

APP-003018

**OPERATIONS OF RELOAD LOGISTICS NAMIBIA ON ERF 5739,
WALVIS BAY**

ENVIRONMENTAL MANAGEMENT PLAN



Prepared by:



Prepared for:



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1 INTRODUCTION

Reload Logistics Namibia (Pty) Ltd (the Proponent) requested Geo Pollution Technologies (Pty) Ltd to conduct an environmental scoping assessment for their proposed operations on erf 5739, Rössing Street, in the new light industrial area of Walvis Bay (extension 12). The Proponent intends to operate a warehouse for the receipt, storage and packaging of copper related products such as copper cathodes and copper concentrates. Both the cathodes and concentrates are partially refined copper, originating from copper mines located in southern Africa. The copper cathodes and copper concentrates are destined for international manufactures of various copper products. In support of the environmental assessment for the project, an environmental management plan (EMP) was developed and is represented in this report.

2 OBJECTIVES OF THE EMP

The EMP provides management options to ensure impacts of the operations are minimised. An EMP is a tool used to take pro-active action by addressing potential problems before they occur. This should limit the corrective measures needed, although additional mitigation measures might be included if necessary. The EMP acts as a stand-alone document, which can be used during the various phases (planning, construction, operational and decommissioning) of any proposed activity or development.

All contractors and sub-contractors taking part in operations associated with the facility should be made aware of the contents of the EMP, so as to plan the relevant activities accordingly in an environmentally sound manner.

The objectives of the EMP are:

- ◆ to include all components of the various activities;
- ◆ to prescribe the best practicable control methods to lessen the environmental impacts associated with the operational activities;
- ◆ to monitor and audit the performance of the operational personnel in applying such controls; and
- ◆ to ensure that appropriate environmental training is provided to responsible personnel and contractors.

3 IMPLEMENTATION OF THE EMP

Section 4 outline the management of the environmental elements that may be affected by the different activities. Impacts addressed and mitigation measures proposed are seen as minimum requirements which have to be elaborated on by the client where required. Delegation of mitigation and reporting activities should be determined by the proponent and included in the EMP. The EMP is a living document that must be prepared in detail, and regularly updated, by the proponent as the project progress and evolve.

The EIA, EMP and environmental clearance certificate must be communicated to the site managers. All monitoring results must be reported on as indicated. These are important for any future renewals of the environmental clearance certificate and must be submitted bi-annually to the Ministry of Environment, Forestry and Tourism.

4 MANAGEMENT OF IMPACTS

4.1 CONSTRUCTION (MAINTENANCE) AND OPERATIONS

The following section provide management measures for the operational phase, inclusive of periodic maintenance activities that may include some construction activities and repairs, related to the facility.

4.1.1 Planning

During the phases of planning for construction, operations and decommissioning of the facility, it is the responsibility of Proponent to ensure they are and remain compliant with all

legal requirements. The Proponent must also ensure that all required management measures are in place prior to and during all phases, to ensure potential impacts and risks are minimised. The following actions are recommended for the planning phase and should continue during various other phases of the project:

- ◆ Ensure that all necessary permits from the various ministries, local authorities and any other bodies that governs the construction (maintenance) and operations of the project are in place and valid.
- ◆ Ensure all appointed contractors and employees enter into an agreement which includes the EMP. Ensure that the contents of the EMP are understood by the contractors, sub-contractors, employees and all personnel present or who will be present on site.
- ◆ Make provisions to have a Health, Safety and Environmental Coordinator to implement the EMP and oversee occupational health and safety as well as general environmental related compliance at the site.
- ◆ Have the following emergency plans, equipment and personnel on site where reasonable to deal with all potential emergencies:
 - Risk management / mitigation / EMP/ Emergency Response Plan and HSE Manuals
 - Adequate protection and indemnity insurance cover for incidents;
 - Comply with the provisions of all relevant safety standards;
 - Procedures, equipment and materials required for emergencies.
- ◆ If one has not already been established, establish and maintain a fund for future ecological restoration of the project site should project activities cease and the site is decommissioned and environmental restoration or pollution remediation is required.
- ◆ Establish and / or maintain a reporting system to report on aspects of construction activities, operations and decommissioning as outlined in the EMP.
- ◆ Submit bi-annual reports to the MEFT to allow for environmental clearance certificate renewal after three years. This is a requirement by MEFT.
- ◆ Appoint a specialist environmental consultant to update the EIA and EMP and apply for renewal of the environmental clearance certificate prior to expiry.

4.1.2 Skills, Technology and Development

During various phases of construction and operations, training will be provided to a portion of the workforce. Skills are transferred to an unskilled workforce for general tasks. The technology required for the development of the facility is often new to the local industry, aiding in operational efficiency. Development of people and technology are key to economic development.

Desired Outcome: To see an increase in skills in Walvis Bay, as well as development and technology advancements in associated industries.

Actions

Mitigation:

- ◆ If the skills exist locally, contractors must first be sourced from the town, then the region and then nationally. Deviations from this practice must be justified.
- ◆ Skills development and improvement programs to be made available as identified during performance assessments.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ Record should be kept of training provided.
- ◆ Ensure that all training is certified or managerial reference provided (proof provided to the employees) inclusive of training attendance, completion and implementation.

4.1.3 Revenue Generation and Employment

The change in land use will lead to changes in the way revenue is generated and paid to the national treasury. An increase of skilled and professional labour will take place due to the operations of the facility. Employment will be sourced locally while skilled labour/contractors may be sourced from other regions.

Desired Outcome: Contribution to national treasury and provision of employment to local Namibians.

Actions

Mitigation:

- ◆ The proponent must employ local Namibians where possible.
- ◆ If the skills exist locally, employees must first be sourced from the town, then the region and then nationally.
- ◆ Deviations from this practice must be justified.

Responsible Body:

- ◆ Proponent

Data Sources and Monitoring:

- ◆ Bi-annual summary report based on employee records.

4.1.4 Demographic Profile and Community Health

The project is reliant on labour during the operational phase. The scale of the project is limited and it is not expected to create a change in the demographic profile of the local community. Community health may be exposed to factors such as communicable disease like HIV/AIDS and alcoholism/drug abuse, associated with the trucking industry (transport of goods to and from Walvis Bay). An increase in foreign people in the area may potentially increase the risk of criminal and socially/culturally deviant behaviour.

Desired Outcome: To prevent the in-migration and growth in informal settlements, prevent the spread of communicable disease and prevent / discourage socially deviant behaviour.

Actions:

Prevention:

- ◆ Employ only local people from the area where possible, deviations from this practice should be justified appropriately.
- ◆ Adhere to all municipal by-laws relating to environmental health which includes but is not limited to sanitation requirements.

Mitigation:

- ◆ Educational programmes for employees (especially truck drivers) on HIV/AIDS and general upliftment of employees' social status.
- ◆ Appointment of reputable contractors.

Responsible Body:

- ◆ Proponent

Data Sources and Monitoring:

- ◆ Facility inspection sheet for all areas which may present environmental health risks, kept on file.
- ◆ Bi-annual summary report based on educational programmes and training conducted.
- ◆ Bi-annual report and review of employee demographics.

4.1.5 Traffic

The warehouse is within an area zoned for light industrial to industrial use and will result in an increase in traffic along Rössing Street. The proposed handling of copper products will add to the amount of trucks accessing and leaving the site, as well as on the national road networks. Heavy vehicle turning in Rössing Street to access and leave the site may result in increased road damage.

Desired Outcome: Minimum impact on traffic and no transport or traffic related incidents.

Actions

Mitigation:

- ◆ Trucks delivering or collecting goods should not be allowed to obstruct any traffic in surrounding areas and the town.
- ◆ Trucks associated with the facility should not be allowed to park or overnight in Rössing Street, and may only overnight at areas designated for this purpose.
- ◆ Adhere to Namport and Town Council regulations e.g. preferred routes through town and mitigation measures provided in Namport's EMP.
- ◆ Adhere to The Road Traffic and Transport Regulations, 2001 and all other applicable legislation related to road transport and maximum axle loads.
- ◆ If any traffic impacts are expected, traffic management should be performed to prevent these.
- ◆ The placement of signs to warn and direct traffic will mitigate traffic impacts.

Responsible Body:

- ◆ Proponent

Data Sources and Monitoring:

- ◆ The Road Traffic and Transport Regulations, 2001
- ◆ Any complaints received regarding traffic issues should be recorded together with action taken to prevent impacts from repeating itself.
- ◆ A bi-annual report should be compiled of all incidents reported, complaints received, and action taken.

4.1.6 Health, Safety and Security

Every activity associated with the operational phase is reliant on human labour and therefore exposes them to health and safety risks. Activities such as the operation of machinery, unsafe stacking and falling from heights poses the main risks to employees. Security risks are related to unauthorized entry, theft and sabotage. Security risks are increased as a result of high value commodities such as copper cathodes stored and handled at the site.

Desired Outcome: To prevent injury, health impacts and theft.

Actions

Prevention:

- ◆ Clearly label dangerous and restricted areas as well as dangerous equipment and products.
- ◆ Equipment that will be locked away on site must be placed in a way that does not encourage criminal activities (e.g. theft).
- ◆ Provide all employees with required and adequate personal protective equipment (PPE).
- ◆ Ensure that all personnel receive adequate training on operation of equipment.
- ◆ All health and safety standards specified in the Labour Act should be complied with.
- ◆ Implementation of maintenance register for all equipment.

Mitigation:

- ◆ Selected personnel should be trained in first aid and a first aid kit must be available on site. The contact details of all emergency services must be readily available.
- ◆ Security procedures and proper security measures must be in place to protect workers and cargo.
- ◆ Strict security that prevents unauthorised entry during all phases should be practiced, with access logs for vehicles and personnel.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ Any incidents must be recorded with action taken to prevent future occurrences.
- ◆ A bi-annual report should be compiled of all incidents reported. The report should contain dates when training were conducted and when safety equipment and structures were inspected and maintained.

4.1.7 Fire

Operational and development activities may increase the risk of the occurrence of fires if proper maintenance and housekeeping are not conducted. The site is located in a developed area, adjacent to a lubricant and fuel depot and fires on site can pose significant risks to surrounding operations.

Desired Outcome: To prevent property damage, possible injury and impacts caused by uncontrolled fires.

Actions:

Prevention:

- ◆ Maintain regular site, mechanical and electrical inspections and maintenance.
- ◆ Ensure sufficient firefighting and fire prevention measure are in place.
- ◆ Regularly update the firefighting and prevention plan and equipment.
- ◆ Maintain firefighting equipment, good housekeeping and personnel training (firefighting, fire prevention and responsible housekeeping practices).

Mitigation:

- ◆ A holistic fire protection and prevention plan is needed. This plan must include an emergency response plan and firefighting plan. The plan should consider risks posed to and by neighbouring properties.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ A register of all incidents must be maintained on a daily basis. This should include measures taken to ensure that such incidents do not repeat themselves.
- ◆ A bi-annual report should be compiled of all incidents reported. The report should contain dates when fire drills were conducted and when fire equipment was tested and training given.

4.1.8 Noise

Noise pollution will exist due to heavy and light motor vehicles accessing the site to load and offload cargo as well as from the stacking and moving of containers and other large equipment. As the site is situated in a light industrial area and all cargo handling activities will take place within the warehouse, noise impacts on surrounding properties will be minimal. Operational hours will be limited to between 06h00 and 18h00, and night-time activities will be minimal. Construction (maintenance and upgrade) may generate excessive noise.

Desired Outcome: To prevent any nuisance and hearing loss due to noise generated.

Actions

Prevention:

- ◆ The World Health Organization (WHO) guideline on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment for workers on site should be followed during the construction and operational phases. This limits noise levels to an average of 70 dB over a 24 hour period with maximum noise levels not exceeding 110 dB during the period.
- ◆ Confine noise generating operational activities to daytime hours as far as possible.
- ◆ At night, the nuisance created by audible warning signals on trucks and forklifts can be prevented by switching to a flashing light or 'broadband white noise' system.

Mitigation:

- ◆ Hearing protectors as standard PPE for workers in situations with elevated noise levels.
- ◆ Maintain noise generating activities to within the warehouse as far as possible.
- ◆ All machinery must be regularly serviced to ensure minimal noise production.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ WHO Guidelines.
- ◆ Maintain a complaints register.
- ◆ Bi-annual report on complaints and actions taken to address complaints and prevent future occurrences.

4.1.9 Dust and Air Quality

Construction (maintenance) activities may result in increased dust generation. Dust and air quality impacts is however expected to be minimal during construction activities. Increased number of trucks in the area may reduce local ambient air quality due to an increase in emissions.

Desired Outcome: To prevent nuisance and health impacts and to maintain the integrity of the built environment.

Actions

Mitigation:

- ◆ Dust suppression to be performed if required.
- ◆ All trucks transporting cargo must be service regularly and make use of technology to reduce emissions. This include selective catalytic reduction, diesel particulate filters and diesel oxidation catalysts.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ Any complaints received regarding dust and emissions must be recorded, investigated and the problem rectified.
- ◆ Any incidents must be recorded with action taken to prevent future occurrences.
- ◆ A bi-annual report should be compiled of all incidents reported and monitoring performed. The report should contain dates when safety equipment and structures were inspected and maintained.

4.1.10 Waste production

Various waste streams will result from the operational phase and development of the facility. Waste may include hazardous waste associated with fuel, oil or hydraulic fluid spills from trucks and machinery. Domestic waste will be generated by the facility and related operations. Waste presents a contamination risk and when not removed regularly may become a fire hazard. Construction waste may include building rubble and discarded equipment. Contaminated soil and water is considered as a hazardous waste.

Desired Outcome: To reduce the amount of waste produced, and prevent pollution and littering.

Actions

Prevention:

- ◆ Waste reduction measures should be implemented and all waste that can be re-used / recycled must be kept separate.
- ◆ Ensure adequate temporary waste storage facilities are available.
- ◆ Ensure waste cannot be blown away by wind.
- ◆ Prevent scavenging (human and non-human) of waste.
- ◆ All drains leading directly into sewers must be closed off, and locked where possible, to prevent any unwanted products from entering sewers should an accidental spill occur. Where drains are present to drain wash water, these should only be opened during times of washing.

Mitigation:

- ◆ Waste should be disposed of regularly and at appropriately classified disposal facilities, this includes hazardous material (empty chemical containers, contaminated rugs, paper water and soil).
- ◆ See the material safety data sheets available from suppliers for disposal of contaminated products and empty containers.
- ◆ Liaise with the municipality regarding waste and handling of hazardous waste.
- ◆ Due to the nature of some hazardous materials they, or the containers they are packed in, should be disposed of in an appropriate way at an appropriately classified waste disposal facility. See the material safety data sheets available from suppliers for disposal methods.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ A register of hazardous waste disposal should be kept. This should include type of waste, volume as well as disposal method/facility.
- ◆ Any complaints received regarding waste should be recorded with notes on action taken.
- ◆ All information and reporting to be included in a bi-annual report.

4.1.11 Ecosystem and Biodiversity Impact

The nature of the operational activities is such that the probability of creating a habitat for flora and fauna to establish is low. No significant impact on the biodiversity of the area is predicted as this is an existing operation and the site is void of natural fauna and flora. Excessive lighting used at night and especially those that are directed upwards may blind birds like flamingos that fly at night. This may result in disorientation of birds and collisions with structures. Further impacts will mostly be related to pollution of the environment.

Desired Outcome: To avoid pollution of and impacts on the ecological environment.

Actions.

Mitigation:

- ◆ Report any extraordinary ecological sightings to the Ministry of Environment, Forestry and Tourism.
- ◆ Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts.
- ◆ Avoid scavenging of waste by fauna.
- ◆ The establishment of habitats and nesting sites at the facility should be avoided where possible.
- ◆ Lights used at night should be kept to a minimum and should be directed downwards to the working surfaces.

Responsible Body:

- ◆ Proponent

Data Sources and Monitoring:

- ◆ All information of extraordinary ecological sightings to be included in a bi-annual report.

4.1.12 Groundwater, Surface Water and Soil Contamination

Potential sources of groundwater, surface water or soil pollution include spilled fuel, oil or hydraulic fluid from trucks and machinery. In an event of groundwater contamination, the shallow groundwater may lead to a rapid lateral spread of pollutants. This will further have potential impacts on underground utilities and may negatively impact neighbouring properties.

Desired Outcome: To prevent the contamination of water and soil.

Actions

Prevention:

- ◆ All handling and storage of hazardous substances should be conducted on spill proof surfaces provided for this purpose. E.g. Concrete slabs with regularly maintained seals between slabs.
- ◆ The procedures followed to prevent environmental damage during service and maintenance, and compliance with these procedures, must be audited and corrections made where necessary.
- ◆ Proper training of on-site personnel must be conducted on a regular basis (handling of hazardous substances, spill detection, spill control).

Mitigation:

- ◆ Spill clean-up means must be readily available on site as per the relevant MSDS.
- ◆ Any spill must be cleaned up immediately.
- ◆ All hazardous waste, such as contaminated materials, hydrocarbons and empty chemical containers should be disposed of at a suitably classified hazardous waste disposal facility.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ A report should be compiled bi-annually of all spills or leakages. The report should contain the following information: date and duration of spill, product spilled, volume of spill, remedial action taken, comparison of pre-exposure baseline data (previous pollution conditions survey results) with post remediation data (e.g. soil/groundwater hydrocarbon concentrations).

4.1.13 Visual Impact

This is an impact that not only affects the aesthetic appearance, but also the integrity of the facility. The site is within an area zoned for light industrial use. The development of the site is in line with the urban character and has increased the aesthetics of the site by utilising a partially constructed building to construct the warehouse.

Operations will be kept tidy and neat which will promote effectiveness and pollution prevention while being aesthetically pleasing.

Desired Outcome: To minimise aesthetic impacts associated with the facility.

Actions

Mitigation:

- ◆ Regular waste disposal, good housekeeping and routine maintenance on infrastructure will ensure that the longevity of structures are maximised and a low visual impact is maintained.
- ◆ All structures and infrastructures constructed on site should be in line with the visual character of the landscape as far as practically possible.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ A bi-annual report should be compiled of all complaints received and actions taken.

4.1.14 Cumulative Impact

Possible cumulative impacts associated with the operational phase include increase in traffic frequenting the site. This will have a cumulative impact on traffic flow on surrounding streets.

The increase of traffic and other noise generating activities in the area may further increase the noise impacts on nearby receptors, the facility is however situated in a light industrial area. The cumulative effect of lighting on birds due to various industrial related developments may also increase the risk of collisions and interference with bird flight paths at night.

Desired Outcome: To minimise all cumulative impacts associated with the facility.

Actions

Mitigation:

- ◆ Addressing each of the individual impacts as discussed and recommended in the EMP would reduce the cumulative impact.
- ◆ Reviewing biannual and annual reports for any new or re-occurring impacts or problems would aid in identifying cumulative impacts and help in planning if the existing mitigations are insufficient.

Responsible Body:

- ◆ Proponent

Data Sources and Monitoring:

- ◆ Annual summary report based on all other impacts must be created to give an overall assessment of the impact of the operational phase.

4.2 DECOMMISSIONING AND REHABILITATION

Decommissioning is not foreseen during the validity of the environmental clearance certificate. Decommissioning was however assessed as construction activities include modification and decommissioning. Should decommissioning occur at any stage, rehabilitation of the area may be required. Decommissioning will entail the complete removal of all infrastructure including buildings and underground infrastructure not forming part of post decommissioning use. Any pollution present on the site must be remediated. The impacts associated with this phase include noise and waste production as structures are dismantled. Noise must be kept within WHO standards and waste should be contained and disposed of at an appropriately classified and approved waste facility and not dumped in the surrounding areas. Future land use after decommissioning should be assessed prior to decommissioning and rehabilitation initiated if the land would not be used for future purposes. The EMP for the facility will have to be reviewed at the time of decommissioning to cater for changes made to the site and implement guidelines and mitigation measures.

5 CONCLUSION

The EMP should be used as an on-site reference document for all the operational activities. Parties responsible for transgression of the EMP should be held responsible for any rehabilitation that may need to be undertaken. The Proponent should use/develop their own in-house safety, health and environmental policies and standards in conjunction with the EMP. It is imperative that all construction and operational personnel are taught the contents of these documents to ensure better environmental practises all round.