

**ENVIRONMENTAL MANAGEMENT PLAN FOR A GROUND SATELLITE  
STATION IN OKAHANDJA AREA, OTJOZONDJUPA REGION.**

**FOR**

**METAGALAXY SPACE SCIENCE AND TECHNOLOGY CC**



*PREPARED BY*



*building prosperous individuals, communities and organizations through*

**"RESEARCH, TRAINING & CAPACITY BUILDING"**


**P. O. BOX 708 22 KHOMASDAL**

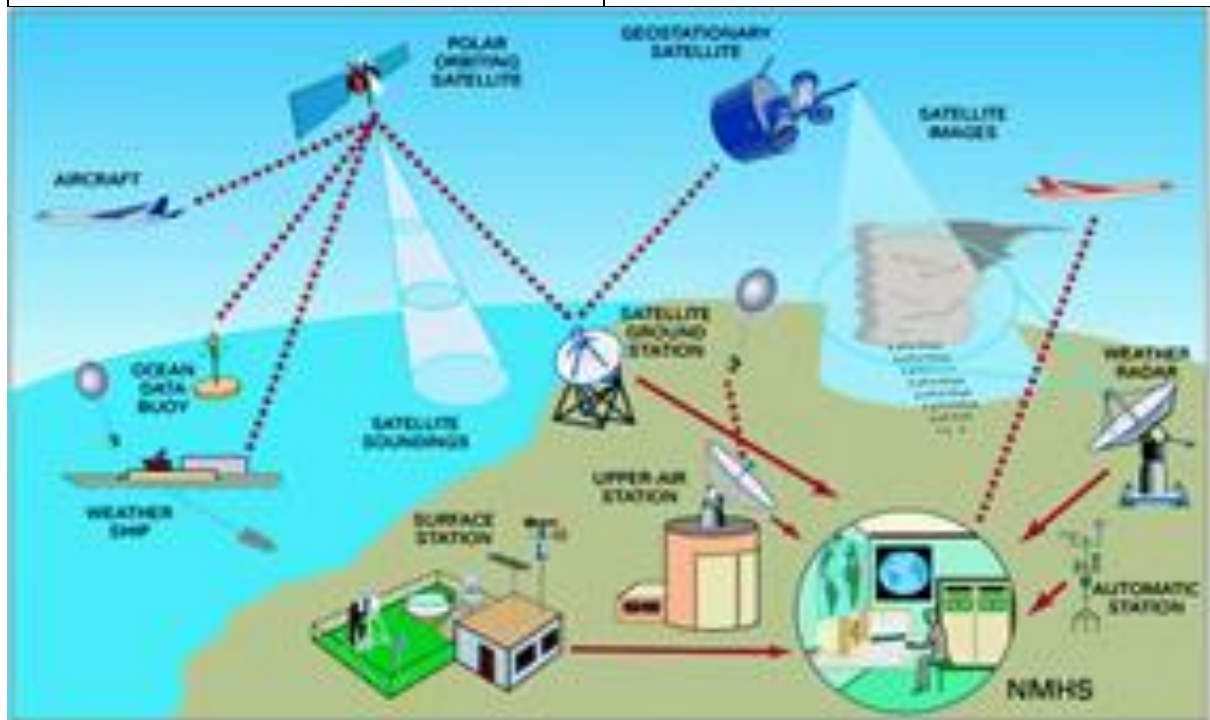
**WINDHOEK, NAMIBIA.**

**+264 812 683 578 /817 181 828**

**[outruninvest@hotmail.com](mailto:outruninvest@hotmail.com)**

**PROJECT DETAILS**

<b>TITLE</b>	ENVIRONMENTAL SCOPING REPORT FOR A GROUND SATELLITE STATION IN OKAHANDJA AREA, OTJOZONDJUPA REGION.
<b>REPORT STATUS</b>	FINAL ENVIRONMENTAL SCOPING REPORT
<b>CONSULTANT</b>	OUTRUN CONSULTANTS CC
<b>ENVIRONMENTAL IMPACT ASSESSMENT PRACTITIONER'S NAME AND SIGNATURE</b>	JOSIAH T. MUKUTIRI 
<b>DATE</b>	26 OCTOBER 2020



## **Acknowledgement**

Many thanks to all stakeholders, Interested and Affected Parties and key stakeholders for their corporation and contributions that have shaped this study.

# Table of Contents

Purpose of this Document .....	<b>Error! Bookmark not defined.</b>
Executive Summary .....	7
1. Introduction .....	8
1.1. Site Locality .....	9
2. Environmental Management Plan .....	10
2.1. Planning and Design.....	10
2.1.1. Biodiversity and Ecology .....	10
2.1.2. Socio-Economic .....	10
2.1.3. Heritage.....	11
2.1.4. Roads.....	<b>Error! Bookmark not defined.</b>
2.1.5. Visual .....	11
2.1.6. Noise .....	11
2.2. Responsibilities .....	12
2.3. Employers Representative (ER).....	12
2.4. Environmental Control Officer (ECO).....	13
2.5. Safety Health and Environmental (SHE) Officer.....	13
2.6. Monitoring .....	14
2.7. Contractor .....	14
2.8. Environmental Specifications: Awareness, Training and Competence .....	15
2.9. The Construction Phase and Construction Mitigation Details.....	15
2.10. The Operational and Maintenance Phase .....	36
2.11. Monitoring Programmes.....	39
2.12. Decommissioning .....	42
2.13. Recommended Mitigation Measures For the Decommissioning Phase .....	42
2.13.1. Ecology .....	42
2.13.2. Visual .....	42
2.13.3. Socio economic .....	43
2.13.4. Surface water .....	<b>Error! Bookmark not defined.</b>
3. Conclusion and Recommendations.....	44
3.1. Conclusion.....	44
3.2. Recommendations .....	44

LIST OF TABLES

Table 1: Environmental Management Plan. .... 16  
Table 2: Establishment of the working area / mobilisation. .... 32  
Table 3: The proposed mitigation measures for the respective environmental aspects of the project.  
..... 36  
Table 4: Environmental Monitoring Programme. .... 39

LIST OF FIGURES

Figure 1: The location of the proposed project site in relation to existing infrastructure. .... 9

## ABBREVIATIONS

EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
EO	Environmental Officer
NHC	National Heritage Council
EMA	Namibia Environmental Management Act (No. 7 of 2007)
METF: DEA	Ministry of Environment, Tourism and Forestry: Directorate of Environmental Affairs

## Executive Summary

The applicant, METAGALAXY SPACE SCIENCE AND TECHNOLOGY CC is a wholly Namibian owned company and are planning to set up a ground satellite station in Okahandja area in Otjozondjupa Region. Construction of telecommunications related infrastructure is a listed activity in the Environmental Management Act of 2007 making it mandatory to conduct an Environmental Impact Assessment and apply for an Environmental Clearance Certificate before implementing the project. Outrun Consultants CC an independent consulting company, conducted the EIA process for Metagalaxy Space Science and Technology CC. The EIA was conducted in 2 phases, the Scoping Phase during which interested and affected parties were given the opportunity to comment on the proposed project activities. The second phase gave rise to the draft environmental management plan (EMP) which was shared with stakeholders for their inputs. The main project activities identified during the scoping and addressed in the EMP emanate from the project construction phase rather than the operation and maintenance. The project poses potential environmental damage in the form of air pollution due to dust, destruction of the landscape, aesthetic view and visual impacts in typical cattle ranging environment. The predicted environmental impacts can be managed resulting in minimal or insignificant residual effects through the successful implementation of the proposed Environmental Management Plan. Specific instructions, responsibility, indicators and monitoring frequency have been formulated and forms the core of this EMP. This EMP cannot be read alone but together with the environmental scoping report generated in the first phase of the study.

# 1. Introduction

The applicant, Metagalaxy Space Science and Technology CC (MSST), contracted a local company to conduct an EIA for the establishment and operation of ground satellite station. MSST has strategically partnered with Shaanxi Xingyi Space Technology Co. Ltd, a service provider in China's commercial aerospace measurement, operation and control network.

Xingyi plans to deploy measurement, operation and control equipment in all continents around the globe including Africa to provide global users with measurement, operation and control services. The plan is to build three ground monitoring stations in Africa, using the current mainstream civil and commercial satellite application frequency bands, and servicing global customers, providing fast, reliable and safe satellite data transmission, reception and services.

MSST's core services will be centred on:

- Measurement and control services,
- Satellite applications,
- Aerospace research and development,
- Space education,
- Health management,
- Environment and agriculture etc.

This document has been drafted according to the Namibian Environmental Management Act (No. 7 of 2007) and its Regulations of (2012) whereby various aspects of the intended development were considered under the listed activities with potential impacts on the environment. Therefore, this development requires authorisation and an Environmental Clearance Certificate (ECC) from the Environmental Commissioner (Ministry of Environment, Tourism and Forestry).

MSST appointed Outrun Consultants cc, an independent Environmental Assessment Practitioner to the project in fulfilment of the Environmental Management Act 2012. The commitments described here form part of the Environmental Clearance Certificate (ECC) between MSST and the state, as represented by the Ministry of Environment, Tourism & Forestry (METF). Non-compliance is considered illegal and may have legal consequences. The amendment, transfer or renewal of the ECC should be communicated to the Environmental Commissioner as stipulated in the Environmental Management Act (EMA) of 2007 and its EIA Regulations 2012. Any changes to this EMP will require an amendment to the ECC for these developments.



## 1.1. Site Locality

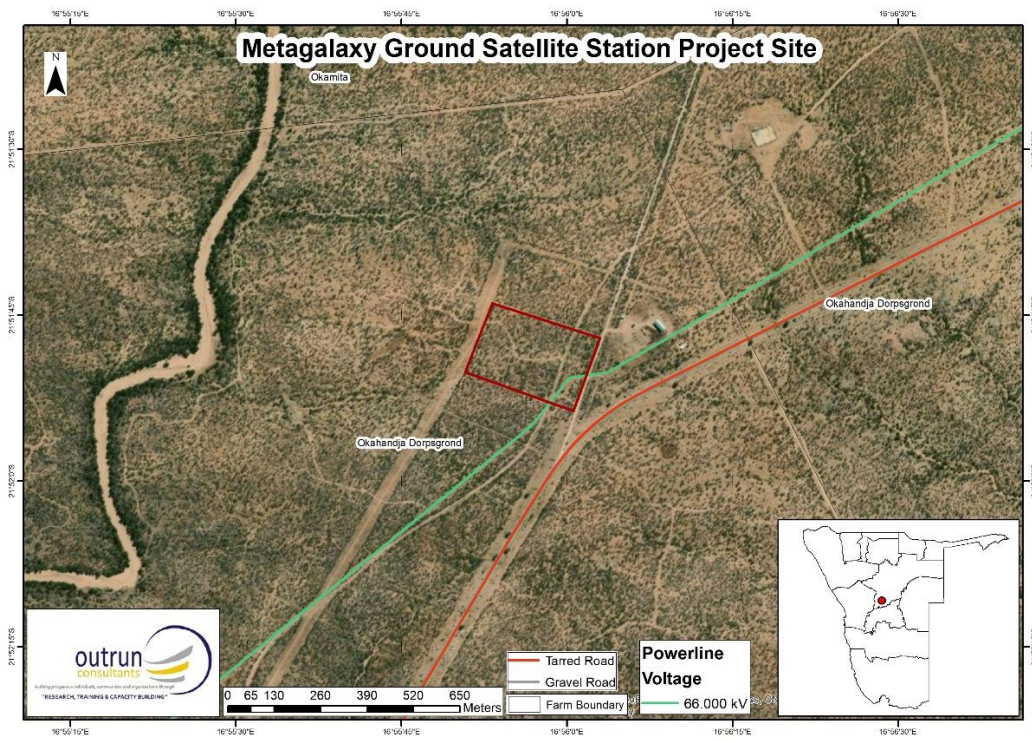


Figure 1: The location of the proposed project site in relation to existing infrastructure.

## 2. Environmental Management Plan

### 2.1. Planning and Design

This section outlines how environmental considerations have informed and been incorporated into the construction and operation phases of the proposed ground satellite station in Okahandja area. The following mitigation measures have been recommended to reduce the environmental impacts and gave rise to the EMP that follows. This EMP has been structured so as to provide its various intended recipients (Developer, ER, consulting engineers and contractors) with mitigation measures immediately applicable to their respective scopes of work. The management requirements for the various recipients carrying out work for this project are divided according to the main project phases.

#### 2.1.1. Biodiversity and Ecology

The following mitigation measures are recommended for the planning and design phase to reduce the impact on the biological environment:

- Minimisation and management of impacts to indigenous or otherwise protected flora that is located on-site, including the protection of habitats therein.
- Locate access routes and other infrastructure to avoid the removal of bigger trees (i.e. *Colophospermum mopane*) as far as possible.
- Limit development and associated infrastructure in sensitive areas such as riparian vegetation.
- Design electrical boundary fencing if needed, so that the first 50cm from ground level is not electrified to allow for small burrowing animals.
- The design should include covers on transformers to prevent owls and genet from nesting on them.
- Design a bund wall around transformers.
- Ensure landscaping designs prohibits the planting of potentially alien invasive plant species (e.g. *Tecoma stans*, *Pennisetum setaceum*, etc.) for decorative purposes (e.g. around offices, etc.) and incorporates indigenous vegetation (especially the protected species such as *A. erioloba*, *Albizia anthelmintica*, *B. albitrunca*, *B. foetida*, *Faidherbia albida*, *Parkinsonia africana*, *Ziziphus mucronata*) into the developments as far as possible (e.g. around offices, etc.).
- Promptly identify weed species and habitats and adopt specific weed control requirements.

#### 2.1.2. Socio-Economic

The following mitigation measures are recommended for the planning and design phase to reduce the impact on the socio-economic aspects.

- The contractor should be required to employ local labour (i.e. from Okahandja area) where possible. The requirements for employing local people should be formalised within the contractor's contract. Should a position be offered to non-local person the contractor should be able to prove that no local person qualifies for such a position, through advertising. Follow up must be undertaken to ensure that the contractor is indeed following the guidelines as prescribed in this EMP.
- A provision stating that all unskilled labour should be sourced from local communities should be included within tenders concerning the construction and/or maintenance of services infrastructure.

- Specific recruitment procedures ensuring qualified local companies enjoy preference during tender adjudication should be included within tenders concerning the construction and/or maintenance of services infrastructure.
- Provisions promoting gender equality pertaining to recruitment should be included within tender documents concerning the construction and/or maintenance of services infrastructure.
- Women should be given preference for certain unskilled jobs (e.g. flag bearers).
- It is crucial that the project procurement criteria include requirements for training and skills development of the contractor's workforce by the contractor.

### 2.1.3. Heritage

The following mitigation measures have been recommended for the planning and the design phase.

- Should any archaeological artefacts be found on site during excavations, a formal application must be made through the National Heritage Council (NHC).

### 2.1.4. Visual

The following mitigation measures are recommended for the planning and design phase to reduce the impact on visual resources:

- Limit offices and structures to single storey and site carefully to reduce visual intrusion.
- Select colours for buildings to reflect hues of the surrounding vegetation and/or the ground (grey green). Door and window frame colour must reference either the roof or wall colours.
- Locate the construction yard away from the new access road and retain as much of the adjacent vegetation as possible.
- Limit the size of signage and use colour tones that are visible but not dominating, so that size and colour contrast do not dominate the attention of the casual observer.
- Ensure that fencing is grey in colour and located as close as possible around the project site.
- Keep facility lighting to a minimum, within the requirements of safety and efficiency. Where lighting is required, use energy savers and design low-level lighting shielded to reduce light spillage and pollution. Use down-lighters for external lighting (including security and perimeter lighting) so that no light falls outside the area needing to be lit and ensure that no naked light sources are directly visible from a distance.

### 2.1.5. Noise

The following mitigation measures are recommended for the planning and design phase to reduce the impact from a noise perspective:

- Ensure that the facility is designed to take into account the maximum allowable equivalent continuous day and night rating levels of the potentially impacted sites outside the project boundary. Where the noise levels at such external sites are presently lower than the maximum allowed, the maximum must not be exceeded.
- Design buildings to minimise the transmission of noise from the inside to the outdoors.
- Insulate particularly noisy plant areas and equipment and keep all plant, equipment and vehicles in good repair.
- Where possible, ensure very noisy activities do not take place at night.

### 2.1.6. Cabling and wiring

- Cables should be installed in line with the manufacturer's recommendations. Installation should be done with care as damage can occur when pulling the cable into position. The correct pulling tensions and bending radii should be adhered to by the installation contractor to prevent damage to the cable. Similarly, cables attached to the mounting structure require the correct protection, attachment and strain relief to make sure that they are not damaged.
- Underground cables should be buried at a suitable depth (generally between 500mm and 1,000mm) with warning tape or tiles placed above and marking posts at suitable intervals on the surface. Cables may either be buried directly or in ducts. If cables are buried directly, they should be enveloped in a layer of sand or sifted soil in order to avoid damage by backfill material.

## 2.2. Responsibilities

The responsibility for the implementation of the EMP ultimately lies with MSST (the Developer), who is also responsible for the eventual operation of these developments. The implementation of this EMP requires the involvement of several key individuals, each fulfilling a different but vital role to ensure sound environmental management during each phase of these developments.

The Developer should appoint an Employer's Representative (ER) to oversee all aspects of these developments for all development phases (including all contracts for work outsourced). Furthermore, the developer may decide to assign this role to one person for the full duration of these developments, or may assign an ER to each of the development phases i.e. one for the Planning and Design Phase, one for the Construction Phase and one for the Operational and Maintenance Phase. The ER will in turn appoint an Environmental Control Officer (ECO) to oversee the implementation of the whole EMP during the Construction and Operation and Maintenance Phases of the ground satellite station. Again, the ER (and/or the Developer) may decide to assign this role to one person for both phases, or may assign a different ECO for each phase – i.e. one for the Construction Phase and another for the Operation and Maintenance Phase. The following positions and their respective responsibilities are outlined below:

- Employer's Representative;
- Environmental Control Officer; and
- Contractor (Construction and Operations and Maintenance).

## 2.3. Employers Representative (ER)

The ER is appointed by the Developer to manage all contracts for work/services that are outsourced during all development phases. Any official communication regarding work agreements is delivered through this person. The ER should with the commencement of the project appoint a competent ECO who will represent the Developer on-site.

During the Planning and Design and Construction Tender Preparation Phase, the ER will have the following responsibilities regarding the implementation of this EMP:

- Ensuring that the necessary legal authorisations have been obtained;
- Developing, managing implementation of and maintaining all Development;

## **2.4. Environmental Control Officer (ECO)**

The ECO should be a competent person appointed by the ER. The ECO is the Developer's on-site representative primarily responsible for the monitoring and review of on-site environmental management and implementation of the EMP by the Contractor. If no ECO is appointed the duties of the ECO fall upon the ER. During the Construction Phase and Operation and Maintenance Phase the ECO's duties include the following:

- Assisting the ER in ensuring that the necessary legal authorisations have been obtained;
- Maintaining open and direct lines of communication between the ER, Developer, the Construction and/or Operations and Maintenance Contractor, and Interested and Affected Parties (I&APs) with regard to this EMP and matters incidental thereto;
- Monthly site inspection of all construction and/or infrastructure maintenance areas with regard to compliance with this EMP;
- Monitor and verify adherence to the EMP (audit the implementation of the EMP) and verify that environmental impacts are kept to a minimum;
- Be fully conversant with the Environmental Management Plan.
- Be fully conversant with all relevant environmental legislation and the Namibian Energy Policy environmental policies and procedures, and ensure compliance with them.

## **2.5. Safety Health and Environmental (SHE) Officer**

The SHE Officer will:

- Be fully conversant with the Environmental Management Programme.
- Be fully conversant with all relevant environmental legislation applicable to the project, and ensure compliance with them.
- Compilation of Method Statements together with the contractor that will specify how potential environmental impacts in line with the requirements of the EMP will be managed, and, where relevant environmental best practice and how they will practically ensure that the objectives of the EMP are achieved.
- Convey the contents of this EMP to the construction site staff and discuss the contents in detail with the Contractor.
- Undertake regular and comprehensive inspection of the site and surrounding areas in order to monitor compliance with the EMP.
- Take appropriate action if the specifications contained in the EMP are not followed.
- Monitor and verify that environmental impacts are kept to a minimum, as far as possible.
- Order the removal from the construction site of any person(s) and/or equipment in contravention of the specifications of the EMP.
- Report any non-compliance or remedial measures that need to be applied to the appropriate environmental authorities, in line with the requirements of the EMP.
- Submitting a report at each site meeting which will document all incidents that have occurred during the period before the site meeting.
- Ensuring that the list of transgressions issued by the ECO is available on request.
- Maintain an environmental register which keeps a record of all incidents which occur on the site during construction. These incidents include:
  - Public involvement / complaints.

- Health and safety incidents.
- Incidents involving hazardous materials stored on site.
- Non-compliance incidents.

## **2.6. Monitoring**

A monitoring programme will be in place not only to ensure compliance with the EMP through the contract/work instruction specifications, but also to monitor any environmental issues and impacts which have not been accounted for in the EMP that are, or could result in significant environmental impacts for which corrective action is required.

A monitoring programme will be implemented for the duration of the construction phase of the project. This programme will include:

- Monthly audits will be conducted by the ECO/s for the duration of the construction phase – the ECO shall undertake this environmental monitoring with the audits considering compliance with the EMP, the EA conditions, as well as the conditions of any permits and/or licences.
- On-going monitoring is to be undertaken by the Contractors' Environmental Manager/Officer – this will include notification to the ECO and proponent EO should an incident take place.
- External auditing may take place at unspecified times by the authorities and/or other relevant authorities.
- An independent, suitably qualified, auditor will need to be contracted to conduct an audit once the construction phase of the project is completed according to the provisions of the EMP.
- The Contractor's Environmental Officer must undertake regular site inspections (at least twice weekly) to ensure all legislative requirements are adhered to. Proof of such inspections shall be kept on file for ease of reference or for audit purposes.

## **2.7. Contractor**

The Contractor is responsible for the implementation of the EMP, on-site monitoring and evaluation of the EMP. It is envisaged that various contractors might be appointed at various periods for various tasks throughout the life cycle (construction through to decommissioning phase) of this project. These can be broadly grouped into Construction Contractors and Operations and Maintenance Contractors. In order to ensure sound environmental management, the relevant sections of this EMP should be included in all contracts of work outsourced thus legally binding all appointed contractors and sub-contractors. All contractors shall ensure that adequate environmental awareness training of senior site personnel takes place and that all construction workers and newcomers are inducted on the environmental, health and safety issues related to the project as well as importance and implications of the proposed EMP. The induction process shall be conducted, as far as is possible, in the employees' language of choice. The Contractor should keep records of all environmental training sessions, including names, dates and the information presented.

## **2.8. Environmental Specifications: Awareness, Training and Competence**

It is important to ensure that all personnel have the appropriate level of environmental awareness and competence to ensure continued environmental due diligence and ongoing minimisation of environmental harm.

To achieve effective environmental management, it is important that employees, Contractors and Subcontractors are aware of the responsibilities in terms of the relevant environmental legislation and the contents of this EMP. Environmental training may typically include the following:

- Employees must have a basic understanding of the key environmental features of the construction site and the surrounding environment;
- Employees will be familiar with the requirements of the EMP and the environmental specifications as they apply to the construction of the power station.
- Basic training in the identification of archaeological artefacts, and rare and endangered flora and fauna that may be encountered on the site.
- Awareness of any other environmental matters, which are deemed to be necessary by the ECO.
- Records must be kept of those that have completed the relevant training.

Training can be done both in a written or verbal format and in an appropriate language, but will be in an appropriate format for the receiving audience. Where training has been done verbally, persons having received training must indicate in writing that they have indeed attended a training session. A regular form of written or verbal testing will have to be designed.

## **2.9. The Construction Phase and Construction Mitigation Details**

All activities involved in the development phases of the solar facility have been identified together with all aspects that may have potential impacts. The construction phase of the EMP aims to address environmental and social risk pertaining to the construction phase. The following table provides a large-scale overview of all the major environmental management themes pertaining to the project activities.

Table 1: Environmental Management Plan.

Section	Aspect	Impact	Mitigation	Indicator	Responsible Party
<b>A</b>	<b>Waste Management Plan</b>	There is a potential environmental contamination and degradation from waste on site.	The Contractor should compile a Waste Management Plan which should address as a minimum the mitigation measures included below	Amount and type of waste observed onsite.	The contractor and the ECO
	<b>Hazardous waste</b>	Impact on soil and water.	<ul style="list-style-type: none"> <li>• All heavy construction vehicles and equipment on site should be provided with a drip tray.                             <ul style="list-style-type: none"> <li>✓ Drip trays are to be transported with vehicles wherever they go.</li> <li>✓ Drip trays should be cleaned daily and spillage handled, stored and disposed of as hazardous waste.</li> </ul> </li> <li>• All heavy construction vehicles should be maintained regularly to prevent oil leakages.</li> <li>• Maintenance and washing of construction vehicles should be take place only at a designated workshop area.</li> </ul>	Correct handling, use and storage of materials, including hazardous material.	The contractor and the ECO



			<ul style="list-style-type: none"> <li>✓ The workshop area should be lined with concrete and sloped so as to collect and detain all run-off.</li> <li>✓ The workshop should have an oil-water separator for collected run-off from washing.</li> <li>• Spilled cement and/or concrete (wet or dry) should be treated as hazardous waste and disposed of by the end of each day in the appropriate hazardous waste containers.</li> <li>• All hazardous substances (e.g. fuel etc.) or chemicals should be stored in a specific location on an impermeable surface that is bunded.</li> </ul>		
	<b>General waste</b>	<p>The incorrect management of solid waste can result in the pollution of soil, groundwater and the general environment.</p> <p>Windblown litter can also contribute to a negative visual impact.</p>	<ul style="list-style-type: none"> <li>• The construction site should be kept tidy at all times. All domestic and general construction waste produced on a daily basis should be cleaned and contained daily.</li> <li>• No waste may be buried or burned.</li> <li>• Waste containers (bins) should be emptied regularly and removed from site to a recognised (municipal) waste disposal site. All recyclable waste needs</li> </ul>	<p>No complaints from the neighbours.</p> <p>No windblown waste.</p> <p>No contamination of the ground and water resources</p>	<p>The contractor and the ECO</p>

			<p>to be taken to the nearest recycling depot.</p> <ul style="list-style-type: none"> <li>• A sufficient number of separate bins for hazardous and domestic/general waste must be provided on site. These should be clearly marked as such.</li> <li>• Construction labourers should be sensitised to dispose of waste in a responsible manner and not to litter.</li> <li>• No waste may remain on site after the completion of the project</li> </ul>		
	<b>Sewage and grey water.</b>	Incorrect management of sewage and grey waste may contaminate the soil, vegetation and underground water resources.	<ul style="list-style-type: none"> <li>• Sewage should not be discharged directly onto open soil.</li> <li>• All sewage must be removed regularly and disposed of at a recognised (municipal) sewage treatment facility.</li> <li>• Grey water that is not recycled should be removed along with sewage on a regular basis.</li> </ul>	<p>No sewage spills on site.</p> <p>No sewage and grey water pools on site.</p>	ECO
			<ul style="list-style-type: none"> <li>• Separate toilets should be available for men and women and should clearly be indicated as such.</li> </ul>		

			<ul style="list-style-type: none"> <li>• Portable toilets (i.e. easily transportable) should be available at the construction site:</li> <li>• Sewage needs to be removed on a regular basis to an approved municipal) sewage disposal site. Alternatively, sewage may be pumped into sealable containers and stored until it can be removed.</li> <li>• Workers responsible for cleaning the toilets should be provided with latex</li> </ul>		
	<b>Open Fires</b>	Potential for fire outbreak on communal lands.	<ul style="list-style-type: none"> <li>• No open fires may be made anywhere on site.</li> </ul>	No sign of burnt material on site.  No sign of smoke on site at all times.	Contractor and ECO
<b>B</b>	<b>Environmental Training of workers</b>	Without proper training the health and safety of workers will be at risk and preventable environmental impacts could occur.	All construction workers are to undergo environmental induction (training) which should include as a minimum the following: <ul style="list-style-type: none"> <li>• Explanation of the importance of complying with the EMP.</li> <li>• Discussion of the potential environmental impacts of construction activities.</li> </ul>	All employees adhere to the mitigation measures provided in this document.  All operators of Mechanical equipment are trained	MET and proponent

			<ul style="list-style-type: none"> <li>• Employees' roles and responsibilities, including emergency preparedness.</li> <li>• Explanation of the mitigation measures that must be implemented when particular work groups carry out their respective activities.</li> <li>• Explanation of the specific mitigation measures within this EMP especially unfamiliar provisions.</li> </ul>	properly by the contractor.	
<b>C</b>	<b>Communication</b>	Inability to communicate the Environmental obligations effectively to responsible parties can result in unnecessary environmental degradation. It can also compromise the health and safety of employees as well as disruption to existing infrastructure.	<p>To ensure that the construction activities do not result in avoidable impacts on the environment by anticipating and managing the impacts.</p> <ul style="list-style-type: none"> <li>• The contact details of the key construction team must be available to all relevant parties.</li> <li>• All site instructions pertaining to environmental matters issued by the Contractor are to be copied to the ECO.</li> <li>• All sub-contractors, employees, suppliers or agents etc. must be fully aware of the environmental management requirements detailed in this EMP.</li> </ul>	<p>The ECO is aware of decisions taken by the engineer and contractors.</p> <p>All relevant stakeholders are kept in the loop of all activity taking place on site.</p>	ECO, Contractor and proponent

			<ul style="list-style-type: none"> <li>• Have a copy of the EMP and ECC available on site at all times for reference purposes.</li> </ul>		
<b>D</b>	<b>Socio-economic impact</b>	<p>The activity could benefit local Communities through job creation, however negative impacts are also possible and must be controlled.</p>	<p>Adhere to the legal provisions in the Labour Act (see Table 1) for the recruitment of labour (target percentages for gender balance, optimal use of local labour and SME's, etc.) in the Contract. The Contractor should compile a formal recruitment process including the following provisions as a minimum:</p> <ul style="list-style-type: none"> <li>• Recruitment should not take place at construction sites.</li> <li>• Ensure that all sub-contractors are aware of recommended recruitment procedures and discourage any recruitment of labour outside the agreed upon process.</li> <li>• Contractors should give preference in terms of recruitment of sub-contractors and individual labourers to those who are qualified and from the project area and only then look to surrounding towns.</li> </ul>	<p>Contribute to employment and capacity building in the local community. Creating awareness amongst employees and the public.</p>	<p>Contractor and ECO</p>

			<ul style="list-style-type: none"> <li>Clearly explain to all job-seekers the terms and conditions of their respective employment contracts (e.g. period of employment etc.) – make use of interpreters where necessary.</li> </ul>		
<b>E</b>	<b>Heritage Resources</b>	Heritage resources can be impacted on during the site clearance, earthworks and the construction of the facility.	<ul style="list-style-type: none"> <li>➤ Should a heritage site or archaeological site be uncovered or discovered during the construction phase of the project, a “chance find” procedure should be applied in the order they appear below: <ul style="list-style-type: none"> <li>If operating machinery or equipment stop work;</li> <li>Demarcate the site with danger tape;</li> <li>Determine GPS position if possible;</li> <li>Report findings to the construction foreman;</li> <li>Report findings, site location and actions taken to superintendent;</li> <li>Cease any works in immediate vicinity;</li> <li>Visit site and determine whether work can proceed without damage to findings;</li> <li>Determine and demarcate exclusion boundary;</li> <li>Site location and details to be added to the project’s Geographic Information</li> </ul> </li> </ul>	No heritage artefacts are disturbed or destroyed on site and the NHC is informed should any heritage artefacts be discovered on site.	ECO, Proponent and Contractor

			<p>System (GIS) for field confirmation by archaeologist;</p> <ul style="list-style-type: none"> <li>• Inspect site and confirm addition to project GIS;</li> <li>• Advise the National Heritage Council (NHC) and request written permission to remove findings from work area; and</li> <li>• Recovery, packaging and labelling of findings for transfer to National Museum.</li> </ul> <p>➤ Should human remains be found, the following actions will be required:</p> <ul style="list-style-type: none"> <li>• Apply the chance find procedure as described above;</li> <li>• Schedule a field inspection with an archaeologist to confirm that remains are human;</li> <li>• Advise and liaise with the NHC and Police; and</li> <li>• Remains will be recovered and removed either to the National Museum or the National Forensic Laboratory.</li> </ul>		
<b>F</b>	<b>Ecological conservation</b>	Constructing the facility may have impacts on the fauna and	To prevent unnecessary disturbance to natural flora and fauna.	No animals are injured.	ECO and Contractor

		<p>flora. Destruction of vertebrate fauna. Destruction of unique flora and special habitats</p>	<ul style="list-style-type: none"> <li>• Employ a qualified environmental officer during the construction phase to ensure the appropriate management of the wildlife and ecological processes.</li> <li>• Implement and maintain speed control with maximum speed limits (e.g. 40km/h). Temporary speed humps could also be used to limit the speed at which people travel but care must be taken to ensure these do not cause erosion.</li> <li>• Avoid off-road driving and unnecessary nocturnal driving in the area.</li> <li>• Prevent and discourage the setting of snares (poaching), illegal collecting of veld foods (e.g. tortoises, etc.), indiscriminate killing of perceived dangerous species (e.g. snakes, etc.) and the collection of wood in and surrounding the project area.</li> <li>• Initiate a policy of capture, removal and relocation of fauna (e.g. slow moving species such as tortoises and chameleon) encountered serendipitously within the</li> </ul>	<p>No setting of snares</p> <p>No employees enter the no-go areas.</p> <p>No alien vegetation establishment.</p> <p>Implement speed limits and temporary speed humps.</p> <p>No off-road driving</p> <p>No setting of fires</p> <p>Establish an appropriate refuse removal policy.</p>	
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			<ul style="list-style-type: none"> <li>• Avoid off-road driving and unnecessary nocturnal driving in the area.</li> <li>• Prevent and discourage the setting of snares (poaching), illegal collecting of veld foods (e.g. tortoises, etc.), indiscriminate killing of perceived dangerous species (e.g. snakes, etc.) and the collection of wood in and surrounding the project area.</li> <li>• Initiate a policy of capture, removal and relocation of fauna (e.g. slow moving species such as tortoises and chameleon) encountered serendipitously within the Avoid the removal of bigger trees (especially protected species – i.e. <i>Clospherpemum mopani</i> [Forestry Ordinance No. 37 of 1952) – during the construction phase(s) – including the development of access routes and other infrastructure developments.</li> <li>• Prevent planting of potentially alien invasive plant species (e.g. <i>Pennisetum setaceum</i>) for decoration purposes.</li> </ul>	No domestic pests on site	
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			<ul style="list-style-type: none"> <li>Any alien plants within the control zone of the company must be immediately controlled to avoid establishment of a soil seed bank. Control measures must follow established norms and legal limitations in terms of the method to be used and the chemical substances used. Disposal of cleared alien vegetation must be to a licenced landfill site.</li> <li>Normal agricultural activities must continue in unaffected areas.</li> <li>Land rehabilitation and re-vegetation must commence immediately upon completion of construction.</li> </ul>		
	<b>Topsoil</b>	Top soil may be removed during the site preparation and excavation process, which could lead to land degradation.	<p>To minimise the erosion of topsoil</p> <ul style="list-style-type: none"> <li>When excavating, topsoil should be stockpiled in a demarcated area.</li> <li>Stockpiled topsoil should be used to rehabilitate the nearest borrow area (existing borrow pits), if such an area is located less than 20 km from the stockpile eg. Sand pits in the Okahandja area.</li> </ul>	All topsoil removed is rehabilitated to its natural state at the end of the construction operations.	ECO and Contractor

<b>G</b>	<b>Stormwater runoff, erosion, and pollution of surface water and groundwater resources</b>	Contamination of stormwater runoff can impact on the surface and groundwater resources. The mismanagement of stormwater can furthermore result in erosion	Prevent storm water from eroding the land and becoming contaminated. <ul style="list-style-type: none"> <li>• Demarcate a 100 m no-go zone from ephemeral watercourses during construction to prevent construction activities from occurring near the ephemeral watercourses to prevent further loss of vegetation, erosion and watercourse sedimentation.</li> <li>• Any disturbed areas must be rehabilitated as Rubble, sand and waste material resulting from the construction activities must be cleared up but not disposed in any stream or drainage channels as it will impede on the flow in these channels.</li> <li>• The abstraction of groundwater must be properly controlled within a prescribed water demand management plan and as required by the licence conditions.</li> <li>• A critical groundwater level must be determined and the groundwater table must be maintained above such critical levels during water abstraction periods.</li> </ul>	Stormwater not contaminated by construction activities. <p>Stormwater control measures are effective at regulating runoff from the site and erosion channels do not develop.</p> <p>Freshwater ecosystems are not unduly disturbed by construction activities within the drainage channels.</p>	Contractor and ECO
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<b>H</b>	<b>Visual impacts</b>	Although the visual resources of the area are degraded the additional facility could contribute to negative visual impacts being a farming area.	<p>Limit dust caused by materials haulage to and from the site, site development works</p> <p>Restrict the structure height to allowable heights.</p> <ul style="list-style-type: none"> <li>• Keep access roads clear and implement measures to minimise dust from construction traffic on gravel roads.</li> <li>• If site clearing is required, the topsoil must be removed and conserved for use in rehabilitation. The remainder could be used for site development, and any surplus disposed of in a manner that appears natural.</li> <li>• Remove all litter and no contaminants shall be allowed to enter the environment by any means.</li> <li>• Rehabilitation of all impacted areas must commence during the construction phase and continue until the state of the vegetation meets the requirements of the ecological assessment and is satisfactory to the ECO.</li> </ul>	No complaints from the public	ECO and Contractor
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<b>I</b>	<b>Traffic</b>	During the construction phase, it is expected that there will be regular movement of vehicle to and from the site for transportation of workers and materials.	To ensure that increased traffic volume is managed efficiently to minimise associated impacts. <ul style="list-style-type: none"> <li>• Demarcate roads clearly.</li> <li>• Off-road driving should not be allowed.</li> <li>• All vehicles that transport materials to and from the site must be roadworthy.</li> <li>• Drivers that transport materials should have a valid driver's license and should adhere to all traffic rules.</li> <li>• Loads upon vehicles should be properly secured to avoid items falling off the vehicle.</li> <li>• Access road entrances must be demarcated, both at their exit point from existing roads and the entry point to the site.</li> <li>• Erect signage to warn motorists about construction activities and heavy vehicle movement where appropriate.</li> </ul>	Traffic is orderly, free flowing and controlled.	Contractor
<b>J</b>	<b>HIV/AIDS and TB training</b>	Possible discrimination of infected people and medical emergencies may occur.	The Contractor should approach the Ministry of Health and Social Services to containing opt a health officer to facilitate HIV/AIDS and TB	No discrimination in the workplace.  Employees are appointed fairly	Contractor

			education programmes periodically on site during the construction phase.	without being discriminated.	
<b>K</b>	<b>Dust</b>	Dust generated from materials handling, roads and stockpiles can become a nuisance to neighbouring landowners.	<p>To avoid nuisance impacts caused by dust as far as possible.</p> <ul style="list-style-type: none"> <li>• A watering truck should be used on gravel roads with the most heavy vehicle movement especially during dry and windy conditions.</li> <li>• However, due consideration should be given to water restrictions during times of drought.</li> </ul>	No complaints received from public and or site staff.	Contractor and ECO
<b>L</b>	<b>Noise</b>	The increase in traffic and operation of equipment such as welding and fixing of the racks may result in noise becoming a nuisance.	<p>To ensure that noise from the construction activities do not exceed unacceptable levels</p> <ul style="list-style-type: none"> <li>• Work hours should be restricted to between 08h00 and 17h00 where construction involving the use of heavy equipment, power tools and the movement of heavy vehicles is less than 500 m from residential areas. If an exception to this provision is required, all</li> </ul>	No noise complaints received.	Contractor and ECO

			<p>residents within the 500 m radius should be given 1 week's written notice.</p> <ul style="list-style-type: none"><li>• Workers will be required to wear ear protecting devices whenever possible.</li><li>• If the contractor needs to undertake activities outside the hours above, the residential and community receptors within audible range of the activity must be notified within 24 hours in advance of the planned activity.</li></ul>		
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Table 2: Establishment of the working area / mobilisation.

Section	Aspect	Impact	Mitigation	Indicator	Suggested Responsibility
1	<b>Demarcate the construction site</b>	Without properly demarcating the site, the public would be able to access the site and would be at risk. The surrounding vegetation and watercourse might also be impacted by the activities.	It is of outmost importance to prevent the encroachment of construction areas into the surrounding environments.	Proper fencing in place to demarcate the construction site.	Contractor
2	<b>Stockpiling of equipment and materials</b>	Incorrect storing of materials can result in water and soil contamination, dust and or erosion. Incorrect storage and handling of materials also pose a risk of environmental contamination and could jeopardise the safety of public / site staff.	<p>Ensure that all materials and equipment handled and stored in a manner that environmental contamination and safety hazards are limited.</p> <ul style="list-style-type: none"> <li>The IPP Contractor shall be advised by the Contractor of the housekeeping arrangements including areas intended for the stockpiling of materials.</li> <li>Implement General Specifications as presented in this document.</li> </ul>	<p>No public complaints or water/soil contamination</p> <p>Correct handling, use and storage of materials, including hazardous materials.</p> <p>No incidents of environmental contamination.</p>	Contractor and ECO



				No accidents or incidents related to the handling of materials.  No public complaints	
3	<b>Ablution facility</b>	The lack of adequate ablution facilities and recess areas can compromise the health of site staff and result in environmental degradation.	To minimise the potential environmental impacts associated with workers on the site. <ul style="list-style-type: none"> <li>• Implement General Specifications</li> </ul>	Adequate ablution facilities are in place.	Contractors and ECO
<b>Section</b>	<b>Aspect</b>	<b>Impact</b>	<b>Mitigation</b>	<b>Indicator</b>	<b>Suggested Responsibility</b>
1	<b>Demarcating the site area for</b>	There may be Unnecessary environmental impacts outside the site footprint if the area is not demarcated.	To keep the site area to a minimum to avoid unnecessary impacts to the surrounding environment. <ul style="list-style-type: none"> <li>• The site must be clearly demarcated with fencing or orange construction barrier to keep clearing activities to a minimum.</li> </ul>	The site area is clearly fenced off.	Contractor and ECO

			<ul style="list-style-type: none"> <li>No site staff must be allowed in the area outside of the demarcated area to prevent trampling of surrounding vegetation</li> </ul>		
<b>2</b>	<b>No-Go areas (Those areas which have been designated by the EAP as sensitive environments).</b>	Without No-Go areas the free moving of site staff could result in impacts to sensitive areas.	<p>To keep the site area to a minimum and to protect sensitive environmental areas.</p> <ul style="list-style-type: none"> <li>Implement General Specifications.</li> </ul>	Comprehensive record, including photographic record, of compliance available.	ECO and Contractor
<b>3</b>	<b>Removal of vegetation</b>	If the removal of vegetation is done incorrectly it may leave the site prone to erosion and compromise rehabilitation requirements post construction.	<p>To ensure that the site is not prone to erosion and any disturbed areas can be rehabilitated as necessary post-construction.</p> <ul style="list-style-type: none"> <li>Implement General Specifications.</li> </ul>	Topsoil conserved in stockpiles for later use if necessary.	Contractor and ECO
<b>4</b>	<b>Excavations for bulk earthworks</b>	Created embankments (cut and fill) and retaining walls are required to level and stabilise the site.	<p>To limit the impact to the environment caused by excavations.</p> <ul style="list-style-type: none"> <li>Implement General Specifications</li> </ul>	No heaps of materials left on site after the construction phase.	Contractor and ECO

		Excavations are also required to accommodate bulk services which might impact on the environment.			
<b>5</b>	<b>Removal of equipment, materials and any temporary structures</b>	If the construction site is not decommissioned it can result in environmental degradation	It is very imperative to leave the impacted area in an acceptable state. <ul style="list-style-type: none"> <li>• Implement General Specifications.</li> </ul>	The area impacted by the construction activities pose no threat to the environment	Contractor and ECO

## 2.10. The Operational and Maintenance Phase

The following mitigation measures should be complied with and carried out during any maintenance works associated with the services infrastructure within the planned development areas.

Table 3: The proposed mitigation measures for the respective environmental aspects of the project.

Aspect	Mitigation Measure
<b>EMP Implementation</b>	If any construction is to be conducted as part of maintenance works for the services infrastructure within the project area please refer to the construction mitigation measures of this EMP.
<b>Environmental management</b> <b>Documentation and procedures</b>	<p>To ensure that the operation of the facility does not result in avoidable impacts on the environment, and that any impacts that do occur are anticipated and managed.</p> <ul style="list-style-type: none"> <li>• Appoint a suitably qualified, independent ECO to monitor compliance and compile an environmental audit report.</li> <li>• Audit the compliance with the requirements of the environmental specification contained within the EMP</li> </ul>
<b>Socio-economic impact</b>	<p>To ensure that the operation of the facility maximises positive impacts on the socioeconomic environment.</p> <p>1) Procurement of materials, goods and services must be from local suppliers, where possible.</p> <p>2) Employ local labour for the operational phase, where possible, and particularly for day to day operations and maintenance.</p> <p>3) The contractor must be required to employ skilled or semi-skilled local labour (depending on their capacity to operate the facility). The requirement to employ local labour must be incorporated in the contractor`s contract. Follow-up compliance monitoring shall be undertaken.</p> <p>4) Where possible encourage the use of local suppliers for procurement of goods, materials and services.</p>

	5) Implement training and capacity building programmes to enhance the ability of local community members to take advantage of available employment opportunities.
<b>Protection of ecology</b>	<p>To prevent unnecessary disturbance to natural vegetation and fauna.</p> <ul style="list-style-type: none"> <li>• Any alien plants within the site footprint must be immediately controlled to avoid establishment of a soil seed bank. Control measures must follow established norms and legal limitations in terms of the method to be used and the chemical substances used.</li> <li>• Ensure removal and control of existing invasive alien plant species (i.e. Prosopis sp.) onsite and within the surrounding 6 m wide fire break.</li> <li>• Maintain track discipline with maximum speed limits (e.g. 40km/h). Temporary speed humps could also be used to limit the speed at which people travel but care must be taken to ensure these do not cause erosion.</li> <li>• Avoid off-road driving and unnecessary nocturnal driving in the area.</li> <li>• Remove all refuse on site.</li> <li>• Maintain coils/flappers on new pylon routes longer than 100m to increase visibility and prevent further bird mortalities.</li> <li>• If nesting on pylon structures becomes problematic, “dummy poles” could be erected for species such as sociable weaver to avoid this problem.</li> <li>• Initiate land rehabilitation and re-vegetation as soon as possible and continue to monitor land for early signs of degradation and erosion.</li> <li>• Re-vegetate with more palatable plant species to enable faster stocking initiation.</li> <li>• Prevent and discourage setting of fires as this could easily cause runaway veld fires.</li> <li>• Do not allow domestic pets – e.g. cats and dogs to accompany employee’s onsite.</li> <li>• Prevent and discourage the collection of firewood in and surrounding the project area.</li> <li>• Maintain transformer covers to ensure that no owls, genet or other animals are nesting on the transformers.</li> <li>• Ensure that solar panels are cleaned regularly and kept free of bird streamers.</li> </ul>

<p><b>Stormwater runoff, erosion, and pollution of surface water and groundwater resources.</b></p>	<p>Prevent stormwater from eroding the land and becoming contaminated.</p> <ul style="list-style-type: none"> <li>• The areas likely to contribute to contaminated runoff, such as the workshop must be designed to have hardened surfaces equipped with oil and grease traps to capture any contaminated runoff. These must be maintained during operation.</li> <li>• Should storm water infrastructure be required, a management plan must be in place to ensure as a minimum that the structures are visually monitored after large rainfall events to ensure that eroded areas do not develop.</li> <li>• Stormwater runoff from the constructed areas must be monitored to ensure that eroded areas do not develop, particularly near the outlets.</li> <li>• Any refuse generated must be disposed of in suitable bins and removed from site at regular intervals.</li> <li>• Maintain the groundwater table above critical groundwater levels during water abstraction periods.</li> <li>• Ensure proper groundwater abstraction Management strategies</li> </ul>
<p><b>Visual impact</b></p>	<p>To protect the sense of place.</p> <ul style="list-style-type: none"> <li>• Keep access roads clear</li> <li>• Keep all lighting minimal, within the requirements of safety and efficiency.</li> <li>• Where such lighting is deemed necessary, use shielded low-level lighting to reduce light spillage and pollution.</li> <li>• Avoid naked light sources that are directly visible from a distance. Only reflected light must be visible from outside the site.</li> <li>• Rehabilitation of all impacted areas must continue until the state of the vegetation meets the requirements of the ecological assessment and is satisfactory to the Environmental Control Officer.</li> </ul>
<p><b>Noise impact</b></p>	<p>To ensure that noise from the operational activities does not exceed unacceptable levels.</p> <ul style="list-style-type: none"> <li>• All plant, equipment and vehicles must be kept in good repair.</li> <li>• When ordering plant and machinery, manufacturers must be requested to provide details of the sound power level. Where possible, those with the lowest sound power level (most quiet) must be selected.</li> </ul>

<b>Post-construction usage of borrow pits</b>	Borrow pits to be utilised post-construction should adhere to the same topsoil and rehabilitation measures outlined within construction mitigation measures of this EMP
<b>Post-construction environmental training and awareness</b>	All contractors appointed for maintenance work on the respective services infrastructure must ensure that all personnel are aware of necessary health, safety and environmental considerations applicable to their respective work.
<b>Monitoring</b>	<p>The ECO should monitor the implementation of the EMP:</p> <ul style="list-style-type: none"> <li>• The ECO should inspect the site before construction starts; and</li> <li>• The ECO should inspect the site at the end of the construction period.</li> </ul>

## 2.11. Monitoring Programme

Table 4: Environmental Monitoring Programme.

Section	Aspect	Phase	What to monitor	Standards to be Achieved
1	<b>Access roads</b>	Construction and operation	<ul style="list-style-type: none"> <li>• Generation of mud on access roads after heavy rainfall event</li> </ul>	Roads in a well maintained condition and causing no damage to vehicles
2	<b>Dust</b>	construction	<ul style="list-style-type: none"> <li>• Dust and ensuring its suppression during construction of infrastructure</li> </ul>	Meet the standard for the South African Atmospheric Pollution Prevention Act 2
3	<b>Erosion</b>	Construction and operation	<ul style="list-style-type: none"> <li>• Area (m2) affected by erosion</li> <li>Effectiveness of erosion control</li> </ul>	<p>No incidences of erosion occurring</p> <p>Should erosion occur, successful remediation of erosion, so that areas are</p>

			measures (improvement over time)	rehabilitated
4	<b>Pollution</b>	Construction and operation	<ul style="list-style-type: none"> <li>No incidences of pollution, Zero pollution incidences</li> </ul>	As incidents occur Fortnightly and after every event logged
5	<b>Pollution safety</b>	Construction and operation	<ul style="list-style-type: none"> <li>Integrity of impervious floor layer of fuel storage and dispensing areas</li> <li>Integrity of bund walls</li> <li>The storage and dispensing areas are secure when not in use, e.g. over-night.</li> <li>Clean up kits for accidental spills are available and 100% complete in terms of their contents</li> <li>Any pollution or safety incidence</li> </ul>	Zero pollution incidences
6	<b>Erosion and water pollution</b>	Construction and operation	<ul style="list-style-type: none"> <li>Stormwater system integrity</li> </ul>	Weekly or after each heavy rainfall event
7	<b>Waste</b>	Construction and operation	<ul style="list-style-type: none"> <li>Certificates of disposal at authorised waste facilities</li> <li>Incidences of waste management contraventions</li> </ul>	Zero waste management infringements



			<ul style="list-style-type: none"> <li>• Distribution and integrity of waste disposal containers</li> <li>• Awareness training for staff related to waste matters (proof of workers trained)</li> </ul>	Application of responsible waste measures
8	<b>Vegetation and fauna</b>	Construction and operation	<ul style="list-style-type: none"> <li>• Incidents of unauthorised entry into no-go areas</li> <li>• Erosion (area in m<sup>2</sup>)</li> <li>• Rehabilitation of disturbed areas</li> <li>• Occurrence of alien species (type, location and area invested (m<sup>2</sup>))</li> <li>• Establishment of bird nests on pylons and transformers as well as beneath solar panels.</li> </ul>	<p>Zero incidents</p> <p>No incidences of erosion occurring</p> <p>Should erosion occur, successful remediation of erosion, so that areas are rehabilitated</p> <p>Measurable targets for this must be determined by the ECO at the commencement of the rehabilitation activities</p> <p>Zero alien species occurring in the footprint area and a 20m buffer area around footprint.</p> <p>No incidences of nesting birds (owls, genets and sociable weavers)</p>

## **2.12. Decommissioning**

In terms of EMA it is necessary to consider the environmental impacts of decommissioning of any development, however, the ground satellite station is expected to be operational for a period of 50 years or more. Thereafter, the facility could either be decommissioned or upgraded, depending on the feasibility.

This study did not include the decommissioning phase and is considered as a separate activity which should be dealt with on its own. The decommissioning of the facility would therefore be addressed in a new EIA process to be conducted prior to the site being decommissioned. This section makes recommendations that should be considered in the new EIA process prior to decommissioning.

The Project Proponent should develop a closure plan to be updated on an annual basis commencing at least 10 years prior to the envisaged decommissioning. The closure plan should identify the targets and objectives for closure, and will be important in allowing operations to work toward closure objectives. The Project Proponent should commission specialist inputs from time to time to provide direction on the closure plan to ensure the end result is as closely aligned with prevailing best practice as is possible, thereby minimising the risk and potential costs associated with decommissioning phase. The various stakeholders should also be engaged as early on in the closure planning process to ensure their interests are known and catered for from the point of origin. The construction phase EMP could be used as a guideline to facilitate the detailed decommissioning phase EMP.

Specific mitigation measures have been recommended for the decommissioning phase of the project and are listed below. It should however be noted that these conditions are subject to change.

## **2.13. Recommended Mitigation Measures for the Decommissioning Phase**

### **2.13.1. Ecology**

The following mitigation measures are recommended from an ecological point of view as part of the closure phase:

- Rehabilitate all areas impacted on by the infrastructure
- Remove all construction waste; rip temporary tracks, if feasible, and replace the topsoil.
- Re-introduce indigenous vegetation (especially protected species – i.e. Mopane) should form part of the rehabilitation process

### **2.13.2. Visual**

The following mitigation measures are recommended from a visual point of view as part of the closure phase:

- All satellite equipment, associated structures and fencing must be removed and recycled as far as possible. Where it is not possible to recycle material, the waste shall be disposed of at a registered landfill site.
- Rehabilitate and restore all impacted footprint areas as per the requirements of the ecological assessment.
- Rehabilitation of all impacted areas must continue until the state of the vegetation meets the requirements of the ecological assessment and is satisfactory to the ECO.

### 2.13.3. Socio economic

The following mitigation measures are recommended from a socio-economic point of view as part of the closure phase:

- Maximise the use of local labour on decommissioning activities;
- Provide adequate notification to staff and other stakeholders of the pending decommissioning;
- Provide staff with references so that they can pursue work with other companies;
- If feasible, assist staff in finding employment at other operations.

## 3. Conclusion and Recommendations

### 3.1. Conclusion

The construction of a ground satellite station in Okahandja area has negative environmental impacts. The EIA study findings showed negative environmental impacts to the environment to varying degrees depending on the nature of the activity and impacts arising thereof. Management and corrective measures were formulated and implementation timelines proposed depending on the gravity of threat to human life and the environment.

The identified impacts, mitigation and monitoring activities, indicators, responsible parties and monitoring frequency are indicated in the EMP. The EMP should form the obligatory conditions upon which the EIA clearance certificates will be issued and non-compliance attracts prosecution. The EMP should be implemented throughout the project lifecycle and an Environmental Management System formulated and implemented based on the EIA study findings. Environmental monitoring and performance evaluations should be conducted and targets for environmental improvement set and monitored throughout the project lifespan. It is also our determination that the findings should be incorporated earlier and sound SHE policies and supportive programmes implemented.

### 3.2. Recommendations

Recommendations were developed to guide the Proponent on the key activities that should be done to effectively manage safety, health and environment:

- Develop SHE policies based on the study findings and use impacts evaluation to formulate the objectives.
- Develop and implement Environmental Management Systems.
- Develop an occupational health and safety plan
- Adhere to the environmental management obligations upon which the EIA clearance certificate will be issued by the METF: DEA.
- The EIA clearance will not exempt the Proponent from obtaining other relevant permits and should do as such:
  - Permit to remove protected trees from the project site.
  - Water connection;
  - Electricity connection to the National Grid;
- Provide relevant training to capacitate the workers with knowledge and skills to manage safety, health and the environment.