ENVIRONMENTAL MANAGEMENT PLAN (EMP)

CONSTRUCTION AND OPERATION OF A 5MW SOLAR PHOTOVOLTAIC POWER PLANT AT REMAINDER OF PORTION NO. 4 OF FARM NARUCHAS NO. 254 IN KHOMAS REGION

MEFT APP NO. 004490

PREPARED FOR:
VEGA STAR ENERGY CC
P.O. BOX 99042
TAUBEN GLEN
WINDHOEK

PREPARED BY:

EPIC Environmental Consultancy CC
Your Trusted Environmental Specialist

CELL.: (+264-81) 209 7875
PO BOX 2291 Swakopmund NAMIBIA
E-MAIL: nkenviro.consultancy@gmail.com

PROJECT DETAILS

TITLE	ENVIRONMENTAL MANAGEMENT PLAN (EMP) FOR THE PROPOSED CONSTRUCTION AND OPERATION OF A 5 MEGAWATTS (MW) SOLAR PHOTOVOLTAIC POWER PLANT AT REMAINDER OF PORTION NO. 4 OF FARM NARUCHAS NO. 254 IN KHOMAS REGION.
MEFT APP NO:	004490
PREPARED FOR	VEGA STAR ENERGY CC P.O. BOX 99042 TAUBEN GLEN WINDHOEK
PREPARED BY	EPIC ENVIRONMENTAL CONSULTANCY CC P.O. BOX 2291 SWAKOPMUND nkenviro.consultancy@gmail.com +264 81 209 7875
LOCATION	KHOMAS REGION
PROPONENT SIGNATURE	
EAP SIGNATURE	

DISCLAIMER

Information enclosed in this report is established on information provided by the Proponent; and is believed/considered to be accurate. Epic Environmental Consultancy CC shall not be liable for any false information provided by the Proponent. Information enclosed in this report may not be copied and replicated without written authorization from the writer.

TABLE OF CONTENTS

List of Figures

List of Tables

ABBREVIATIONS

AC	Alternative Current
DC	Direct Current
DEA	Directorate of Environmental Affairs
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMA	Environmental Management Act No. 7 of 2007
EMP	Environmental Management Plan
ESAR	Environmental Scoping Assessment Report
GDP	Gross Domestic Product
Ha	Hectare
MW	Megawatts
MEFT	Ministry of Environment, Forestry and Tourism
MME	Ministry of Mines and Energy

EXECUTIVE SUMMARY

Epic Environmental Consultancy CC was appointed by Vega Star Energy CC to conduct the much required environmental assessment, to apply and acquire an Environmental Clearance Certificate (ECC) at the Ministry of Environment, Forestry and Tourism, Directorate of Environmental Affairs (DEA), for the proposed construction and operation of a 5 MW solar photovoltaic power plant at Remainder of Portion No.4 of the Farm Naruchas No. 254 in Khomas region measuring 621, 4374 hectares in extent (Only 12 hectares shall be utilized for this proposed Solar plant).

The site is situated approximately less than 20 kilometers from Rehoboth on the B1 road to Windhoek; Site GPS coordinates**:** Latitude: -23.1660405°, Longitude: 17.0958253°.

According to the Environmental Management Act No. 7 of 2007 and its Environmental Impact Assessment Regulations GN. 30 of 2012, the proposed project activity is a listed activity and an environmental assessment is required in order to obtain the Environmental Clearance Certificate before the proposed project can commence.

Listed below are the potential positive impacts associated with the proposed project:

- Improved energy supply
- Employment creation to local community/residents
- Enable local and national economic growth
- Solar energy is renewable
- Reduction in foreign energy overheads/costs
- An Environmental Management Plan (EMP) has been formulated to mitigate the predicted impacts of the proposed project.

The Solar power plant will contribute in the supplying of electricity throughout Namibia in future and possibly source electricity to nearby nation states (countries).

1. INTRODUCTION

The proponent, Vega Star Energy CC aims to construct a 5 Mega Watts Solar power plant at Remainder of Portion No. 4 of Farm Naruchas No. 254 in the Khomas region measures 621, 4374ha. The size of the reserved area where the solar power plant will be constructed on is 12 hectares (ha).

Before commencing of this proposed project, approval is required for an Environmental Clearance Certificate (ECC) to be issued by the competent authority to the proponent, as in terms of the Environmental Management Act No.7 of 2007 and its EIA regulations of 2012. This Activity falls under the listed activities in terms of the Environmental Management Act (EMA).

The proponent appointed Epic Environmental Consultancy cc to undertake the environmental assessment and apply for the required Environmental Clearance Certificate (ECC) to construct the proposed 5 Mega Watts solar power plant at at Remainder of Portion No. 4 of Farm Naruchas No. 254 in Khomas region.

Environmental assessments helps relevant authorities to make informed decisions and obtain an understanding of the likely environmental and socio-economic impacts associated with the planning, construction and operation of the proposed project.

Continuous engagement with residents and the surrounding community shall be undertaken by the proponent, to identify any further concerns or issues, and to make certain that suitable mitigation and management measures are adhered to at all times.

1.1 Purpose of the EMP

The main purpose of this Environmental Management Plan is to lessen the identified likely negative impacts by adhering to mitigation measures recommended. On the basis of the impacts identified, targets are set and action plans are decided and executed to accomplish the goal effectively and efficiently.

Environmental Management Plan guarantees an effective implementation process and alternatives for mitigation measures recommended to disregard the adverse impacts, minimize disturbance of the natural environment, promote and encourage decent environmental management practices, educate employees and/or contractors with regard to environmental obligations, avoid all methods of pollution, protect the natural environment, develop ideal or propose alternatives of waste management practices.

Comply with all national appropriate laws, regulations and standards; to outline the roles and responsibilities to ensure that the administration schedules are competently and properly executed.

Namibia is regarded as an exporter of electricity. Local electricity generation is derivative from hydropower, coal and diesel burning power stations. Consequently, this is not adequate enough to meet local demand requiring Namibia to source more than 60% from other neighbouring countries within the Southern African region.

Vega Star Energy CC has embarked on this opportunity to contribute to energy self-support and efficiency in Namibia by building and operating a 5 Mega Watts (mw) Solar Photovoltaic Power Plant at Portion No.4 of Farm Naruchas No. 254 in the Khomas Region.

The energy consumption in Namibia marks a path of the inevitable reliance of national development on the convenience, supply, demand and energy use. Namibia will need to advance soon and be able to produce/generate own electricity. The proposed solar power plant will contribute in the supplying of electricity throughout Namibia in future and possibly source electricity to nearby nation states (countries).

The staff working shall be by law required to comply and adhere to the ethics as set out in this Environmental Management Plan.

1.2 Compliance to the EMP

This Environmental Management Plan is a legally binding document as stipulated in the Environmental Management Act, 2007 (Act No. 7 of 2007). The Proponent, contractors and/or personnel shall therefore adhere and comply with the context of this document. Any changes made dependent on the changing environments and new further information that may be available in the future, must be revised accordingly in the EMP.

Non-compliance shall be recorded, including a brief description and the cause for the non-compliance, the person accountable, the consequence, and the correct action taken and any follow up measures necessary.

1.5 Limitations and Assumptions

The Safety Management Plan shall be developed by the Proponent (if required).

2. PROJECT LOCATION AND DESCRIPTION

This proposed project involves the conversion of plain plot to accommodate the proposed 5 megawatts (mw) solar photovoltaic power plant.

Solar energy is electrical or thermal energy harvested from sunlight, with the use of solar panels containing photovoltaic (PV) cells made up of semiconductor materials such as silicon to absorb elemental particles from the sun called photons.

The project area where the construction and operation of the 5 Mega Watts solar power plant is situated on the Remainder of Portion No. 4 of Farm Naruchas No. 254. The project site is found near B1 road from Windhoek leading to Rehoboth.

GPS coordinates**:** Latitude: -23.1660405°, Longitude: 17.0958253°.

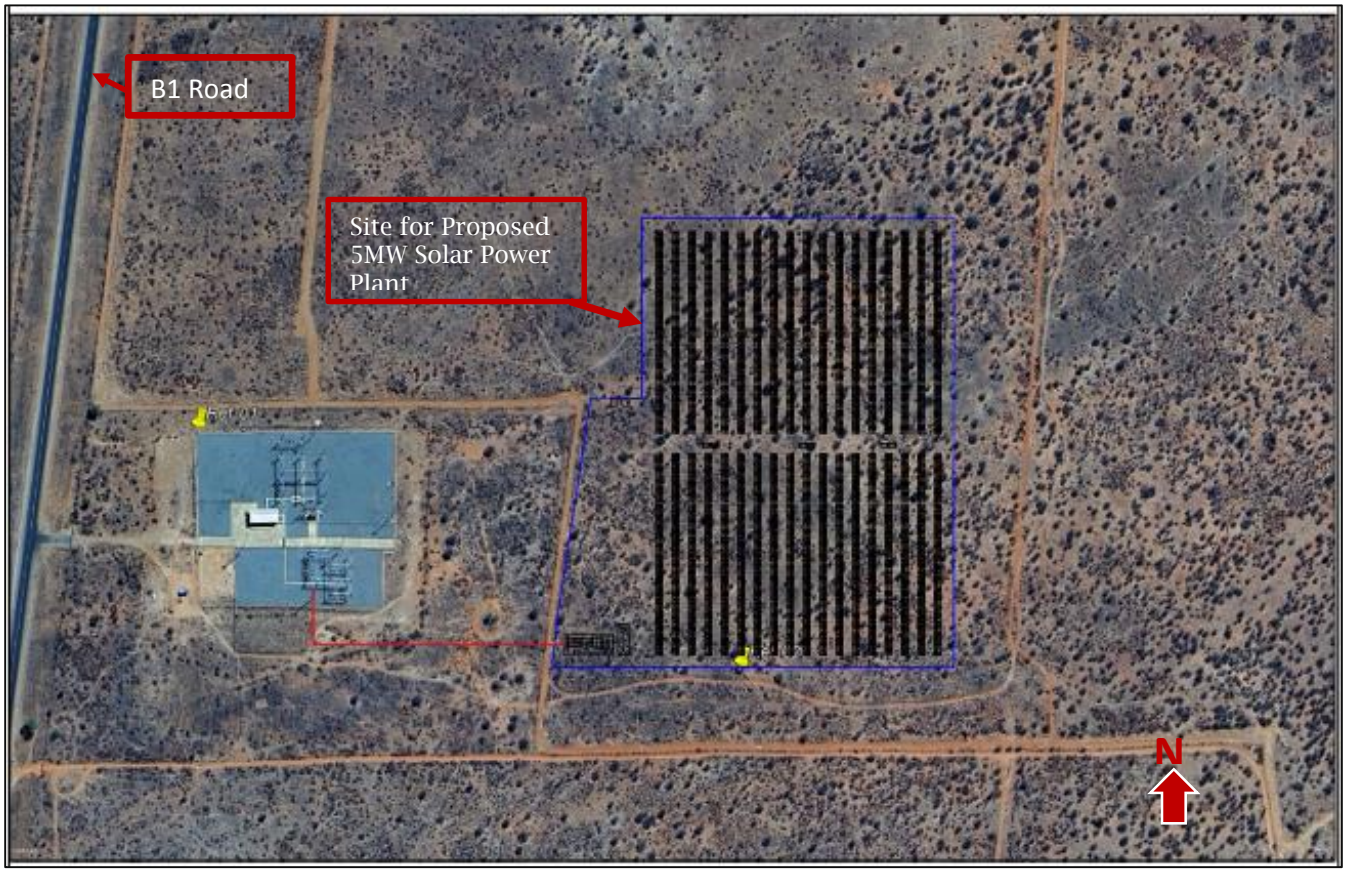

Figure 1: Location of Proposed Solar Power Plant

A portion of about 12 hectares (ha) has been reserved for this proposed project as depicted in the Figure 1 above.

When the particles are absorbed by the panels from the sun, the photons release electrons from the atoms of the semiconductor material and the flow of these electrons within the cell creates an electric current we can direct to our circuits. The more light the panels sit exposed, the more electricity production potential.

The 5 megawatts (MW) solar power plant will produce Direct current which will be transmitted through parallel conductors to an inverter and then to an output of the AC current. Transmitted to a step-up transformer at a substation that will turn into the power plant's central substation which shall be connected to a metering station that will incorporate the Nampower meter point.

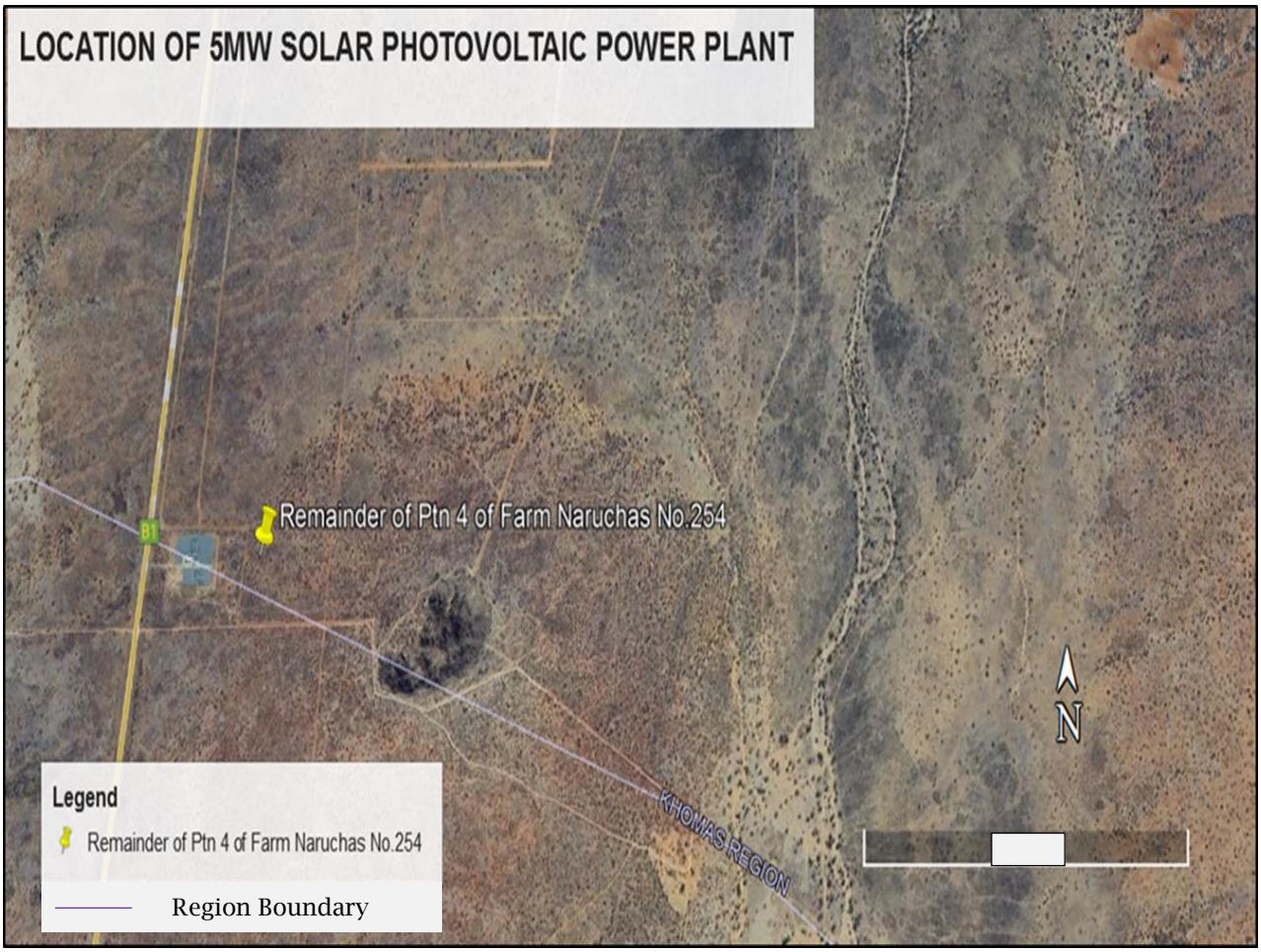

Figure 2: Study Area (GPS coordinates: Latitude: -23.1660405°, Longitude: 17.0958253°).

3. REGULATORY FRAMEWORK

Environmental Management Act (No.7 of 2007)

The Environmental Management Act (also referred to as the EMA), requires that for every activity which is listed under the EIA regulations, an Environmental Clearance Certificate obtained. The purpose of the EIA is to identify, assess and ascertain potential environmental impacts that may arise from the proposed activity. An Environmental Impact Assessment is a process of identifying, predicting, interpreting and communicating potential impacts to interested and affected parties (I&APs).

According to the Environmental Management Act (No. 7 of 2007) and Environmental Impact Assessment Regulations (EIA) Government Notice No. 30 of 2012, the proposed project is a listed activity as below:

Table 1: Listed Activity

Name of Listed Activity	Description of Activity
1(a) Energy generation, transmission and storage activities	Generation of electricity.
1 (b) Energy generation, transmission and storage activities	The transmission and supply of electricity.

Table 2: Related Legislations, Acts and Policies

Legislation	Legislation Objective(S)
The Constitution of the Republic of Namibia	The state shall actively promote and maintain the welfare of the people by adopting policies that are aimed at…maintenance of ecosystems, essential ecological processes and the biological diversity of Namibia and utilization of natural resources on a sustainable basis for the benefit of all Namibians, both for present and future".

Environmental Management Act No.7 of 2007	The Environmental Management Act No.7 of 2007 promotes the sustainable management of the environment and the use of natural resources and provides for the process of assessment and control of activities which may have significant effects on the environment; and provides for incidental matters. The Act ensures that potential impacts are considered, a comprehensive stakeholder's consultation is carried out, all interested and affected parties are given a chance to comment/object on the project. The Act as well provides a list of activities that may not be undertaken without an Environmental Clearance Certificate. Line Ministry: Ministry of Environment, Forestry and Tourism (MEFT)
Environmental Impact Assessment (EIA) Regulations (GN notice No. 30 of 2012)	Provides procedures for Environmental Assessments. Line Ministry: Ministry of Environment, Forestry and Tourism (MEFT)
Forestry Act No.12 of 2001	The act regulates the cutting down of trees and reads as follows "To provide for the establishment of a Forestry Council and the appointment of certain officials; to consolidate the laws relating to the management and use of forests and forest produce; to provide for the protection of the environment and control and management of forest trees. Line Ministry: Ministry of Environment, Forestry and Tourism (MEFT)
Agricultural (Commercial) Land Reform Act No. 6 of 1995	To provide for the acquisition of agricultural land by the State for the dedications of land reform and for the allocation of such land to Namibian citizens who do not own or otherwise have the use of any or of suitable agricultural land, and foremost to those Namibian citizens who have been socially, economically or educationally underprivileged by past discriminatory laws or practices; to vest in the State a right to purchase agricultural land for the purposes of the Act; to provide for the required acquisition of certain

	agricultural land by the State for the purposes of the Act; to regulate the acquisition of agricultural land by foreign nationals; to form a Lands Tribunal and determine its jurisdiction. Line Ministry: Ministry of Agriculture, Fisheries, Water and Land Reform (MAFWLA)
Petroleum Products and Energy Act No. 13 of 1990	Provide methods for the saving of petroleum products and an economy in the cost of the distribution thereof, and for the maintenance of a price thereof; for control of the furnishing of certain information regarding petroleum products; and for the rendering of services of a particular kind, or services of a particular standard; in connection with motor vehicles; for the establishment of the National Energy Fund and for the utilization thereof; for the establishment of the National Energy Council and the functions thereof; for the imposition of levies on fuel. Line Ministry: Ministry of Industries, Mines and Energy (MIME)
Electricity Act no 4 of 2007	Provision of electricity should ensure compliance with the requirements of laws relating to health, safety and environmental standards.
Soil Conservation Act No. 76 of 1969	The Act promotes the conservation of soil and the prevention of soil erosion.
Water Resources Management Act No. 11 of 2013	An Act to provide for the management, protection, development, use and conservation of water resources; to provide for the regulation and monitoring of water services and to provide for incidental matters. Line Ministry: Ministry of Agriculture, Fisheries, Water and Land Reform (MAFWLA)

Namibian Water Corporation (Act 12 of 1997)	The Act provides for water rehabilitation of prospecting and mineral exploration areas, environmental impact assessments and for minimising or preventing pollution.
Hazardous substances Ordinance No. 14 of 1974	The Ordinance controls the handling of hazardous substances such as manufacturing, imports and exports to ensure human and environmental safety.
Nature conservation ordinance, ordinance No. 4 of 1975	Provides for the protection of wild animals (including reptiles and wild birds), problem animals, fish, and the protection of indigenous plants. It also establishes a nature conservation board. Provides regulations to include tariffs for game parks, regulations involving game parks, use of boats in game parks, inland fisheries, keeping game and other wild animals in capturing. The Nature Ordinance also regulates game dealers, game skins, protected plants, birds kept in cages, trophy hunting of huntable game (species), export of game and game meat, sea birds, private game parks, nature reserves, regulations of wildlife associations. Line Ministry: Ministry of Environment, Forestry and Tourism (MEFT)
National Heritage Act No. 27 of 2004	The Act makes provision for the protection of places and objects of heritage significance and the registration of such places And objects. Section 46 of the Act, further prohibits the removal, damage, alteration, excavation of national sites or remains; and Section 48, sets out the procedure for application and granting permits for exploration activities such as trenching, drilling, etc. National Heritage Council of Namibia
Atmospheric Pollution Prevention Ordinance 11 of 1976	Provides for the prevention of air pollution.

4. THE BIOPHYSICAL ENVIRONMENT

The topography in the study area is generally flat to moderately rising and falling with elevation in the variety of 1350m and 1450 above sea level respectively.

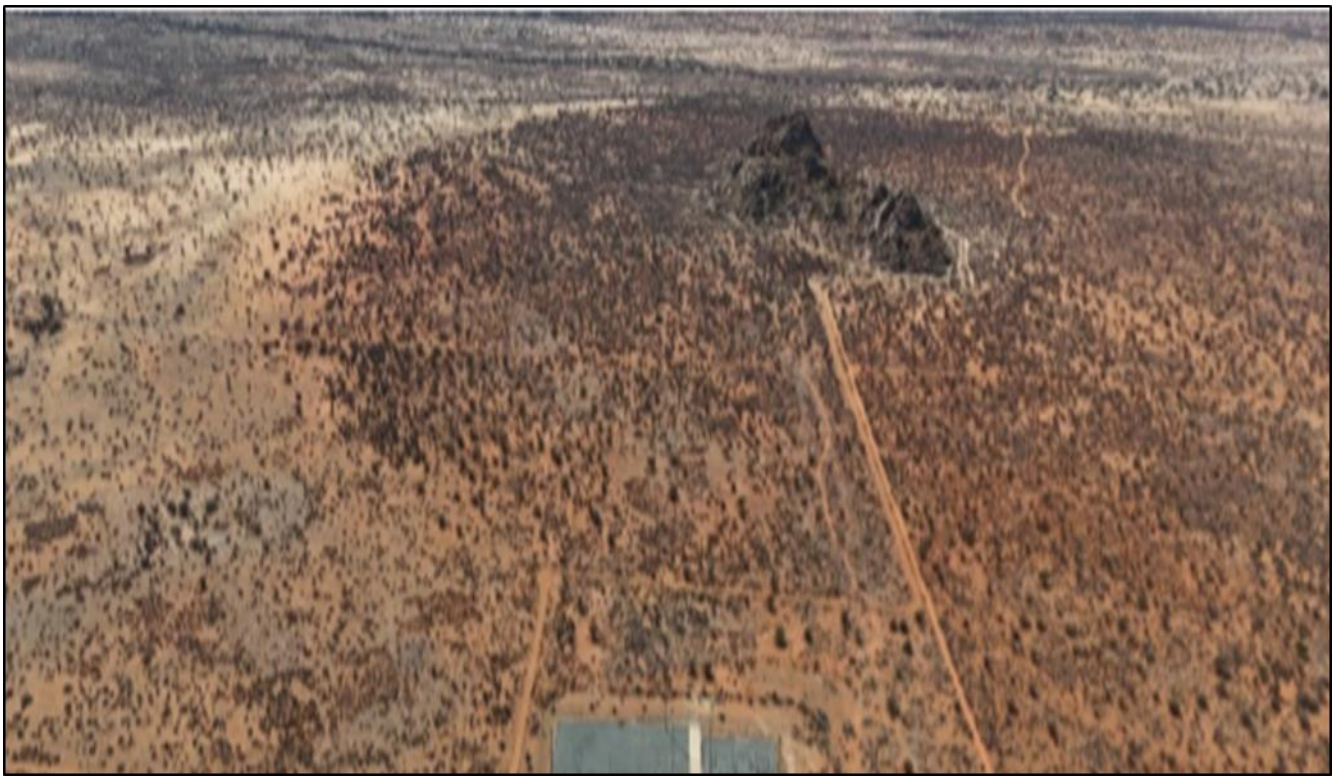

Figure 3: Topography and Geology of the study area

The study area has scarce rock ridge because of the Kalahari sand, calcrete and gravel shield. The primary rock contains mostly of the red iron oxide-bearing arkosic sandstones, grits and slight calcareous units of the Nosib Group.

The most main soil in the Khomas region is the lithic leptosol soil. Lithic leptosol soil is a very shallow soil over hard rock or a deeper soil that is particularly gravelly and/or stony. Leptosols can be found on hard rocks or where erosion has kept pace with soil formation or removed the top of the soil.

4.1. Infrastructure and Services

Services water, electricity and sewerage such as will be connected from the existing infrastructure in the area to the site**.** Should there be need for new service infrastructure,

relevant competent authorities shall be approached and requirements shall be adhered to.

- Water supply

The water necessities for the proposed project shall be obtained from the pipeline from the Naruchas substation project which is fewer than 2 kilometre from the solar power plant site. Water containers shall be brought to site (if need be). The water shall be used sparingly for cleaning and consumption.

- Buildings

Pre-fabricated containers shall be made available (when required).

- Waste and Sanitation

Waste containers will be available on-site to make sure safe disposal of waste generated on-site. These will be collected on a weekly basis. All waste generated will be disposed of at the local dumpsite/landfill used by all local inhabitants in the study and the surrounding area. Sewerage will be disposed in a way that does not contaminate the environment.

The Proponent will be accountable for the discharging of the ablution facility weekly and dispose of at the nearest sewerage discarding ponds.

- Roads

Existing roads shall be utilized to gain entry to the targeted solar power plant site.

- Telecommunication

Provision for a two-way radio shall be made available to ensure the team communicate effectively at all times, in case the team experience network problems.

- Security

Provision shall be made for fencing even though stringent access to and from the solar power plant site shall be facilitated by the assigned employees.

- Fuel

All vehicles shall be fuelled at the nearest town (Rehoboth and/or Windhoek). A fuel tank shall be mounted on site should when required.

5. PROJECT PERSONNEL, ROLES AND RESPONSIBILITIES

5.1 Roles and Responsibilities

Roles, responsibilities and authority shall be well-defined, documented and communicated in order to simplify operative environmental management through execution of the Environmental Management Plan (EMP).

The Environmental Management Act has three (3) key purposes:

i. To ensure that people consider the impact of activities on the environment carefully and in good time;
ii. To ensure that all interested or affected people have a chance to participate in environmental assessments; and
iii. To ensure that the results of environmental assessments are measured/considered in advance before any decisions are made about activities which might affect the environment.

Table 2: Roles and Responsibilities

ROLE	RESPONSIBILITIES
ENVIRONMENTAL COMPLIANCE OFFICER (ECO)	○ The Ministry of Environment, Forestry and Tourism (MEFT) is the overseer of environmental protection. ○ The ECO shall be an appointed Environmental Officer from the Directorate of Environmental Affairs trusted to impose compliance. ○ The ECO may carry out inspections and monitoring any time to ensure compliance.

PROPONENT OR PROPONENT'S REPRESENTATIVE (SEEIS INCINERATION SERVICES CC)	○ Complete responsibility for the implementation, administration and management of this EMP; ○ Responsible for providing the required resources (including financial and technical) for all responsibilities; ○ Employ Managers such as a Site Manager, employees or contractors; ○ Guarantee that all employees, contractors and visitors get inductions on environmental measures in this EMP report and safety measures as compiled by the Proponent. ○ Ensure the environmental rules are communicated to all personnel, contractors and visitors and make sure that they comply with the EMP.
SITE MANAGER/SUPERVISOR	○ Guarantee all employees and contractors take part in a site induction procedure before they commence work. ○ Keep community concerns and issues register. ○ Keep records of complaints; ○ Ensure that greatest environmental practice is carried out all the time; and that any non-compliance or accidents are reported to the authority. ○ Responsible for compliance with this EMP, oversee all day to day activities, including routine and non-routine maintenance works are carried out accordingly. ○ Make sure enough resources are available for the execution of this EMP; ○ Ensure that all employees, contractors and visitors on site are familiar with the

	requirements of this EMP, significant to their roles at all times; o Responsible for environmental awareness and management training and site inductions for all employees, contractors and/or visitors; o Monitor everyday tasks and ensure devotion by employees to the EMP; o Receive, respond to and record complaints; and o Report any non-compliance or accidents to the Proponent. o Accountable for management, maintenance and review of the Environmental Management Plan.
PERSONNEL (AND CONTRACTORS AND VISITORS)	o Liable for reporting incidents, accidents, tasks and conditions/issues that differ from the EMP or that are not complying with the EMP immediately to their Supervisor; o Responsible for complying and adhering to this EMP at all times. o Attend site inductions when required. o Ensure that enough information on activities, roles are provided and understood. o Wear personal protective clothing at all times on site or when carrying out their duties.

5.2 Employment

The Proponent shall make sure that local people have access to information about job opportunities; and that the jobless living in the local area are considered first for employment positions; the total number of job opportunities shall be made known together with the related skills and qualifications; the employing process should be

evidently explained and communicated; the duration of the employment shall be clearly stated; and staffs with no proof of permanent residence shall not be hired.

5.3 Contractors

All contractors that will be hired from time to time should make sure that correct actions are taken to report all possible environmental hazards and cases/incidents to the Site Manager; conduct their duties in line with this EMP and associated policies, procedures, management plans, legislative requirements; and implementing appropriate environmental management measures/procedures.

5.4 Disciplinary Actions

Non-compliance to the EMP shall result in disciplinary legal action such as:

- Suspension of work;
- Monetary penalties.

The disciplinary action shall be determined as per the provision of Environmental Management Act No.7 of 2007 and applicable statutory framework. Under Section 27 (4), Any person who contravenes subsection (3) commits an offence and is on conviction liabble to a fine not exceeding N$500 000 or to imprisonment for a period not exceeding 25 years or to both such fine and such imprisonment".

6. TRAINING AND COMMUNICATIONS

6.1 Emergency Response Services

All personnel be made aware of the below emergency response numbers. These numbers be posted on site and made accessible in each company vehicle.

Table 3: Emergency Contact Numbers

TOWN	POLICE	AMBULANCE	FIRE BRIGADE
WINDHOEK (061)	**1 0111 061 30 2302 (CITY POLICE)**	**21 1111 (WHK MUNICIPALITY) 203 3282/3 (WHK CENTRAL HOSPITAL) 061 41 1600 (EMED 24) 081 924 299 9924, 30 5928**	**21 1111**

6.2 Communication and Training

The Proponent and/or Site Manager shall communicate all environmental issues to the team through audits, site inductions, site inspections, information on incident response actions and meetings on precise environmental issues at all times.

All Shareholders should be aware of all potential impacts and how to reduce them. It is essential to make sure that all stakeholders are well informed regularly and properly trained on functioning measures as required. All personnel employed shall be conversant to implement responsibilities in a manner that are likely to lessen negative impacts.

All the staff should understand why the environment needs to be protected, including the social aspects involved, how the use of solar power plant can impact the environment and the possible mitigation measures.

This Environmental Management Plan shall be distributed to employees and/or all contractors (if any) working on site to make sure that the environmental, social and

economic requirements are communicated. Delicate duties shall be communicated to personnel and contractors.

Considerations among the management will continue to take account of any complaints received and actions to resolve them, incidents and responses, assessments, audits and any goal accomplishments.

6.3 Induction

Inductions are vital information sessions that helps to acquaint people with the locations, equipment, materials, processes and tasks they may encounter while working at or visiting a site for the first time.

To attain the best results, inductions need to be custom-made and targeted. Inductions should accommodate all workers (i.e. employees, contractors, trainees).

Workers shall require a refresher if:

- They have been absent for some time
- The work environment is different to that normally encountered (e.g. switching to night shift for first time).

6.3.1 Site inductions

Site inductions shall ensure that personnel receive suitable information before commencing work, to be able to recognize the hazards on site that can harm them and the environment. Personnel should also understand the control measures in place to protect themselves from the hazards/incidents.

Induction requirements shall be determined using information obtained from:

- Legislative requirements
- Site specific competency and training needs analysis
- Standards applicable to site.

All site inductions shall contain an assessment to guarantee the required knowledge has been retained by worker. It is important to inspect the site's induction regularly to determine if the content is still related.

Site inductions shall at all times include a formal program that provides workers with an understanding of:

- Site layout including emergency assembly points
- Emergency contact numbers
- The obligations of the Proponent and employees and/or contractors
- Common likely incidents on the site and their control measures
- Basic environmental management principles to reduce negative impacts and tools used on site
- Reporting processes for incidents; and
- The standard behavior expected of workers on sites

6.4 Complaint Register

All personnel shall be informed about the complaints register, its location and the person responsible for keeping it, in order to refer residents or the public who wish to lodge a complaint. The complaints register shall be available at all times; and will be made available for government or public review upon request. It is the duty of the Proponent or Site Manager/Supervisor to maintain a complaint register that has details of the names of the complainant, date and time of the complaint and actions taken to resolve the issues. The complainant shall be informed in writing of the results of the investigation and actions to be taken to rectify or address the matters.

6.5 Environmental Inspections and Compliance Monitoring

The Proponent and/or Site Manager shall be responsible to make sure that this EMP is adhered to and complied with at all times throughout their daily roles; and to make sure that pollution control measures are adhered to. Daily, weekly and monthly inspections shall be carried out.

7. ENVIRONMENTAL MANAGEMENT PLAN (EMP)

The main objective of the management actions of this Environmental Management Plan is to reduce the air emissions, odour nuisance, noise, waste generation, low to zero contamination cases, minimal clearing of vegetation and earthworks (if any), protection of indigenous flora and fauna; and ensure minimum disruption to activities in the nearby farms/areas.

This Environmental Management Plan is aimed at considering environmental, social, safety and health features.

NOTE: The following provisions of the EMP shall apply to the planning, construction and operation phases.

Table 4: Environment: Environmental Mitigation Measures to be executed

POTENTIAL IMPACT	MITIGATION MEASURE	MONITORING REQUIREMENTS	RESPONSIBILITY
ODOUR NUISANCE	*Employees should ensure the incinerators are well cleaned, maintained and properly functioning at all times. * Ensure that the incinerators are not overloaded to reduce or eliminate the smoke/emissions.	REGULARLY/ WEEKLY	SITE MANAGER/ SUPERVISOR
AIR POLLUTION EMISSIONS, SMOKE (Burning of waste generates smoke which is associated with several public health risks such as respiratory abnormalities, blood	* All vehicles and machinery/equipment to be shut down between periods when not in use. *Ensure that the incinerators are not overloaded to reduce or eliminate the	NB: PUBLIC COMPLAINTS MUST BE RECORDED DAILY/WEEKLY	SITE MANAGER/ SUPERVISOR

disorder, abdominal problems, etc)	smoke/emissions into the air. *No burning of waste must be done on windy days. *Only a certain amount of carcasses/waste must be burnt at a time. *All personnel must be provided with PPE.		
NOISE NUISANCE	* Personnel must NOT be exposed to noise levels above the required 85dB, earmuffs must be provided. * All vehicles and machinery/equipment to be shut down. Between periods of use. *Noise nuisance shall be monitored accordingly.	NB: PUBLIC COMPLAINTS MUST BE RECORDED DAILY/WEEKLY	SITE MANAGER/ SUPERVISOR, EMPLOYEES, CONTRACTORS
FIRE AND EXPLOSION HAZARD/DANGER	* The Emergency and Crisis Response Plan should be executed; and must address the possible leaks. * Adequate water must at all times be accessible or available for fire fighting dedications. *Virtuous cleaning such as the elimination of combustible materials e.g. trash, dry vegetation; and hydrocarbon-saturated soils should be removed from the site accordingly.	DAILY	SITE MANAGER/ SUPERVISOR, EMPLOYEES, CONTRACTORS

	*Consistent checks to examine and test fire fighting kits; and pollution control measures should be done regularly. *Emergency evacuation/exit, entry, assembly points, etc should be labelled and visible to all personnel and contractors on site. *The Proponent should ensure that all employees undergo fire fighting training and all relevant training required.		
SURFACE/ GROUND WATER CONTAMINATION	* Waste water shall be contained. *Empty containers of chemicals shall not be dumped just anywhere, all the garbage should be collected and disposed of at approved sites. * Ensure proper toilet facilities are on site and are working properly. * Risks of surface/groundwater contamination impacts shall be reduced through proper induction and training of staff; and installation of suitable containment structures. * Proper Installation of oil seizure and leak detection systems.	DAILY	SITE MANAGER/ SUPERVISOR, EMPLOYEES, CONTRACTORS

	* The Site Manager/Supervisor or contractor shall ensure that there is no toilet leakages or during normal operation; and that the contents/substances are properly removed from site.		
HYDROCARBON WASTE	*This impact can be minimised through proper training of the workers. * Appropriate and suitable monitoring of the product/diesel level in the tank must take place to minimise or avoid overfilling. * Spills must be cleaned up immediately; and if there spill is more than 200 litres, it must be reported to the Ministry of Mines and Energy (MME). * An emergency response plan and appropriate suitable equipment is recommended, to avoid or manage any spillage or leaks properly and efficiently.	DAILY/ REGULARLY	SITE MANAGER/ SUPERVISOR
GENERATION OF WASTE	*After incineration, ashes to be wrapped in plastic bags and disposed of at an approved local site accordingly. * Proper toilet facilities should be installed at the	DAILY	SITE MANAGER/ SUPERVISOR, EMPLOYEES, CONTRACTORS

	construction site or other provisions should be made. * Polluted wastes in the form of soil, litter, building rubble and other material must be disposed of at an appropriate disposal site. *Tanks and pipelines removed must be disposed of in a suitable method by an approved contractor/service provider.		
HERITAGE IMPACT	*There are no known heritage areas or objects impacted by the operation so far in the study area. * If archaeological remains or objects with national values such as Stoneware, skeletons, shells, prehistoric clothing or weapons, ancient knives and forks, graves etc discovered on-site, the area must be secured off; and the relevant authorities must be informed of such discoveries straightaway.	DAILY	PROPONENT, SITE MANAGER, SUPERVISOR, EMPLOYEES, CONTRACTORS
	*Employees should not be allowed to cut and collect firewood. * Promote re-vegetation in cleared areas.		SITE MANAGER/

BIODIVERSITY LOSS/HABITAT DESTRUCTION	*No animals must be killed unless it poses danger. *No domestic animals should be allowed at the site. *Prevent the destruction of protected species by minimizing clearing areas through proper planning. * Where possible, rescue and relocate plants of significance.	DAILY	SUPERVISOR, EMPLOYEES, CONTRACTORS

8. RECOMMENDATIONS AND CONCLUSION

As the earth's most plentiful energy source, the sun holds enormous promise as a clean and dependable way to power our work. The proponent is keen to create a viable, cost-effective and exclusive solar power energy industry that will bargain substantial work opportunities to the local inhabitants temporarily and/or permanently.

Whenever potential impacts occur, prompt actions must be taken to lessen the increase of effects associated with the potential impacts. To warranty the significance of this Environmental Management Plan, it needs to be revised at all times during all phases mainly when there is any changes in scope, impacts, mitigation measures, etc.

Correct execution of this EMP, will lessen possible negative impacts to moderately low or zero, this will in turn help to improve the likely benefits to the community in the surrounding areas

.

This Environmental Management Plan shall be used as an on-site reference document at all times; and reviewing should take place whenever there is any changes in order to ensure obedience/adherence stated in the EMA and its EIA Regulations**.**

The advantages of using solar energy are endless, it still a better alternative to environmentally unfriendly fossil fuels and the opportunity we have to stop global warming.

Therefore, Epic Environmental Consultancy CC recommends that the proposed project activity receive an Environmental Clearance Certificate (ECC) provided that:

- The Environmental Management Plan is complied with at all times;
- Ensure that all required permits, licenses and approvals for the proposed activities are acquired or renewed as required;
- That the Proponent and all project staff or contractors to fulfil the legal requirements leading the proposed project and its associated activities;
- Site areas where the project activities have stopped to be rehabilitated to the pre-state; and
- That Environmental Compliance monitoring reports to be compiled and submitted to MEFT as required.

9. REFERENCES

Cunningham, P. L. 2010. *Desktop study: Vertebrate Fauna and Flora Expected in the Finkenstein area.* 29pp.

Mendelsohn, J., Jarvis, A., T. Robertson. 2009. *Atlas of Namibia. A portrait of the land and its people*. Third Edition. Sunbird Publishers (Pty) Ltd. Cape Town, RSA. 200pp.

Namibia Statistics Agency (NSA). 2013. *Namibia 2011 Population and Housing Census Main report*.

Ministry of Environment and Tourism (MET). 2008. *A Guide to the Environmental Management Act No. 7 of 2007.*

https://www.weather-atlas.com/en/namibia/windhoek-weather. Retrieved 10 December 2022.

Major Soils in Namibia. Retrieved 2 September 2024 at: https://www.researchgate.net/figure/Major-soil-types-of-Namibia-The-northern-part-of-the-country-is-dominated-by-fluvisols_fig1_284283213