes or deviations may be 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.
7. This activity must commence within a period of five (05) years from the date of issue of this environmental authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.
8. Construction must be completed within 5 years of the commencement of the activity on site.
9. 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 shall not commence until the period for the submission of appeals has lapsed as per the National Appeal Regulations, 2014 and no appeal has been lodged against the decision. In terms of section 43(7), an appeal under section 43 of the National Environmental Management Act, 1998 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 development layout plan titled "Keren Energy Keimoes (Pty) Ltd Site Layout", dated 20 April 2016 submitted as part of the final Basic Assessment Report (BAR) is approved.
14. The Environmental Management Programme (EMPr) submitted as part of the Application for EA is hereby approved. This EMPr must be implemented and strictly adhered to during all phases of the project. It must be seen as a dynamic document and must be included in all contract documentation for all phases of the development.
15. A shapefile of the approved development layout/footprint must be submitted to this Department within two months from the date of this decision. The shapefile must be created using the

Hartebeesthoek 94 Datum and the data should be in Decimal Degree Format using the WGS 84 Spheroid.

The shapefile must include at a minimum the following extensions i.e. .shp; .shx; .dbf; .prj; and, .xml (Metadata file). If specific symbology was assigned to the file, then the .avl and/or the .lyr file must also be included. Data must be mapped at a scale of 1:10 000 (please specify if an alternative scale was used). The metadata must include a description of the base data used for digitizing. The shapefile must be submitted in a zip file using the EIA application reference number as the title. The shape file must be submitted to:

Postal Address:

Department of Environmental Affairs
Private Bag X447
Pretoria, 0001

Physical address:

Department of Environmental Affairs
Environment House
473 Steve Biko Road, Arcadia
Pretoria

For Attention:

Mr Muhammad Essop
Integrated Environmental Authorisations
Strategic Infrastructure Developments
Telephone Number: (012) 399 9406
Email Address: MEssop@environment.gov.za

Frequency and process of updating the EMPr

16. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 24 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.

17. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
18. The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of GN R. 982. The updated EMPr must have been subjected to a public participation process, which process has been agreed to by the Department, prior to submission of the updated EMPr to the Department for approval.
19. In assessing whether to grant approval of an EMPr which has been updated as a result of an audit, the Department will consider the processes prescribed in Regulation 35 of GN R.982. 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.
20. The holder of the authorisation may apply for an amendment of an EMPr, if such amendment is required before an audit is required. In assessing whether to grant such approval or not, the Department will consider the processes and requirements prescribed in Regulation 37 of GN R. 982.

Monitoring

21. The holder of the authorisation must appoint an experienced independent Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this environmental authorisation are implemented and to ensure compliance with the provisions of the approved EMPr.
 - 21.1. The ECO must be appointed before commencement of any authorised activities.
 - 21.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department at Directorcompliance@environment.gov.za.
 - 21.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a schedule of tasks undertaken by the ECO.
 - 21.4. 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

22. 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 at Directorcompliance@environment.gov.za.
23. The holder of the environmental authorisation must, for the period during which the environmental authorisation and EMPr remain valid, ensure that project compliance with the conditions of the environmental authorisation and the EMPr are audited, and that the audit reports are submitted to the *Director: Compliance Monitoring* of the Department at Directorcompliance@environment.gov.za
24. The frequency of auditing and of submission of the environmental audit reports must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of GN R. 982.
25. The holder of the authorisation must, in addition, submit an environmental audit report 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.
26. The environmental audit reports must be compiled in accordance with appendix 7 of the EIA Regulations, 2014 and must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the approved EMPr.
27. 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

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

Operation of the activity

29. 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

30. 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

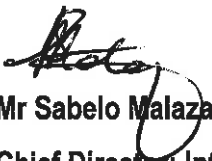
31. No activities, which require a water use authorisation, must be allowed to encroach into a water resource without a water use authorisation being in place from the Department of Water and Sanitation.
32. A 32m setback must be maintained from the intermittent watercourse on the north-western boundary of the site (as depicted in Annexure 2). It must be treated as a "no-go" area and appropriately demarcated as such. No facility infrastructures / structures are to be erected in this area. No vehicles, machinery, personnel, construction material, fuel, oil, bitumen or waste must be allowed into this area without the express permission of and supervision by the ECO, except for rehabilitation work in this area.
33. No discharge of effluents or polluted water must be allowed into any drainage lines, water courses and wetland areas.
34. Ablution facilities must be placed outside of the 1:100 year floodline of watercourses.
35. The facility footprint must be scanned by a qualified botanist prior to construction, in order to identify the plants listed for Search & Rescue. The botanist must advise on the best way for search & rescue operations to be implemented.
36. Vegetation clearing must be kept to an absolute minimum. Mitigation measures must be implemented to reduce the risk of erosion and the invasion of alien species.
37. A permit must be obtained from the relevant nature conservation agency for the removal or destruction of any indigenous protected and endangered plant and animal species if required.
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38. No exotic plants may be used for rehabilitation purposes. Only indigenous plants occurring within a ten (10) kilometre radius of the development site must be utilised.
39. Dust suppression measures must be implemented at all times during the construction phase to limit the impacts of dust.
40. Signage must be erected at appropriate points warning of turning traffic and the construction site.
41. A designated access to the site must be created and clearly marked to ensure safe entry and exit.
42. Should abnormal loads have to be transported by road to the site, a permit must be obtained from the relevant authorities.
43. 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.
44. Borrow materials must be obtained only from authorised and permitted sites. Permits must be kept on site by the ECO.
45. The washing of panels during maintenance must be done with biodegradable soaps to avoid soil contamination and poisoning of small animals.
46. Lighting for both the construction period and through the operation of the facility must be of low-pressure sodium type, preferably yellow. All perimeter and security lighting must be attached to motion detectors, and should be dark-sky friendly.
47. Construction must include design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.
48. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste, which will not be recycled, 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). No waste material may be left on site after construction.
49. 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 found during construction, the South African Heritage Resources Agency (SAHRA) must be alerted immediately, and a professional archaeologist or palaeontologist, must be contacted to inspect the findings. Burials must not be removed or disturbed until inspected by an archaeologist.

General

50. A copy of this environmental authorisation, the audit and compliance monitoring reports, and the approved EMPr, must be made available for inspection and copying-
- 50.1. at the site of the authorised activity;
 - 50.2. to anyone on request; and
 - 50.3. where the holder of the environmental authorisation has a website, on such publicly accessible website.
51. 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: 14/11/2017



Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations

Department of Environmental Affairs

Annexure 1: Reasons for Decision

1. Information considered in making the decision

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

- a) The information contained in the BAR dated July 2017;
- b) The comments received from the South African Heritage Resources Agency, Civil Aviation Authority, Eskom, Kai! Garib Local Municipality and interested and affected parties as included in the BAR dated July 2017;
- c) Mitigation measures as proposed in the BAR dated July 2017 and the EMPr;
- d) The information contained in the specialist studies contained within Appendix D of the BAR;
- e) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act No.107 of 1998); and
- f) The findings of the site visit conducted on 18 October 2017.

2. Key factors considered in making the decision

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

- a) The findings of all the specialist studies conducted and their recommended mitigation measures.
- b) The project need was sufficiently addressed. The project is a response to the Department of Energy's bid invitations for renewable energy. Should the project be successful in the bid, the project will contribute approximately 5MW of electricity to the national grid network. This power will reduce the burden of electricity demand on the existing coal fuelled power stations and in turn reduce the amount of fossil fuels required for electricity production, which will have positive benefits on the receiving environment as a whole.
- c) The BAR dated July 2017 identified all relevant environmental legislation and guidelines that have been considered in the preparation of the BAR dated July 2017.

- d) The methodology used in assessing the potential impacts identified in the BAR dated July 2017 and the specialist studies have been adequately indicated.
- e) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2014 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 BAR dated July 2017 and sufficient assessment of the key identified issues and impacts have been completed.
- b) The procedure followed for impact assessment is adequate for the decision-making process.
- c) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- d) According to the independent environmental assessment practitioner, the information contained in the BAR dated July 2017 is accurate and credible.
- e) EMPr measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the BAR 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 Plan

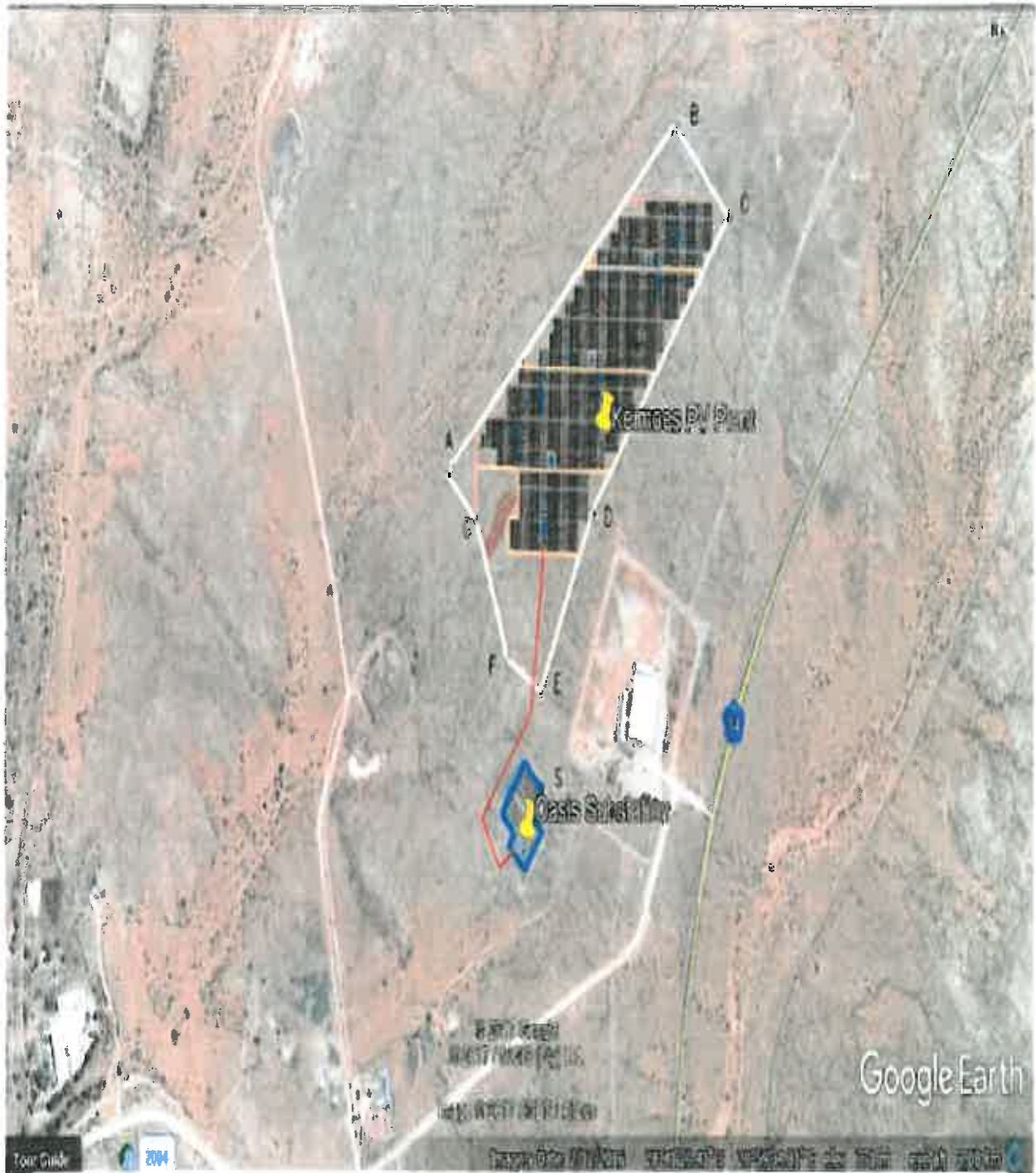


Figure 2 - position of the proposed project site and solar PV panel layout with nearby Oasis substation (substation outlined in blue, proposed overhead power line tie-in for evacuation of electricity to substation indicated in red). Lighter red shaded area within site indicates 32m setback from intermittent water course within proposed site.