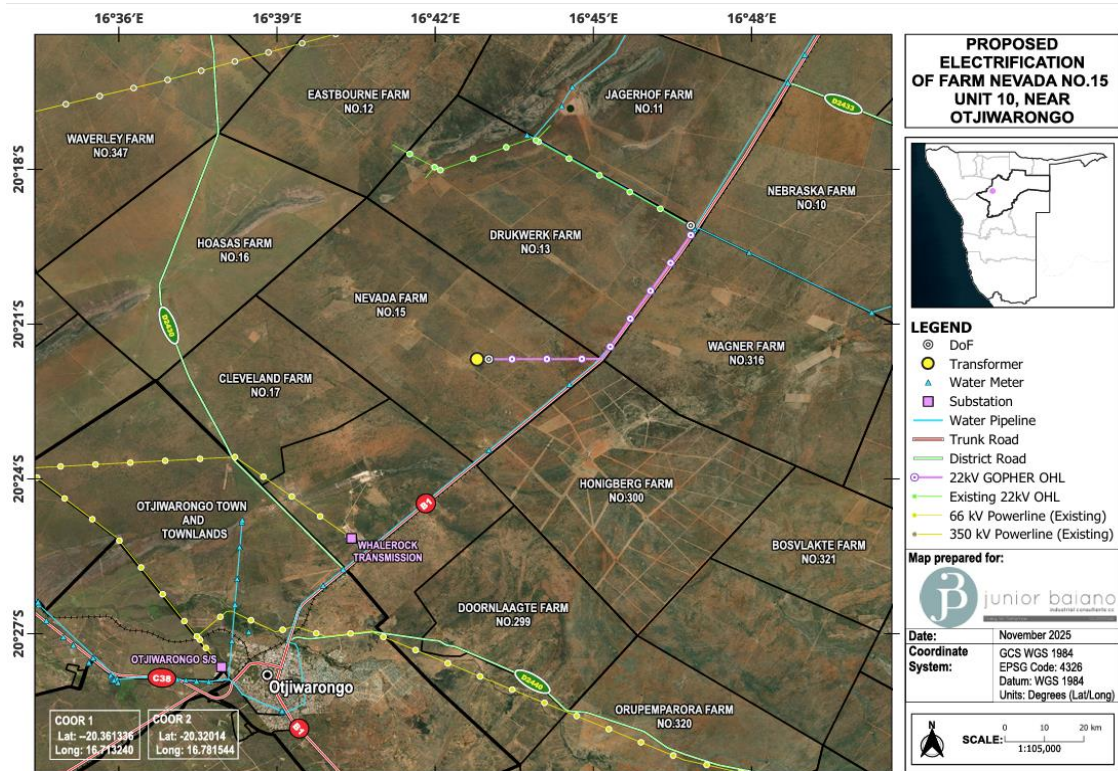


# ENVIRONMENTAL IMPACT ASSESSMENT

## PROPOSED DEVELOPMENT AND OPERATION OF A POWERLINE AND ELECTRIFICATION OF FARM NEVADA NO. 15, UNIT D, OTJIWARONGO DISTRICT, OTJOZONDJUPA REGION, NAMIBIA



## ENVIRONMENTAL MANAGEMENT PLAN

### FINAL VERSION

### ECC APPLICATION: 7053

### JANUARY 2026



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## 1 INTRODUCTION

The proposed construction and operation of the 22 kV medium-voltage (MV) overhead powerline to supply electricity to Farm Nevada No. 15 (Unit D), located near Otjiwarongo in the Otjozondjupa Region, has the potential to generate localised and largely short-term environmental and socio-economic impacts.

As identified in the Environmental Scoping Report and impact assessment, the primary risks associated with the powerline project relate to:

- Localised soil disturbance and compaction at pole foundation sites;
- Selective vegetation clearing within the servitude for statutory safety clearance;
- Temporary dust generation from construction vehicle movement along farm roads;
- Noise during pole erection and conductor stringing;
- Risk of accidental veld fires during dry and windy conditions;
- Potential hydrocarbon spills from construction equipment;
- Disturbance to livestock and wildlife during construction;
- Avifaunal interaction risks (electrocution and collision) during the operational phase;
- Temporary disruption to farm access and infrastructure;
- Occupational health and safety risks during construction activities; and
- Possible accidental disturbance of unknown heritage resources during excavation.

The Environmental Scoping Report focuses on the detailed project description, legal framework, baseline environmental conditions, stakeholder engagement process, and the assessment of potential impacts.

This Environmental Management Plan (EMP) complements the Scoping Report by translating the identified impacts into practical, site-specific management measures, monitoring requirements, and implementation responsibilities.

This EMP must be read in conjunction with CENORED's approved Generic Environmental Management Plan (GEMP), which establishes overarching environmental management standards for powerline construction projects. While the GEMP provides general environmental specifications applicable to all CENORED projects, this project-specific EMP defines the special conditions, mitigation measures, and monitoring requirements applicable to the Nevada 22 kV powerline project.

The EMP forms an integral component of the Environmental Assessment undertaken in accordance with the Environmental Management Act (EMA), No. 7 of 2007, and the

Environmental Impact Assessment Regulations (GN 30 of 2012), and will be binding on the proponent and all contractors engaged in project implementation.

Given the linear footprint of the project and the relatively short construction period (approximately 30 days), most impacts are expected to be localised, manageable, and reversible with proper implementation of mitigation measures.

### **1.1 Purpose of the EMP**

The purpose of this EMP is to provide a structured and enforceable framework for environmental and social management during the construction and operational phases of the Nevada 22 kV powerline project.

Specifically, this EMP aims to:

- Avoid environmental and socio-economic impacts wherever reasonably practicable;
- Minimise and control impacts that cannot be avoided;
- Ensure full compliance with applicable Namibian legislation and Environmental Clearance Certificate (ECC) conditions;
- Protect farming operations, livestock, water infrastructure, and landowner interests;
- Safeguard ecological receptors including vegetation, wildlife, and avifauna;
- Establish monitoring and reporting procedures to verify compliance; and
- Promote continuous improvement through corrective action and adaptive management.

The EMP therefore serves as the operational management tool that ensures the project proceeds in a responsible, compliant, and environmentally sound manner.

### **1.2 Scope of the EMP**

This EMP applies to all activities associated with the construction and operation of the 22 kV overhead powerline to Farm Nevada No. 15 (Unit D), including:

- Establishment of temporary construction work areas;
- Excavation and installation of pole foundations;
- Erection of wooden poles (approximately 11 m in height);
- Stringing of conductors;
- Installation of the 16 kVA 22/0.4 kV transformer;
- Temporary use of farm access roads;
- Servitude vegetation trimming and safety clearance;
- Movement of construction vehicles, equipment and personnel;

- Site rehabilitation following completion of construction; and
- Operational phase inspection and maintenance activities.

The EMP addresses potential impacts on environmental and socio-economic receptors within and adjacent to the powerline alignment, including:

- Soils susceptible to compaction and erosion;
- Ephemeral drainage features and natural runoff patterns;
- Rangeland vegetation and protected tree species;
- Wildlife habitats and avifauna species vulnerable to collision or electrocution;
- Farm infrastructure (fences, boreholes, pipelines, gates, roads);
- Livestock and grazing areas;
- Heritage and archaeological resources (via chance-find procedure);
- Farm residents, workers, and neighbouring landowners.

This EMP further defines:

- Organisational roles and responsibilities;
- Construction-phase management measures;
- Operational-phase management requirements;
- Environmental monitoring protocols;
- Non-conformance management and corrective action procedures;
- Record-keeping and reporting obligations.

The EMP is binding on the proponent, contractors, subcontractors, and all personnel engaged in project implementation.

### **1.3 EMP Administration**

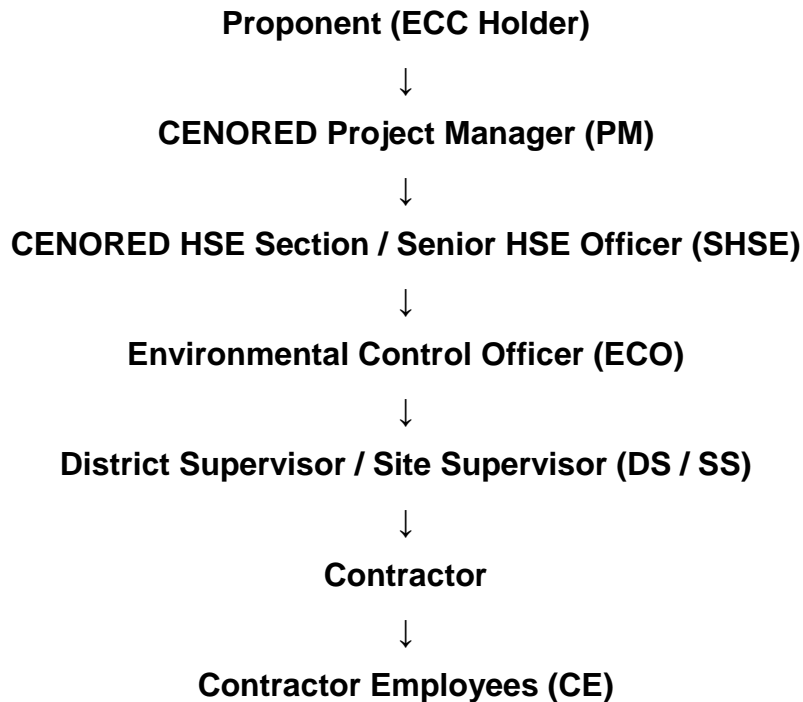
Effective implementation of this Environmental Management Plan (EMP) requires clear allocation of authority, responsibility, and reporting lines.

This project-specific EMP shall be implemented in conjunction with CENORED's approved Generic Environmental Management Plan (GEMP). While the Proponent (Farm Nevada Owner / Project Developer) remains the legal holder of the Environmental Clearance Certificate (ECC) and retains overall accountability for environmental compliance, day-to-day implementation and enforcement of environmental management requirements during construction shall follow CENORED's established reporting structure.

Environmental management performance will therefore be achieved through coordinated oversight between the Proponent, CENORED Project Manager, CENORED HSE Section, Environmental Control Officer (ECO), Contractor, and relevant regulatory authorities.

#### **1.4 Reporting Structure**

EMP implementation shall follow the CENORED reporting hierarchy as defined in the GEMP, namely:



The ECO shall report environmental compliance findings to the CENORED Project Manager and HSE Section. The Contractor remains responsible for implementation of all mitigation and rehabilitation measures.

#### **1.5 Roles and Responsibilities**

Clear definition of roles and responsibilities is essential to ensure effective implementation, monitoring, and enforcement of this EMP. The responsibilities outlined below align with the CENORED Generic EMP reporting structure and distinguish between legal accountability, operational oversight, monitoring functions, and on-site implementation duties.

**Table 1-1:** Roles and Responsibilities in EMP Implementation

<b>ROLE</b>	<b>ENVIRONMENTAL RESPONSIBILITIES</b>
Proponent (Farm Nevada Owner / Project Developer)	Legal holder of the ECC; overall accountability for environmental compliance; ensure EMP requirements are incorporated into contractual agreements.
CENORED Project Manager (PM)	Overall enforcement of the EMP; ensure contractor compliance; coordinate with HSE section; approve corrective actions; ensure environmental performance prior to project sign-off.
CENORED HSE Section / Senior HSE Officer (SHSE)	Provide HSE inductions; support monitoring and audits; advise on non-conformances; ensure alignment with the CENORED GEMP.
Environmental Control Officer (ECO)	Conduct site inspections; monitor compliance; maintain environmental records; report findings to PM and HSE; verify rehabilitation and close-out of non-conformances.
District Supervisor / Site Supervisor (DS / SS)	Oversee daily construction activities; ensure mitigation measures are implemented on site; communicate environmental issues to PM and ECO.
Contractor	Implement all mitigation and monitoring measures; comply with EMP and GEMP requirements; report incidents; ensure staff induction; rehabilitate disturbed areas.
Contractor Employees (CE)	Comply with site rules; use required PPE; report spills, environmental damage, veld fire risks, or heritage finds immediately.
Environmental Commissioner / MEFT	Regulatory oversight; review and approve EMP where required; issue ECC; conduct compliance inspections if necessary.

## **1.6 Enforcement and Compliance**

Compliance with this EMP and the CENORED GEMP is mandatory. Non-conformances identified during inspections or audits shall be recorded and corrective actions implemented within specified timeframes.

The CENORED Project Manager retains the authority to:

- Issue corrective action instructions;
- Suspend activities in the event of serious environmental risk;
- Withhold project sign-off pending satisfactory rehabilitation and compliance verification.

All contractors and subcontractors engaged on the project are contractually bound to adhere to this EMP and the applicable provisions of the CENORED GEMP.

## **2 EMP Management Actions**

The management actions presented below translate the impacts identified in the Environmental Scoping Report into practical, site-specific mitigation, monitoring, and compliance measures for the construction and operational phases of the Nevada 22 kV powerline.

This section must be read in conjunction with:

- The Environmental Scoping Report (impact identification and significance rating)
- The CENORED Generic Environmental Management Plan (GEMP)
- The Environmental Clearance Certificate (once issued)

Where the GEMP sets general corporate environmental requirements, this EMP contextualises those requirements to the Nevada powerline alignment and the specific environmental and agricultural setting of Farm Nevada No. 15 (Unit D).

**Table 2-1:** Construction EMP

Impact Category	Identified Impact	Management / Mitigation Measures	Responsible Party	Monitoring & Verification
Topography & Soils	Localised soil disturbance and compaction at pole foundation sites	<ul style="list-style-type: none"> <li>• Restrict vehicles to existing roads where feasible;</li> <li>• Avoid parallel tracks</li> <li>• Excavate only required pole footprint;</li> <li>• Stockpile and replace topsoil;</li> <li>• Backfill and compact immediately;</li> <li>• Rehabilitate disturbed areas within 3 months</li> </ul>	Contractor; Site Supervisor; ECO	Weekly site inspections; post-construction rehabilitation inspection
Topography & Soils	Localised soil erosion at disturbed areas	<ul style="list-style-type: none"> <li>• Avoid construction during heavy rainfall;</li> <li>• Install temporary berms on slopes where required;</li> <li>• Stabilise disturbed areas immediately;</li> <li>• Prevent runoff into drainage lines;</li> <li>• Repair erosion scars promptly</li> </ul>	Contractor; ECO	Inspection after rainfall events; final rehabilitation audit
Soils / Groundwater	Hydrocarbon contamination from refuelling or equipment breakdown	<ul style="list-style-type: none"> <li>• Refuel only in designated bunded areas;</li> <li>• Maintain spill kits on vehicles;</li> <li>• Immediately contain and remove contaminated soil;</li> </ul>	Contractor; ECO; HSE Section	Daily visual checks; spill/incident register review

Impact Category	Identified Impact	Management / Mitigation Measures	Responsible Party	Monitoring & Verification
		<ul style="list-style-type: none"> <li>• Maintain hazardous substance register;</li> <li>• Dispose contaminated material at approved facility</li> </ul>		
Water & Drainage	Sediment mobilisation into ephemeral drainage lines	<ul style="list-style-type: none"> <li>• Do not stockpile soil within drainage lines;</li> <li>• Maintain minimum buffer where alignment runs near drainage; avoid obstruction of natural flow;</li> <li>• Stabilise donga crossings</li> </ul>	Contractor; Site Supervisor	Post-rain inspections; ECO verification
Air Quality	Dust generation from vehicle movement	<ul style="list-style-type: none"> <li>• Enforce speed limits; limit unnecessary vehicle trips;</li> <li>• Avoid driving during high wind conditions where feasible;</li> <li>• Apply water suppression only where necessary</li> </ul>	Contractor; Site Supervisor	Visual inspections; landowner feedback
Air Quality	Minor vehicle emissions	<ul style="list-style-type: none"> <li>• Maintain vehicles regularly;</li> <li>• Minimise idling time; avoid unnecessary trips</li> </ul>	Contractor	Routine supervision

Impact Category	Identified Impact	Management / Mitigation Measures	Responsible Party	Monitoring & Verification
Noise	Temporary noise from augering, pole erection and stringing	<ul style="list-style-type: none"> <li>• Restrict noisy activities to daylight hours;</li> <li>• Inform landowner of schedule; maintain equipment;</li> <li>• Avoid sensitive livestock periods where possible</li> </ul>	Contractor; Site Supervisor	Complaint register review
Flora	Selective clearing within servitude	<ul style="list-style-type: none"> <li>• Limit clearing strictly to statutory clearance;</li> <li>• Prefer manual clearing; prohibit clearing outside servitude;</li> <li>• No burning; scatter cleared material to reduce erosion</li> </ul>	Contractor; ECO; CENORED PM	Pre-clearing inspection; post-clearing audit
Flora	Accidental removal of protected tree species	<ul style="list-style-type: none"> <li>• Identify protected species prior to clearing;</li> <li>• Obtain permits where required;</li> <li>• Avoid large or culturally significant trees where feasible</li> </ul>	Contractor; ECO	ECO approval before removal
Flora	Establishment of invasive species in disturbed areas	<ul style="list-style-type: none"> <li>• Monitor disturbed areas;</li> <li>• Eradicate declared weeds during rehabilitation;</li> <li>• Avoid importing contaminated fill</li> </ul>	Contractor; ECO	Monthly inspection during construction

Impact Category	Identified Impact	Management / Mitigation Measures	Responsible Party	Monitoring & Verification
Fauna	Disturbance to livestock and wildlife	<ul style="list-style-type: none"> <li>• Restrict driving to designated routes;</li> <li>• Enforce speed limits; prohibit hunting or harassment;</li> <li>• Avoid unnecessary night operations</li> </ul>	Contractor; Site Supervisor	Ongoing supervision; complaint register
Avifauna	Preparation for electrocution and collision risk	<ul style="list-style-type: none"> <li>• Install bird flappers where required;</li> <li>• Install raptor perch deterrents where specified;</li> <li>• Avoid disturbing active nests;</li> <li>• Report bird mortalities to CENORED HSE</li> </ul>	Contractor; CENORED HSE	Post-installation inspection; incident log
Fire Risk	Accidental veld fire during construction	<ul style="list-style-type: none"> <li>• Prohibit open fires outside designated areas;</li> <li>• Fire extinguishers on all vehicles; no smoking in veld;</li> <li>• Comply with farm fire rules;</li> <li>• Immediate reporting of fires</li> </ul>	Contractor; Site Supervisor	Daily checks; fire equipment inspection
Socio-Economic	Temporary disruption to farm operations	<ul style="list-style-type: none"> <li>• Secure written access agreements;</li> <li>• Inform landowner at least 14 days prior;</li> <li>• Coordinate activities with farm operations;</li> <li>• Maintain access routes</li> </ul>	Contractor; CENORED PM	Signed landowner forms; complaint register

Impact Category	Identified Impact	Management / Mitigation Measures	Responsible Party	Monitoring & Verification
Socio-Economic	Damage to fences, gates or infrastructure	<ul style="list-style-type: none"> <li>• Leave gates as found; repair any damage immediately;</li> <li>• Avoid interference with boreholes/pipelines;</li> <li>• Resolve claims within one month</li> </ul>	Contractor; Site Supervisor	Joint inspection with landowner; claims register
Socio-Economic (Positive)	Short-term employment and local procurement benefits	<ul style="list-style-type: none"> <li>• Prioritise local labour where feasible;</li> <li>• Source goods and services locally where practical</li> </ul>	Contractor	Contract documentation
Heritage	Accidental disturbance of archaeological resources	<ul style="list-style-type: none"> <li>• Stop work immediately if artefacts discovered;</li> <li>• Record GPS location;</li> <li>• Notify CENORED and National Heritage Council;</li> <li>• Resume only after clearance</li> </ul>	Contractor; ECO	Incident log verification

Table 2-2: Operation EMP

Impact Category	Identified Impact	Management / Mitigation Measures	Responsible Party	Monitoring & Verification
Visual / Landscape	Permanent visual presence of poles and overhead conductors	<ul style="list-style-type: none"> <li>• Maintain infrastructure in neat condition;</li> <li>• Avoid unnecessary widening of servitude during maintenance;</li> <li>• Ensure vegetation trimming remains minimal and targeted;</li> <li>• Prevent accumulation of debris along servitude</li> </ul>	CENORED Maintenance Team	Annual inspection; landowner feedback
Flora	Ongoing vegetation regrowth within servitude	<ul style="list-style-type: none"> <li>• Conduct periodic trimming only where statutory clearance distances are compromised;</li> <li>• Avoid complete vegetation removal; no clearing outside servitude;</li> <li>• Obtain permits if protected species are affected;</li> <li>• Ensure removed vegetation is scattered and not burned</li> </ul>	CENORED Maintenance Team; HSE Section	Annual vegetation inspection; compliance with statutory clearance
Flora	Establishment of invasive species along disturbed servitude	<ul style="list-style-type: none"> <li>• Monitor servitude during maintenance inspections;</li> <li>• Remove declared alien invasive species where observed;</li> <li>• Prevent spread through contaminated equipment</li> </ul>	CENORED Maintenance Team	Annual inspection report

Impact Category	Identified Impact	Management / Mitigation Measures	Responsible Party	Monitoring & Verification
Avifauna	Electrocution risk to large raptors on 22 kV structures	<ul style="list-style-type: none"> <li>• Maintain bird flappers and deterrent devices;</li> <li>• Inspect structures for avifaunal incidents;</li> <li>• Retrofit additional mitigation if recurring incidents are recorded</li> </ul>	CENORED HSE Section; Maintenance Team	Incident reporting register; annual inspection
Avifauna	Collision risk for large birds (e.g., bustards)	<ul style="list-style-type: none"> <li>• Ensure bird flappers remain visible and functional;</li> <li>• Replace damaged markers promptly;</li> <li>• Monitor reported bird collisions</li> </ul>	CENORED HSE Section	Incident log; maintenance inspection records
Soils	Minor soil disturbance during maintenance access	<ul style="list-style-type: none"> <li>• Restrict maintenance vehicles to existing tracks;</li> <li>• Avoid driving during wet conditions;</li> <li>• Rehabilitate any new disturbances immediately</li> </ul>	CENORED Maintenance Team	Visual inspection during and after maintenance
Fire Risk	Risk of veld fire during maintenance activities	<ul style="list-style-type: none"> <li>• Equip maintenance vehicles with fire extinguishers;</li> <li>• Prohibit open flames; comply with farm fire regulations;</li> <li>• Report and address any fire incidents immediately</li> </ul>	CENORED Maintenance Team	Fire equipment checks; incident register

Impact Category	Identified Impact	Management / Mitigation Measures	Responsible Party	Monitoring & Verification
Socio-Economic	Interference with farming operations during maintenance	<ul style="list-style-type: none"> <li>• Inform landowner prior to planned maintenance;</li> <li>• Coordinate access routes;</li> <li>• Leave gates as found;</li> <li>• Repair any damage immediately</li> </ul>	CENORED Maintenance Team	Maintenance log; landowner sign-off where applicable
Infrastructure Integrity	Damage to farm infrastructure during maintenance	<ul style="list-style-type: none"> <li>• Avoid contact with fences, boreholes, irrigation systems and pipelines;</li> <li>• Immediately repair any accidental damage;</li> <li>• Document and resolve claims</li> </ul>	CENORED Maintenance Team	Joint inspection where required; claims register
Positive Socio-Economic Impact	Improved agricultural productivity and operational efficiency due to reliable electricity supply	<ul style="list-style-type: none"> <li>• Maintain uninterrupted electricity supply where possible;</li> <li>• Plan maintenance outages in coordination with landowner;</li> <li>• Communicate planned outages in advance</li> </ul>	CENORED	Service records; outage notifications

### 3 ENVIRONMENTAL MONITORING PLAN

Environmental monitoring is required to verify that the mitigation measures outlined in this Environmental Management Plan (EMP) are effectively implemented and that environmental and socio-economic impacts associated with the construction and operation of the 22 kV overhead powerline to Farm Nevada No. 15 (Unit D) are properly managed.

Monitoring serves to:

- Confirm compliance with this EMP and the CENORED Generic Environmental Management Plan (GEMP);
- Verify adherence to Environmental Clearance Certificate (ECC) conditions;
- Identify unforeseen impacts at an early stage;
- Enable corrective action before impacts escalate; and
- Provide documentary evidence of environmental compliance.

All environmental monitoring records—including site inspection checklists, daily site diaries, spill and incident reports, waste disposal records, grievance registers, rehabilitation records, and photographic evidence—shall be maintained on site and made available to CENORED management and regulatory authorities upon request.

Prior to commencement of construction, the CENORED Project Manager, in consultation with the Environmental Control Officer (ECO), shall confirm a project-specific monitoring schedule aligned to:

- Approved powerline alignment and servitude limits;
- Pole foundation locations;
- Access routes and construction work areas;
- Vegetation clearing extents;
- Bird flapper installation points (where required);
- Hazardous material storage areas (if applicable);
- Fire prevention measures; and
- Landowner communication procedures.

The environmental monitoring programme shall apply during both the construction phase and the operational phase (maintenance activities).

**Table 3-1:** Environmental Monitoring Plan

Monitoring Aspect	Monitoring Requirement	Phase	Frequency	Responsible Party
Vegetation clearing and servitude control	<ul style="list-style-type: none"> <li>• Confirm clearing remains within approved servitude width;</li> <li>• Verify no unauthorised clearing;</li> <li>• Check protected species are not removed without permits</li> </ul>	Pre-construction & Construction	Once prior to clearing; weekly during clearing	ECO / Site Supervisor
Soil disturbance at pole sites	<ul style="list-style-type: none"> <li>• Inspect pole foundations for excessive disturbance; verify topsoil replacement and proper backfilling;</li> <li>• Confirm no parallel vehicle tracks are created</li> </ul>	Construction	Weekly; after rainfall events	ECO
Soil erosion and drainage stability	<ul style="list-style-type: none"> <li>• Inspect disturbed areas and access routes for erosion;</li> <li>• Confirm no sediment enters drainage lines;</li> <li>• Verify stabilisation of donga crossings</li> </ul>	Construction	Weekly; after rainfall	ECO
Hydrocarbon and spill control	<ul style="list-style-type: none"> <li>• Inspect equipment and vehicles for leaks;</li> <li>• Confirm availability of spill kits;</li> </ul>	Construction	Daily visual checks by Site Supervisor; weekly ECO inspection	Site Supervisor / ECO

Monitoring Aspect	Monitoring Requirement	Phase	Frequency	Responsible Party
	<ul style="list-style-type: none"> <li>• Verify bunded refuelling areas where applicable;</li> <li>• Ensure spills are recorded and remediated immediately</li> </ul>			
Waste management	<ul style="list-style-type: none"> <li>• Confirm waste segregation;</li> <li>• Inspect for litter along servitude; verify removal of waste to approved disposal facilities;</li> <li>• Check that no waste is burned on site</li> </ul>	Construction	Weekly	ECO
Dust control and traffic management	<ul style="list-style-type: none"> <li>• Monitor compliance with farm speed limits;</li> <li>• Inspect for excessive dust on access roads;</li> <li>• Verify corrective measures where necessary</li> </ul>	Construction	Weekly; additional checks during windy conditions	Site Supervisor / ECO
Noise management	<ul style="list-style-type: none"> <li>• Confirm noisy construction activities are limited to daylight hours;</li> <li>• Record and respond to any complaints from landowner</li> </ul>	Construction	Weekly review	ECO

Monitoring Aspect	Monitoring Requirement	Phase	Frequency	Responsible Party
Fire risk management	<ul style="list-style-type: none"> <li>• Verify fire extinguishers are present on vehicles;</li> <li>• Confirm no unauthorised open fires;</li> <li>• Ensure compliance with farm fire rules</li> </ul>	Construction	Daily supervision; weekly ECO inspection	Site Supervisor / ECO
Farm access and infrastructure protection	<ul style="list-style-type: none"> <li>• Inspect fences, gates, boreholes and pipelines for damage;</li> <li>• Verify gates are left as found;</li> <li>• Maintain grievance register;</li> <li>• Confirm claims are resolved</li> </ul>	Construction	Ongoing supervision; weekly review	Site Supervisor / ECO
Heritage chance-find procedure	<ul style="list-style-type: none"> <li>• Confirm staff induction includes chance-find procedure;</li> <li>• Inspect excavation areas for potential artefacts;</li> <li>• Verify immediate work stoppage if finds occur</li> </ul>	Construction	Ongoing during excavation	ECO
Avifauna protection (installation stage)	<ul style="list-style-type: none"> <li>• Verify installation of bird flappers where required;</li> <li>• Confirm no disturbance of active nests during construction</li> </ul>	Construction	During installation; final inspection before commissioning	ECO / CENORED HSE

Monitoring Aspect	Monitoring Requirement	Phase	Frequency	Responsible Party
Rehabilitation and site handover	<ul style="list-style-type: none"> <li>• Confirm all disturbed areas rehabilitated;</li> <li>• Verify removal of waste and temporary materials;</li> <li>• Conduct final inspection prior to project sign-off</li> </ul>	Post-construction	Once prior to handover; follow-up after 3 months if required	ECO / CENORED Project Manager
Operational vegetation management	<ul style="list-style-type: none"> <li>• Inspect servitude for regrowth affecting statutory clearance;</li> <li>• Verify trimming remains minimal and targeted</li> </ul>	Operation	Annually or during maintenance cycle	CENORED Maintenance Team
Operational avifauna monitoring	<ul style="list-style-type: none"> <li>• Inspect bird flappers and deterrents;</li> <li>• Record any bird mortality incidents;</li> <li>• Initiate corrective action if recurring incidents are observed</li> </ul>	Operation	Annually; incident-based	CENORED HSE
Operational access and soil disturbance	<ul style="list-style-type: none"> <li>• Confirm maintenance vehicles use approved routes;</li> <li>• Inspect for new soil disturbance;</li> <li>• Verify rehabilitation if damage occurs</li> </ul>	Operation	During maintenance visits	CENORED Maintenance Team

## 4 CONCLUSION AND RECOMMENDATIONS

The Environmental Impact Assessment (EIA) for the proposed construction and operation of a 22 kV medium-voltage overhead powerline to supply electricity to Farm Nevada No. 15 (Unit D), located near Otjiwarongo in the Otjozondjupa Region, has been undertaken in accordance with the Environmental Management Act (EMA), No. 7 of 2007, and the Environmental Impact Assessment Regulations (GN 30 of 2012).

All relevant national environmental legislation, applicable policies, and the CENORED Generic Environmental Management Plan (GEMP) were reviewed and applied to ensure that the assessment process is robust, transparent, and legally compliant.

The assessment indicates that the proposed powerline construction—comprising pole foundation excavation, erection of approximately 11 m wooden poles, conductor stringing, installation of a 16 kVA 22/0.4 kV transformer, limited vegetation trimming within the servitude, and use of existing farm access roads—will result in predominantly low to moderate environmental impacts, provided that the prescribed mitigation and monitoring measures are fully implemented.

The majority of potential negative impacts are:

- Localised in extent;
- Short-term in duration during construction;
- Limited in magnitude; and
- Readily reversible through rehabilitation measures.

These impacts primarily relate to:

- Localised soil disturbance at pole foundation sites;
- Temporary dust and noise generation during construction;
- Selective vegetation clearing within the servitude;
- Minor risk of hydrocarbon spills;
- Temporary disturbance to livestock and wildlife;
- Potential avifaunal interaction risks during operation; and
- Temporary disruption to farm access and infrastructure.

No significant or irreversible impacts on biodiversity, water resources, heritage resources, agricultural productivity, or surrounding land uses are anticipated, provided that construction and operational activities are conducted strictly in accordance with this Environmental Management Plan (EMP) and the CENORED GEMP.

The operational phase impacts are limited primarily to:

- The permanent but moderate visual presence of poles and conductors within an agricultural landscape;
- Ongoing vegetation maintenance within statutory clearance limits; and
- Long-term avifaunal interaction risks, which can be mitigated through installation and maintenance of bird flappers and deterrent devices.

Importantly, the project is expected to generate meaningful positive socio-economic benefits, including:

- Improved reliability of electricity supply to Farm Nevada;
- Enhanced agricultural productivity through mechanisation and improved water pumping;
- Increased operational efficiency and farm sustainability;
- Short-term employment and local procurement benefits during construction.

All identified potential negative impacts have been systematically addressed through a comprehensive EMP that sets out:

- Clear mitigation measures;
- Defined monitoring requirements;
- Assigned roles and responsibilities;
- Incident and grievance management procedures; and
- Rehabilitation and handover requirements.

Effective implementation of the EMP, supported by ongoing monitoring and compliance with Environmental Clearance Certificate (ECC) conditions, will ensure that environmental risks remain low and manageable throughout the project lifecycle.

Given:

- The limited linear footprint of the 22 kV powerline;
- The short construction duration (approximately 30 days);
- The use of largely existing access infrastructure;
- The feasibility of effective mitigation and rehabilitation measures; and
- The absence of significant sensitive environmental receptors along the alignment,

it is concluded that the project can proceed without causing significant environmental harm.

## **Recommendation**

It is therefore recommended that the Environmental Commissioner of the Ministry of Environment, Forestry and Tourism (MEFT) grant an Environmental Clearance Certificate (ECC) for the construction and operation of the proposed 22 kV overhead powerline to Farm Nevada No. 15 (Unit D), subject to:

- Full and continuous implementation of the Environmental Management Plan (EMP);
- Compliance with the CENORED Generic Environmental Management Plan (GEMP);
- Adherence to all applicable environmental legislation and regulatory requirements;  
and
- Ongoing monitoring and reporting as prescribed in this EMP.

With these measures in place, the project is considered environmentally acceptable and aligned with Namibia's legislative framework for responsible infrastructure development.

## 5 REFERENCES

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# **APPENDICES**

## **Appendix A: Public Consultation Documents, Site information & relevant documentation**

1. Proof of payment
2. Confirmation of screening notice
3. Locality Map
4. Declaration of author
5. List of registered Interested & affected parties
6. Proof of Newspaper adverts
7. Proof of written notice to local, regional & traditional authority
8. Meeting Minutes
9. EAP CV