ENVIRONMENTAL IMPACT ASSESSMENT

FOR PROPOSED CONSTRUCTION AND OPERATION OF A SERVICE STATION IN AMINUIS SETTLEMENT, OMAHEKE REGION, NAMIBIA

ENVIRONMENTAL MANAGEMENT PLAN

FINAL VERSION

ECC APP NO: 6490

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1. INTRODUCTION

The proposed Aminuis fuel retail facility, truck port and shopping complex Project, located within the Aminuis Settlement of the Omaheke Region, introduces new infrastructure into a rural environment where mobility, access to fuel, and local economic activity are currently limited. As with all developments that interact with land, water, air quality, biodiversity, and community wellbeing, the project requires structured environmental management.

In accordance with the Environmental Management Act (No. 7 of 2007) and the EIA Regulations (GN 30 of 2012), this Environmental Management Plan (EMP) has been prepared to guide the proponent, contractors, service providers, and all site personnel in preventing, minimising, and managing environmental and social impacts throughout the project lifecycle.

The purpose of this EMP is to ensure that project implementation remains environmentally responsible, socially acceptable, and compliant with statutory requirements. It provides a systematic approach for identifying risks, enforcing mitigation measures, and ensuring accountability during site preparation, construction, operation, and—where applicable—future upgrading or decommissioning.

The EMP provides a framework that ensures:

- Avoidance of negative impacts wherever technically and financially feasible.
- Minimisation or reduction of unavoidable impacts to acceptable levels.
- Protection of sensitive biophysical elements, including soil, vegetation, groundwater and cultural resources.
- Safeguarding of community health and safety, particularly given the project's proximity to homesteads, the clinic, schools, and communal movement routes.
- Promotion of socio-economic benefits such as job creation, local procurement, and improved service accessibility.
- Compliance with national legislation, local authority requirements, and best-practice fuel-handling standards.
- Prevention of long-term or irreversible environmental degradation, especially regarding groundwater, soil contamination and fire safety risks.

The EMP is an adaptive management tool, meaning it must be updated when:

- Project design changes;
- New environmental or social risks emerge;
- Monitoring results indicate the need for modified mitigation;
- Regulations or local authority requirements are updated; or
- Stakeholders raise valid concerns requiring improved controls.

Through effective EMP implementation, the Aminuis Service Station aims to deliver essential services and socio-economic benefits to the community while safeguarding environmental quality and public health.

1.1 EMP ADMINISTRATION

There is a strong need to clearly outline the roles and responsibilities of all stakeholders to ensure that the EMP is fully implemented. There is also a need for the proponent to appoint an overall responsible person (project manager) to ensure the successful implementation of the EMP as highlighted below.

Table 2-1: Roles and Responsibilities in EMP Implementation

ROLE	ENVIRONMENTAL RESPONSIBILITIES
Aminuis Service Station Management	Responsible to enforce EMP implementation to contractors
Environmental Control Officer	• Implement, review and update the EMP. • Ensure all reporting and monitoring required under EMP is undertaken, documented and distributed as needed • Conduct environmental site training (tool box talks) and inductions with the support of an environmental consultant. • Conducts environmental audit at work site with the support of environmental consultant. • Close out all non-conformances. • Ensure materials being used on site are environmental friendly and safe.
The Department of Environmental Affairs	• Approve the EMP and any amendments to the EMP. • Approve reports of environmental issues and non-conformances as issued. • Review and approve environmental reports submitted as part of EMP implementation
Environmental	• Conduct and monitor actions required by the EMP if required

ROLE	ENVIRONMENTAL RESPONSIBILITIES
Consultant	• Conduct environmental site training (tool box talks) and inductions if assistance is required • Conducts environmental audit at work site • Ensure materials being used on site are environmental friendly and safe.
Site Technical Team	• Control and monitor actions required by the EMP. • Report all environmental issues to Environmental Control Officer. • Ensure documented procedures are followed and records kept on site. • Ensure any complaints are passed onto the management within 24 hours of receiving the complaint.
Workers	• Follow requirements as directed by site technical. • Report any potential environmental issues to site engineer/project manager, indicating spilt oil, excess waste, excessive dust generation, dirty water running off the site and other possible non-conformances

1.2 EMP Management Actions

The management actions aim to avoid potential impacts where possible. Where impacts cannot be avoided, management actions are outlined in order to minimize the significant impacts.

The tables below outline the specific management actions which need to be undertaken during the construction and operational phase of the development to ensure that the site activities are compliant.

2. CONSTRUCTION AND OPERATIONAL PHASE MANAGEMENT ACTIONS

The table below outlines the management actions to be undertaken during the construction and operation phase of the project to ensure compliance with the EMP.

Table 2-1: Construction and Operation EMP

Impact	Description	Effects	Class	Time frame	Responsibility	Action	Phase
Noise Pollution	Noise generated during site clearance, construction machinery, delivery trucks, and operational activities (fuel pumps, generators).	• Disturbance to workers. • Nuisance to nearby households and businesses. • Temporary displacement of livestock and small wildlife common in Aminuis settlements.	Environmental	Construction & Operation	• Environmental Control Officer (ECO) • Site Manager	• Issue earplugs to staff. • Limit noisy activities to daytime. • Maintain machinery to reduce noise. • Install signage notifying community of working hours.	Construction & Operation
Dust Generation	Dust from site clearing, excavation, aggregate delivery, vehicle movement on gravel areas.	• Respiratory irritation to workers. • Nuisance to surrounding residents and shops. • Reduced visibility for traffic on the	Environmental	Construction & Operation	• ECO • Site Manager	• Water down dusty surfaces during windy periods. • Enforce low-speed limits on unpaved areas.	Construction & Operation

Impact	Description	Effects	Class	Time frame	Responsibility	Action	Phase
		C15 road near the site.				• Provide masks for workers.	
Excavations & Open Trenches	Excavation of fuel tanks, pipe trenches, stormwater channels and foundations.	Safety hazards for workers, pedestrians and livestock (goats/cattle roaming near the site).	Safety	Construction	• ECO • Site Manager	• Secure excavations with temporary fencing. • Install warning tape & signage. • Backfill/cover trenches immediately after work.	Construction
Loss of Vegetation & Soil Disturbance	Clearing of shrubs and grasses typical of the Aminuis rangeland.	• Minor loss of natural vegetation. • Increased soil erosion if unmitigated. • Possible displacement of small fauna (rodents, reptiles).	Environmental	Construction	• ECO • Site Manager	• Limit clearing to the approved footprint. • Avoid unnecessary disturbance beyond plot boundary. • Stabilise exposed soils.	Construction

Impact	Description	Effects	Class	Time frame	Responsibility	Action	Phase
Bushfires	Fire risk from machinery, smoking, welding, and fuel storage.	• Threat to property, rangelands, and adjacent homesteads. • Safety risk to workers and livestock.	Environmental / Safety	Construction & Operation	• ECO • Site Manager	• Maintain fire extinguishers on site. • Designate smoking zones. • Keep vegetation short. • Train staff in fire response.	Construction & Operation
Greenhouse Gas Emissions	Emissions from vehicles, generators, and fuel handling.	Contribution to air pollution and climate change.	Environmental	Construction & Operation	• ECO • Site Manager	• Maintain equipment & reduce idling. • Use energy-efficient lighting. • Consider solar installations for non-fuel energy needs.	Construction & Operation
Waste Generation	General construction waste, packaging, rubble, oily	• Soil and water contamination if unmanaged. • Visual pollution.	Environmental	Construction & Operation	• ECO • Site Manager	• Separate hazardous & general waste.	Construction & Operation

Impact	Description	Effects	Class	Time frame	Responsibility	Action	Phase
	rags, used filters, and domestic waste.					• Use labelled bins. • Dispose waste at Aminuis settlement waste site or Gobabis landfill. • Maintain waste register.	
Soil & Groundwater Contamination	Risk of hydrocarbon leaks from tanks, dispensers, pipelines, or accidental spills.	• Pollution of shallow groundwater used by households and livestock. • Long-term soil contamination.	Environmental	Operation	• Site Manager • Fuel Supplier	• Install leak detection systems. • Conduct regular integrity testing of tanks. • Maintain spill kits & train staff. • Implement stormwater-oil separators.	Operation

Impact	Description	Effects	Class	Time frame	Responsibility	Action	Phase
Stormwater Runoff	Runoff from paved surfaces carrying hydrocarbons.	Potential contamination of local seasonal water drainage pathways.	Environmental	Construction & Operation	• Site Manager • ECO	• Install oil-water separators. • Channel stormwater away from fuel areas. • Regularly clean drains.	Construction & Operation
Air Quality (Fumes & Vapours)	Hydrocarbon vapour release from fuel dispensing & tanker offloading.	• Health risks to workers and customers. • Localised odour nuisance.	Environmental	Operation	• Site Manager • Pump Attendants	• Use vapour recovery systems where applicable. • Ensure proper sealing of tanks. • Train staff in safe fuel handling.	Operation
Noise & Light Impacts on Fauna	Night-time lighting & intermittent noise operations.	Disturbance to local birds and small mammals.	Environmental	Operation	• ECO	• Install downward-facing, shielded lighting. • Avoid unnecessary	Operation

Impact	Description	Effects	Class	Time frame	Responsibility	Action	Phase
						night operations.	
Safety & Health Risks	Fuel handling, slips/falls, burns, traffic movement at the service station.	• Worker injuries. • Customer safety risks.	Health & Safety	Construction & Operation	• ECO • Safety Officer • Site Manager	• Provide PPE (gloves, boots, goggles). • Conduct toolbox talks. • Install safety signage. • Mark pedestrian & vehicle circulation paths.	Construction & Operation
Traffic Increase	Increased vehicle movement, delivery trucks & customer traffic.	• Road congestion near the site. • Increased risk of accidents.	Social / Safety	Construction & Operation	• Site Manager • Local Authority	• Create proper entry/exit points. • Provide clear road signage. • Manage fuel delivery times to avoid peak-hours.	Construction & Operation
Land Use Change	Conversion of undeveloped communal land	• Reduced agricultural use potential.	Social / Terrestrial	Permanent	• ECO • Site Manager	• Maintain neat site landscaping.	Construction & Operation

Impact	Description	Effects	Class	Time frame	Responsibility	Action	Phase
	to commercial use.	• Visual change to settlement character.				• Engage community for visual screening options (trees/shrubs)	
Positive Impacts							
Employment Creation	Job opportunities during construction and operations.	• Increased income for households in Aminuis. • Skills transfer.	Socio-economic	Project lifetime	• • Site Manager	• • Prioritise local hiring (via Constituency Office). • Provide fair labour conditions.	Construction & Operation
Business Linkages	Procurement of goods & services from local SMEs.	• Boost to local economy. • Increased demand for accommodation, catering & transport services.	Socioeconomic	Construction & Operation	• Site Manager	• Source local suppliers where possible. • Support local SMEs with small contracts.	Construction & Operation
Improved Mobility & Access	Availability of fuel in Aminuis reduces long travel distances to	• Reduced transport costs. • Improved emergency	Socioeconomic	Operation	• Site Manager	• Maintain reliable fuel supply & safe service.	Operation

Impact	Description	Effects	Class	Time frame	Responsibility	Action	Phase
	Gobabis/Aranos for refuelling.	service response.					

1.3 ENVIRONMENTAL MONITORING PLAN

Environmental monitoring is a core requirement of the Environmental Management Act (2007) and ensures that all mitigation and management measures included in the EMP are implemented effectively throughout the construction and operational phases of the Aminuis Service Station project. Monitoring provides early detection of emerging risks, ensures legal compliance, and enables adaptive management in response to onsite changes.

All monitoring activities must be coordinated by the Environmental Control Officer (ECO), with support from the Site Manager, relevant contractors, and any specialist service providers (waste contractors, fuel suppliers, etc.). Records must be documented, stored, and included in internal and external compliance reporting.

1.3.1 Monitoring Plan Requirements Before Construction

Before construction begins, the proponent and contractors must prepare a site-specific Environmental Monitoring Plan indicating:

1.3.1.1 Site Layout and Facility Monitoring

- Final placement of construction camp, ablution units, and temporary storage areas.
- Mapping of laydown areas, fuel storage zones and waste holding areas.
- Confirmation that all infrastructure fits within the approved footprint.

1.3.1.2 Waste Management Monitoring

- Location and suitability of waste storage points.
- Availability of labelled containers for general waste, recyclables, and hazardous waste.
- Appointment and verification of licensed waste handlers.

1.3.1.3 Dust and Noise Monitoring Setup

- Dust management techniques (watering schedule, speed limits).
- Identification of noise-sensitive receptors, particularly:
    - nearby households,
    - the clinic,
    - schools,
    - livestock kraals.

1.3.1.4 Traffic and Access Monitoring

- Approved entry/exit routes.

- Safety signage and speed-control measures.
- Parking and loading/offloading zones.

1.3.1.5 Spill Prevention Measures

- Availability and placement of spill kits.
- Fuel handling procedures and emergency response instructions.

1.3.1.6 Climate-Responsive Scheduling

- Planning around:
    - high-wind days (dust control),
    - rainy season (stormwater management),
    - livestock movement cycles.

The plan must be endorsed by the ECO and submitted to the Competent Authority where required.

1.3.2 Monitoring During Construction and Operation

Monitoring must follow the EIA findings, EMP commitments, licence conditions, and Aminuis-specific environmental sensitivities. Below is the detailed monitoring scope:

1.3.2.1 Vegetation and Site Clearance Monitoring

It is important to prevent unnecessary clearing and protect ecological features of the Aminuis settlement environment.

The ECO must verify that:

- Only approved areas are cleared.
- No protected trees or important shade trees near homesteads are removed.
- Clearing is limited to fuel tank area, building footprint, drains and parking space.
- Topsoil is stockpiled for rehabilitation.

1.3.2.2 Rehabilitation Monitoring

After construction activities (and during operation where needed), the ECO must confirm that:

- Disturbed areas (temporary storage zones, offloading points, trenches) are reshaped and stabilised.
- Exposed soils are compacted or re-vegetated where feasible.
- Erosion channels or bare patches are addressed immediately.

1.3.2.3 Stormwater & Surface Runoff Monitoring

Particularly important in Aminuis due to sandy soils and occasional high-intensity rainfall.

Monitoring must ensure that:

- No blocked drains or artificial ponding occurs.
- Fuel areas drain through oil-water separators.
- Stormwater channels do not direct runoff into homesteads, kraals or access roads.
- After major rainfall, the ECO inspects the entire site for erosion, siltation, or hydrocarbon sheen.

1.3.2.4 Groundwater and Soil Pollution Control

Monitoring includes:

- Tank and pipeline integrity inspections.
- Checking for stains or leaks near dispensers, tanker offloading areas, and generator bays.
- Testing oil-water separators and keeping logs.
- Recording and reporting spills (including volume, cause, corrective action).

1.3.2.5 Compliance with Approved Site Layout

Weekly site inspections must verify that:

- All construction and operational activities remain within the authorised footprint.
- No unauthorised expansion or new access tracks are created.
- Any deviations are corrected immediately and reported.

1.3.2.6 Spill Prevention & Emergency Readiness

Monitoring includes:

- Ensuring spill kits are always stocked and accessible.
- Staff are trained in spill response.
- All spills — even minor ones — are cleaned, recorded, and disposed of appropriately.
- Contaminated soils are removed to an approved hazardous waste facility.

1.3.2.7 Solid Waste Management Monitoring

The ECO must confirm that:

- Waste bins are secured and labelled.
- No waste is burned, buried, or dumped around Aminuis.
- Hazardous waste (oily rags, filters, soil) is stored on an impermeable surface.
- Waste manifests and disposal receipts are kept on file.

- Monthly waste reports are produced.

1.3.2.8 Dust Monitoring

Dust monitoring will include:

- Visual inspections (especially during windy conditions).
- Checking that water bowser use is consistent.
- Ensuring speed limits (<20 km/h) are adhered to.
- Monitoring complaints from residents, schools, or businesses.

1.3.2.9 Noise Monitoring

- Noise during construction to remain within daytime hours.
- Weekly checks to ensure generators (if used) have silencers.
- Monitoring community feedback or complaints.
- Adjusting operations if nearby households or schools are heavily affected.

1.3.2.10 Traffic & Access Monitoring

- Monitoring safe movement of construction vehicles and fuel tankers.
- Ensuring signage remains visible.
- Checking that entry/exit routes remain unobstructed.
- Verifying that fuel delivery times avoid school traffic peaks.

1.3.2.11 Health & Safety Monitoring

- Weekly toolbox meetings.
- PPE inspections.
- Fire extinguisher checks.
- Incident and near-miss reporting.

1.3.2.12 Reporting Requirements

- Weekly ECO reports during construction.
- Monthly environmental compliance reports during operation.
- Annual environmental audit to be submitted to the Competent Authority.
- Immediate reporting of serious incidents (spills, fires, structural failures).

2 CONCLUSION AND RECOMMENDATIONS

The Environmental Impact Assessment (EIA) for the proposed Aminuis Service Station development has been conducted in accordance with the Environmental Management Act (EMA) No. 7 of 2007 and the EIA Regulations (2012). All relevant sectoral laws—including those governing water resources, waste management, public health, occupational safety, fuel storage, land use, and heritage protection—were taken into account during the assessment.

The study evaluated the existing biophysical and socio-economic environment of Aminuis and assessed the potential impacts arising from site clearance, construction of fuel infrastructure, operational fuel handling, increased traffic movement, and service-related commercial activities.

2.1 KEY FINDINGS OF THE ASSESSMENT

- The proposed development will take place within an already transformed settlement landscape, where existing facilities (clinic, police station, traditional authority offices, shops, and residential areas) already define Aminuis as a rural service hub.
- The footprint of the service station is small and confined to a designated plot within the settlement boundary, with no expected displacement of households or community facilities.
- All identified negative impacts—dust, noise, waste generation, soil disturbance, risks of hydrocarbon spills, increased traffic, and minor vegetation clearing—are site-specific**,** short- to medium-term**,** and can be effectively mitigated.
- No protected species, heritage sites, or ecologically sensitive zones were found within the project footprint.
- Stakeholder engagement with the Aminuis Settlement Office**,** local councillor**,** local businesses, and community members revealed strong support for the project, particularly due to long-standing fuel shortages and high travel costs for accessing fuel in distant towns.

2.1.1 Positive Impacts Identified

- Improved access to fuel for residents, farmers, clinics, schools, police services, and emergency vehicles.
- Reduction of long-distance fuel trips to Gobabis, Leonardville, or other towns.
- Creation of temporary jobs during construction and permanent jobs during operation.

- Stimulated local economy through procurement, SME opportunities, and increased commercial activity.
- Strengthening of the settlement's role as a service node in the Aminuis Constituency.

2.1.2 Negative Impacts Identified

- Construction-related dust and noise.
- Localized vegetation loss during site clearing.
- Potential contamination of soil and groundwater from fuel leaks if poorly managed.
- Increase in traffic risks within and around the settlement.
- Minor visual and land-use change as the area transitions from open land to a commercial facility.
- General health and safety risks during construction and operation.
- All negative impacts can be reduced to low or negligible significance through measures outlined in the EMP—particularly spill prevention, stormwater management, waste handling, traffic control, fire safety, and rehabilitation of disturbed areas.

2.2 FINAL RECOMMENDATION

Based on the findings of the EIA, it is concluded that:

- The proposed Aminuis Service Station does not pose significant or irreversible environmental risks when the EMP is properly implemented.
- There are no environmental, ecological, heritage, or socio-economic fatal flaws that would prevent the project from proceeding.
- The project is highly beneficial to the community, aligns with local development priorities, and strengthens essential service delivery in Aminuis.
- With strict adherence to the EMP, including regular monitoring by the Environmental Control Officer (ECO), the project can operate within acceptable environmental standards.

Therefore, it is recommended that:

1. An Environmental Clearance Certificate (ECC) be issued for the project.
2. The proponent implements all mitigation measures and monitoring actions outlined in the EMP.
3. The proponent maintains close coordination with the Aminuis Settlement Office and community leaders during construction and operations.

4. Regular environmental compliance monitoring reports be submitted to the Competent Authority.
5. Any spills, incidents, or chance heritage finds be reported immediately and managed according to national guidelines.

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APPENDICES

Appendix A: Public Consultation Documents

1. Background Information Document
2. Newspaper Adverts
3. Site Notice
4. Meeting Attendance Register
5. Meeting Presentation
6. Questionnaires

Appendix B: Site Information

1. EPL Ownership
2. Locality Map

Appendix C: Consultancy Team resumes