

ENVIRONMENTAL MANAGEMENT PLAN (EMP)

**FOR THE PROPOSED OKANDJIRA LANDFILL
AT OKANDJIRA SETTLEMENT,
OMATAKO CONSTITUENCY,
OTJOZONDJUPA REGION,
NAMIBIA**

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LIST OF ACRONYMS

Acronym	Meaning
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ER	Employer's Representative
ERP	Emergency Response Plan
ESIA	Environmental and Social Impact Assessment
GN	Government Notice
I&APs	Interested and Affected Parties
MAWLR	Ministry of Agriculture, Water and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
MOHSS	Ministry of Health and Social Services
MOLEC	Ministry of Labour, Employment and Social Security
NAMWATER	Namibia Water Corporation
NAMPOL	Namibian Police
NDC	Nationally Determined Contribution
NDP	National Development Plan
OHS	Occupational Health and Safety
ORC	Otjozondjupa Regional Council
OTC	Otjozondjupa Regional Council (Project Proponent)
PPE	Personal Protective Equipment
RA	Roads Authority

1. INTRODUCTION

1.1. Background

The Otjozondjupa Regional Council (hereafter referred to as *the Proponent*) proposes the development and operation of the Okandjira Landfill to provide an environmentally sound and sustainable waste management solution for the Okandjira Settlement and surrounding areas.

This Environmental Management Plan (EMP) has been prepared as part of the Environmental Impact Assessment (EIA) process and serves as a practical framework for managing, mitigating, monitoring, and reporting environmental and socio-economic impacts associated with the project. The EMP has been developed in accordance with the Environmental Management Act, 2007 (Act No. 7 of 2007) and the Environmental Impact Assessment Regulations, 2012.

The EMP applies to all phases of the project lifecycle during Planning, Construction, Operation, and recommends way forward before Closure, and Post-closure for monitoring and rehabilitation.

This EMP is a legally binding document and forms part of the Environmental Clearance Certificate (ECC) issued by the competent authority. Compliance with the EMP is mandatory for the Proponent, appointed contractors, and landfill operators. Failure to comply may result in enforcement action in terms of the Environmental Management Act.

1.2. Location of the Project

The proposed Okandjira Landfill is located within Okandjira Settlement, under the jurisdiction of the Omatako Constituency in the Otjozondjupa Region, Namibia. The site is situated on communal land allocated by the Kambazembi Royal Traditional Authority specifically for waste disposal purposes.

The location was selected based on its suitability for landfill development, accessibility from the settlement, and its capacity to serve Okandjira and nearby communities while minimising potential impacts on residential areas, sensitive environmental features, and existing land uses.

1.3. Description of the Proposed Site

The land allocated to the proposed landfill covers an area of 1.8 hectares, however there is a drainage line on the Southern Side within an area of 0.4 hectares, which may not be enclosed, and which will be excluded from the project development. The surrounding area is characterised by open communal land used primarily for grazing, with no permanent infrastructure located directly within the proposed footprint.

The site will be developed to function as a controlled landfill, incorporating basic environmental protection measures such as defined waste disposal cells, access control, and operational management procedures. The design and operation of the landfill will aim to minimise impacts on soil, groundwater, surface water, air quality, biodiversity, and public health, in accordance with national environmental standards and best practice.

1.4. **Objectives of the Environmental Management Plan**

The objectives of this Environmental Management Plan are to:

- Ensure compliance with all applicable environmental legislation, regulations, permit conditions, and approval requirements.
- Prevent, minimise, and mitigate adverse environmental and socio-economic impacts associated with the landfill during all project phases.
- Protect soil resources, groundwater, surface water, air quality, biodiversity, and public health.
- Promote safe working conditions and occupational health and safety for all personnel involved in the project.
- Define clear roles, responsibilities, monitoring, and reporting requirements for effective environmental management.
- Facilitate effective stakeholder engagement and promote socio-economic benefits for the local community; and
- To advise that there should be a separate management plan prior to closure, to facilitate environmentally acceptable closure and rehabilitation practices.

2. INSTITUTIONAL ARRANGEMENTS AND RESPONSIBILITIES

The implementation of the Environmental Management Plan (EMP) for the proposed Okandjira Landfill is the responsibility of the Otjozondjupa Regional Council (OTC), as the project proponent. Effective implementation requires collaboration between the proponent, contractors, operators, and relevant government authorities to ensure sound environmental management throughout all project phases.

The institutional framework for the EMP includes the Project Proponent, Employer's Representative (ER), Environmental Control Officer (ECO), Contractors, Landfill Operator, Sub-contractors, Government Ministries, and the Environmental Assessment Practitioner (EAP). Their respective roles and responsibilities are outlined below.

2.1. Project Proponent - Otjozondjupa Regional Council

The Otjozondjupa Regional Council (OTC) holds ultimate responsibility for the implementation of the EMP and overall environmental compliance. Key responsibilities include:

- Ensuring the EMP is implemented throughout the project lifecycle (construction, operation, closure, and post-closure).
- Appointing competent contractors, sub-contractors, and landfill operators.
- Appointing an Employer's Representative (ER) and an Environmental Control Officer (ECO).
- Ensuring the availability of adequate financial and human resources for environmental management.
- Ensuring compliance with the Environmental Clearance Certificate (ECC) conditions and statutory requirements; and
- Overseeing stakeholder engagement and public liaison regarding environmental matters.
- Retains ultimate accountability for EMP implementation and compliance.

2.2. Employer's Representative (ER)

The ER is appointed by the Proponent to manage outsourced contracts during the construction, operation, maintenance, and decommissioning phases. The ER may be a competent technical staff member already employed by the Council. Key responsibilities include:

- Supervising all contractors and project activities on behalf of the Proponent.

- Appointing a competent Environmental Control Officer (ECO) to oversee the EMP implementation.
- Ensuring environmental compliance through monitoring, reporting, and enforcement; and
- Maintaining communication with contractors, sub-contractors, authorities, and Interested and Affected Parties (I&APs).
- If an ECO is not appointed, the ER assumes the ECO's responsibilities.

2.3. **Environmental Control Officer (ECO)**

The ECO acts as the Proponent's on-site representative and is responsible for ensuring that all environmental management measures are implemented effectively. The ECO's responsibilities include:

- Monitoring and auditing compliance with the EMP.
- Conducting regular site inspections during construction and operation.
- Advising the Proponent, ER, and contractors on corrective and preventative actions.
- Maintaining records of environmental monitoring, inspections, incidents, and complaints.
- Liaising with authorities and I&APs regarding environmental matters.
- Assisting in ensuring that necessary permits and authorizations are obtained.
- Verifying that all personnel receive environmental awareness training, and recommending remedial action if non-compliance occurs.
- Advising on the removal of non-compliant personnel or equipment.
- Recommending updates to the EMP as needed; and
- Supporting the Proponent in enforcing environmental penalties or fines for non-compliance.

2.4. **Consultant (Planning and Design)**

The Planning and Design Consultant is responsible for ensuring that the landfill is planned and engineered in a manner that prevents long-term environmental risks and aligns with the Environmental and Social Assessment findings. Key responsibilities include:

- Ensuring that the landfill design complies with applicable environmental legislation, standards, and permit conditions.
- Integrating all mitigation measures identified in the ESIA and EMP into detailed engineering designs and technical specifications.
- Ensuring environmental protection measures are clearly reflected in tender documentation and construction drawings.

2.5. **Contractor (Construction Phase)**

Construction contractors are responsible for the implementation of all construction-related mitigation measures outlined in the EMP. Key responsibilities include:

- Ensuring compliance with EMP requirements and site rules.
- Providing environmental and occupational health and safety (OHS) training to all personnel.
- Providing and enforcing the use of appropriate personal protective equipment (PPE).
- Reporting environmental incidents, spills, and non-compliance to the ECO.
- Maintaining records of training, inspections, and incidents.
- Including EMP requirements in all sub-contracts to legally bind sub-contractors; and
- Conducting environmental induction and awareness sessions for all new personnel in the language they understand.

2.6. **Landfill Operator (Operational Phase)**

The landfill operator is responsible for the daily implementation of the EMP during the operational, closure, and post-closure phases. Responsibilities include:

- Implementing all operational mitigation and monitoring measures.
- Ensuring proper waste acceptance, screening.
- Prevent unauthorised access and scavenging
- Reporting environmental incidents and public complaints to the Proponent and ECO.
- Conducting staff training on environmental management practices as needed
- Implement monitoring and nuisance control measures;
- Maintain health and safety standards;

2.7. **Sub-contractors**

Sub-contractors appointed at different project stages are required to comply with the EMP. Responsibilities include:

- Executing all activities in compliance with the EMP.
- Ensuring all personnel receive adequate environmental awareness training; and
- Maintaining records of trainings, inspections, and environmental compliance.

The Proponent and main contractors are responsible for ensuring that sub-contractors always adhere to the EMP.

2.8. **Government Authorities**

The following government bodies play a role in monitoring and supporting the project:

- Ministry of Environment, Forestry and Tourism (MEFT): Oversight of environmental compliance and enforcement.
- Ministry of Health and Social Services (MoHSS): local health practitioners to inspect and ensure public compliance and enforcement.
- Other relevant ministries, providing technical support, supervision, and expertise where necessary; and
- Pollution Control and Waste Management Authorities: Oversight of pollution control and waste management, as outlined in relevant legislation.
- Community members to report irregularities

2.9. **Environmental Assessment Practitioner (EAP)**

The EAP is responsible for:

- Assessment and submitting environmental reports to MEFT.
- Providing additional information to I&APs and authorities as required.
- Updating the EMP based on EIA recommendations or changes in legislation or project scope during the appointed period.

3. LEGAL REQUIREMENTS

As part of the implementation of this Environmental Management Plan (EMP, the Proponent shall comply with all applicable national legislation, policies, and regulatory frameworks governing environmental protection, waste management, public health, occupational safety, land use, and natural resource protection in Namibia.

Compliance with these legal instruments is mandatory throughout all phases of the Okandjira Landfill project, including planning, construction, operation, closure, and post-closure. The legislation listed below provides the statutory basis for environmental authorisation, operational controls, monitoring requirements, and enforcement mechanisms relevant to the project.

Table 1: Applicable National Laws Relevant to the Okandjira Landfill Project

THEME	LEGISLATIVE / POLICY INSTRUMENT	KEY PROVISIONS	EMP COMPLIANCE REQUIREMENTS FOR OKANDJIRA LANDFILL
Constitutional & Environmental Governance	Namibian Constitution	Article 95(l): State shall promote ecosystem integrity, sustainable use of natural resources, and environmental protection for present and future generations.	The EMP must ensure sustainable landfill design, pollution prevention, groundwater protection, and rehabilitation measures aligned with constitutional environmental protection principles.
	Environmental Management Act 7 of 2007	Section 27: Listed activities require Environmental Clearance Certificate (ECC). Section 3: Environmental principles. Sections 2(b-c): Public participation.	Maintain valid ECC at all times. Implement all ECC conditions. Ensure environmental monitoring, reporting, and adherence to approved EMP. Maintain public consultation records and grievance mechanism.
	Environmental Impact Assessment Regulations (GN 30 of 2012)	Scoping, EIA reporting, alternatives assessment, and public consultation requirements.	Ensure implementation of approved mitigation measures. Maintain environmental compliance register. Submit required reports to Environmental Commissioner.
Solid Waste Management	Pollution Control and Waste Management Bill (Pending)	Integrated waste management, licensing of disposal facilities, hazardous waste control.	Design and operate landfill according to best practice standards (engineered cells, access control, waste classification, hazardous waste exclusion unless licensed).

	National Solid Waste Management Strategy (2018-2028)	Waste hierarchy; controlled landfill development; environmental protection.	Promote waste separation, recycling initiatives, and controlled disposal. Prohibit open dumping and uncontrolled burning.
	Hazardous Substances Ordinance No. 14 of 1974	Controls manufacture, storage, handling and disposal of hazardous substances.	Proper storage of fuels and hydrocarbons during construction. Spill prevention and response plan required. Hazardous waste to be stored and disposed of at licensed facilities.
Public Health & Occupational Safety	Public Health Act 36 of 1919	Section 119: Prohibits nuisances injurious to health.	Implement odour control, litter management, vector control, dust suppression, and stormwater drainage. Prevent groundwater contamination affecting communities.
	Labour Act 11 of 2007	Working conditions and occupational health and safety provisions.	Ensure safe working environment, training, PPE provision, safe machinery operation, and reporting of workplace incidents.
	Health and Safety Regulations (GN 156 of 1997)	Occupational exposure standards and workplace safety requirements.	Provide sanitation facilities, first aid, fire-fighting equipment, and enforce PPE usage on site.
Water Resources Protection	Water Act 54 of 1956	Section 21: Effluent disposal permit required. Section 23: Prohibits water pollution.	Install leachate management system. Prevent discharge of contaminated water. Conduct groundwater monitoring. Obtain necessary permits if discharge occurs.
	Water Resources Management Act 11 of 2013	Sustainable water resource management and groundwater protection.	Align monitoring and groundwater protection measures with national water resource standards once fully operational.
Air Quality & Climate	Atmospheric Pollution Prevention Ordinance 11 of 1976	Dust, smoke and noxious gas control.	Implement dust suppression (water spraying, speed limits). Prohibit open burning. Monitor windblown litter.
	National Climate Change Policy (2011) & Namibia NDC	Climate adaptation and mitigation obligations.	Incorporate stormwater control, fire prevention, methane management, and climate-resilient cell design.
Land Use & Governance	Communal Land Reform Act 5 of 2002	Regulates communal land allocation and land use rights.	Maintain proof of land allocation approval from Traditional Authority and Communal Land Board. Ensure land use remains consistent with approved purpose.

	Local Authorities Act 23 of 1992	Waste service provision and by-law enforcement.	Upon establishment of local authority jurisdiction, ensure landfill complies with municipal waste management by-laws.
	Regional Councils Act 22 of 1992	Regional planning and infrastructure oversight.	Coordinate with Otjozondjupa Regional Council on compliance reporting and infrastructure planning.
Biodiversity & Vegetation	Forest Act 12 of 2001	Protection of listed tree species; permits for vegetation removal; 100m watercourse buffer.	Obtain vegetation clearance permits if required. Avoid removal of protected species. Maintain buffer zones around drainage lines.
	Nature Conservation Ordinance 4 of 1975	Protection of indigenous fauna and flora.	Prevent attraction of wildlife through proper waste covering. Avoid disturbance to sensitive species.
Heritage Resources	National Heritage Act 27 of 2004	Section 48: Permit required for disturbance of heritage resources; chance finds procedure.	Implement chance finds procedure during construction. Stop work and notify National Heritage Council if graves or artefacts are discovered.
Traffic & Infrastructure	Roads Ordinance 17 of 1972	Road reserve protection and access control.	Maintain approved access points. Prevent damage to public roads from heavy vehicles. Implement traffic management plan.
Disaster Risk & Emergency Management	Disaster Risk Management Act 10 of 2012	Disaster risk identification, mitigation and emergency preparedness.	Develop and implement Emergency Response Plan (ERP) covering fires, flooding, hazardous spills, and extreme weather events. Coordinate with regional disaster authorities.
Development Planning Framework	Vision 2030 & National Development Plans (NDPs)	Sustainable development, infrastructure expansion, environmental protection.	Align landfill operations with national service delivery and sustainability objectives. Promote environmentally responsible waste management practices.
Environmental Health & Sanitation Governance	Environmental Health Regulations / Local Waste By-laws	Sanitation, waste handling, nuisance control.	Implement hygiene protocols, pest control, daily waste covering, and community complaint mechanism. Ensure compliance once local by-laws are enacted.

4. IMPLEMENTATION OF THE ENVIRONMENTAL MANAGEMENT PLAN

The Otjozondjupa Regional Council, as the Proponent, shall play a central role in the implementation of this Environmental Management Plan (EMP). The EMP provides a framework through which environmental impacts of the Okandjira Landfill shall be managed, mitigated, and monitored.

The effective implementation of this EMP requires the involvement of all parties, including the Proponent, Environmental Control Officer (ECO), contractors, landfill operators, and relevant authorities. Each party shall perform its respective roles and responsibilities in accordance with the provisions of this EMP and applicable national legislation.

4.1. Management Plan - Planning and Design Phase

To address the most critical identified risk (groundwater contamination), engineering design requirements for the composite liner system, leachate management system, and stormwater management system must be carefully developed and implemented. The planning and design phase is crucial because it addresses and mitigates all risks related to the project.

Table 2: Management Plan - Planning and Design Phase

Environmental Impacts	Mitigation Measures	Roles and Responsibilities (Implementation)	Roles and Responsibilities (Monitoring)
Inappropriate site layout and infrastructure design	Design landfill cells, access roads, and support infrastructures away from drainage lines and sensitive areas	Design Consultant	Proponent / ECO (design approval review)
Risk to groundwater resources	Incorporate engineered liner systems, leachate collection, and stormwater diversion into landfill design	Design Consultant	Proponent / ECO
Natural disasters (flooding, extreme rainfall)	Design stormwater systems and landfill cells to accommodate extreme rainfall events and flooding	Design Consultant	Proponent / ECO
Risk to hydrology	Exclude area with drainage lines, and design stormwater diversion from the landfill	Design Consultant	Proponent / ECO
Visual intrusion	Design landfill layout to minimise visual impacts and incorporate buffer zones	Design Consultant	Proponent
Occupational health and safety risks	Include secure access control, fencing, controlled entry points.	Design Consultant	Proponent

4.2. Management Plan - Construction Phase

During the construction phase, proper site preparation and vegetation clearance must be undertaken by limiting clearing activities to the approved project footprint and Effective waste management practices must be applied.

Table 3: Proposed Mitigation Measures - Construction Phase

Environmental Impacts	Mitigation Measures	Roles and Responsibilities (Implementation)	Roles and Responsibilities (Monitoring)
Clearing of vegetation leading to habitat loss	Limit vegetation clearance to approved footprint; no unnecessary clearing, animals should not be killed	Construction Contractor	Proponent / ECO / MEFT
Soil disturbance, compaction, and erosion	Restrict heavy machinery to designated areas; implement erosion control measures	Construction Contractor	Proponent / ECO
Pollution of groundwater and surface water	Prevent fuel, oil, and waste spillages; store hazardous materials in bunded areas	Construction Contractor	Proponent / MAWLR / MEFT
Waste generation during construction	Collect and dispose of all waste at designated disposal facilities; no littering	Construction Contractor	Proponent / ORC
Worker sanitation	Provide minimum 1 toilet per 25 workers; maintain hygienic conditions	Construction Contractor	ORC
Traffic congestion and road safety risks	Install warning signage; avoid peak traffic hours; maintain access roads	Construction Contractor	Proponent / RA / ORC
Noise pollution	Restrict construction activities to daylight working hours	Construction Contractor	ORC
Visual intrusion from construction waste	Remove rubble and waste promptly; maintain orderly site	Construction Contractor	Proponent / MEFT
Dust and air pollution	Water exposed surfaces; cover construction vehicles and stockpiles	Construction Contractor	MEFT / MOHSS
Health risks (HIV/AIDS, malaria)	Conduct health awareness and induction training	Construction Contractor	MOHSS / ORC
Heritage chance finds	Stop work immediately; notify National Heritage Council; secure site	Construction Contractor	ORC / ECO
Occupational health & safety risks	PPE mandatory; toolbox talks; appoint safety officer; first aid available	Construction Contractor	ORC / ECO
Social conflict over employment	Transparent recruitment process; prioritise local labour	ORC / Contractor	ORC

Notes

- Site Preparation and Vegetation Clearance-Limit clearing to the approved footprint. Avoid sensitive habitats and communal grazing areas, and Implement erosion and stormwater control measures.
- Dust and Air Quality Control-Water exposed surfaces and access roads as required. Cover or stabilise stockpiles.
- Waste Management-Provide clearly marked waste receptacles to separate hazardous and general waste, and Dispose of waste at approved facilities.
- Soil and Water Protection-Store fuels and chemicals in bunded areas and Maintain spill kits on site. Prevent sedimentation of nearby drainage areas.
- Noise Control-Restrict high-noise activities to daytime hours, and maintain equipment on site to minimise excessive noise.

4.3. Management Plan - Operational Phase

Operational phase controls are critical, as this phase carries the highest environmental risk profile.

Table 4: Proposed Mitigation Measures - Operational Phase

Environmental Impacts	Mitigation Measures	Roles and Responsibilities (Implementation)	Roles and Responsibilities (Monitoring)
Groundwater contamination from leachate	Maintain liner systems and leachate collection infrastructure; routine inspections	Landfill Operator	Proponent / MAWLR/ NAMWATER
Surface water contamination	Maintain stormwater diversion channels; inspect after rainfall events	Landfill Operator	ECO
Waste Sorting	Screen incoming waste to only accept general waste; maintain waste register; reject prohibited waste	Landfill Operator	ORC/ MEFT/ MOHSS
Odour nuisance	Apply daily-weekly soil cover, compact waste; limit exposed waste	Landfill Operator	ECO
Pest, vector, and bird attraction	Maintain good housekeeping; implement pest control measures	Landfill Operator	MOHSS / ORC
Fire hazard	Prohibit open burning; maintain firebreak; ensure firefighting measures	Landfill Operator	ORC / Operator
Traffic congestion	Enforce traffic management rules	Landfill Operator	ORC / NAMPOL

Litter and visual intrusion	Install litter fencing; conduct clean-up sessions; maintain boundary wall	Operator	ORC
Landfill gas accumulation	Install passive gas vents; monitor methane levels	Landfill Operator	ORC / ECO
Scavenging and public health risks	Secure fencing; locked gate; security personnel; awareness campaigns	ORC / Operator	ECO
Occupational injuries	Enforce PPE; provide supervision; regular safety training	Operator	ORC
Employment and business opportunities	Give preference employment to local community members especially non-skilled labour, create opportunity for local business to recycle materials for income generation and waste value recovery.	Proponent	MOLEC
Waste-related pollution of soil and water	Ensure waste containment; dispose of oils and chemicals at approved facilities	Landfill Operator	MAWLR / MEFT/NAMWATER
Community complaints	Maintain grievance register; respond within 7 days; include in bi-annual reports	Operator / ORC	ECO
Institutional capacity failure	Annual environmental audit; continuous training; budget review	ORC	Independent Auditor
Institutional planning gaps	Secure operational budget; define staffing structure; prepare closure plan	ORC	ORC / ECO

Notes

- Access Control and Site Security - The landfill shall be fenced and access-controlled, and controlled operating hours shall be enforced. Special attention shall be given to preventing informal scavenging, particularly by vulnerable groups such as children. Daily or weekly waste covering when necessary and strict security shall be enforced to reduce public health risks.
- Waste Acceptance and Screening - Only approved non-hazardous waste shall be accepted. Incoming waste loads shall be inspected and recorded and Daily waste acceptance logs shall be maintained. Hazardous, medical, or prohibited waste shall be rejected and documented. Waste minimisation principles (reduce, reuse, recycle) shall be promoted. Where feasible, and subject to approval by the Otjozondjupa Regional Council, structured recycling initiatives involving local businesses may be supported, provided that health, safety, and environmental controls are maintained.
- Waste Placement and Compaction - Waste shall be deposited in designated cells and compacted regularly. Daily or weekly cover shall be applied to minimise odour, litter, pests, and fire risk.

- Leachate and Groundwater Protection - To protect groundwater resources the landfill shall include compacted layers and engineered protective barriers. A leachate collection system shall be installed, and Leachate shall be channelled to a lined evaporation pond. Residual hazardous material shall be disposed of at an approved hazardous waste facility.
- Quarterly monitoring shall be conducted to detect any potential contamination. Monitoring results shall be reported to the competent authority. Baseline information has been obtained from existing studies, including prior groundwater assessments conducted in the Ovitoto and Okandjira areas in collaboration with the Namibia University of Science and Technology. Ongoing operational monitoring will serve as verification of environmental protection measures.
- Nuisance Control-Measures including sand layer cover and compacting shall be implemented to control, Dust, Odour, Wind-blown litter, Pests and birds, Noise. Good housekeeping practices shall be maintained at all times.
- Health and Safety Management-All personnel shall comply with occupational health and safety requirements, and PPE shall be mandatory. Fire prevention measures shall be implemented and Emergency response procedures shall be maintained and tested.

4.4. **Closure and Post-Closure Management**

Upon reaching its design capacity, the landfill shall be closed in accordance with an approved Closure Plan. The objective is to restore environmental stability and enable potential beneficial after-use, subject to regulatory approval and safety considerations. The final land use shall be determined in consultation with authorities and the community. Closure measures shall include Conducting a closure assessment and install final capping layers. Post-closure monitoring shall continue for a period to be determined by MEFT.

5. ENVIRONMENTAL MANAGEMENT REQUIREMENTS

This chapter sets out the Environmental Management Requirements for the Okandjira Landfill project. It provides an integrated framework of mitigation measures, operational controls, monitoring protocols, reporting obligations, and enforcement mechanisms applicable during the construction, operational, closure, and post-closure phases.

These requirements are legally binding in terms of the Environmental Management Act, 2007 and its 2012 Regulations and form part of the conditions of the Environmental Clearance Certificate (ECC) issued by the Ministry of Environment, Forestry and Tourism (MEFT).

5.1. Environmental Awareness and Training

All personnel, contractors, and sub-contractors shall undergo EMP induction training before commencing work. Refresher training shall be conducted periodically. Training shall include:

- Overview of the EMP and ECC conditions;
- Waste management and recycling procedures;
- Groundwater protection and spill response;
- Dust, odour, and noise control;
- Health and safety requirements (PPE, emergency procedures);
- Incident and complaint reporting procedures.

The ECO and Contractor shall maintain detailed training records including attendance registers, dates, training content, and trainer details.

5.2. Record-Keeping and Documentation

The following records shall be maintained:

- EMP training records;
- Waste acceptance logs;
- Inspection and audit reports, and Monitoring results;
- Incident and complaint registers, and corrective action reports;
- Maintenance and emergency response records;
- Correspondence with authorities and Interested and Affected Parties (I&APs).

All records shall be retained for a minimum of two (2) years after project completion or longer if required by the competent authority.

5.3. **Environmental Reporting**

The Proponent shall:

- Compile monthly monitoring reports during construction, and quarterly during operation;
- Document incidents and corrective actions;
- Submit bi-annual compliance reports to MEFT as required;
- Prepare a project completion environmental performance report;
- Make relevant reports available to stakeholders upon request.

5.4. **Non-Compliance, Enforcement, and Corrective Action**

- The EMP shall become legally binding upon approval of project and issue of ECC by MEFT.
- All non-compliance incidents shall be recorded in a dedicated register.
- Immediate corrective actions shall be implemented.
- Repeated or serious non-compliance may result in contractual penalties or regulatory enforcement in accordance with the Environmental Management Act, Act, 7 of 2007.
- Continuous supervision shall ensure adherence to EMP specifications.

5.5. **Review and Continuous Improvement**

This EMP shall be reviewed periodically to ensure effectiveness and legal compliance. Updates may be made to reflect Operational change and monitoring results. Any significant amendments shall be submitted to MEFT for approval where required by the ECC.

6. CONCLUSION

The proposed Okandjira Landfill Project represents a critical infrastructure initiative aimed at improving waste management services within Okandjira Settlement and the surrounding areas. Through the implementation of this Environmental Management Plan (EMP), the Otjozondjupa Regional Council demonstrates its commitment to be environmentally responsible by practicing, sustainable waste management and protect natural resources and public health.

This EMP provides a structured and legally enforceable framework for the prevention, mitigation, monitoring, and management of environmental and socio-economic impacts throughout the planning, construction, operational, closure, and post-closure phases of the landfill. Particular emphasis has been placed on groundwater protection, surface water management, waste screening and control, nuisance management, occupational health and safety, and stakeholder engagement. Successful implementation of this EMP will depend on:

- Strong institutional coordination and clear allocation of responsibilities;
- Adequate financial and human resource allocation;
- Continuous monitoring, auditing, and reporting;
- Ongoing environmental awareness and capacity building; and
- Transparent communication with authorities and the local community.

The EMP forms an integral part of the Environmental Clearance Certificate (ECC) and is binding on the Proponent, contractors, landfill operators, and all associated parties. Compliance with its provisions will ensure that the Okandjira Landfill operates in accordance with national environmental legislation and best practice standards, thereby minimising environmental risks and promoting long-term sustainability.

In conclusion, provided that all mitigation measures and monitoring requirements outlined in this EMP are effectively implemented and enforced, the proposed Okandjira Landfill Project can be developed and operated in an environmentally acceptable and socially responsible manner, contributing positively to improved sanitation, environmental protection, and service delivery within the region.