

APP-003445

**OPERATION OF A CHARCOAL PROCESSING AND
HANDLING FACILITY IN
WALVIS BAY FOR KING CHARCOAL
ENVIRONMENTAL MANAGEMENT PLAN**



Assessed by:



Assessed for:

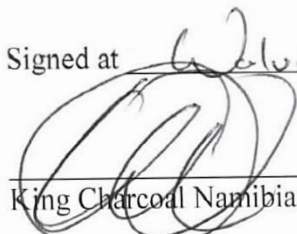


February 2022

Project:	OPERATION OF A CHARCOAL PROCESSING AND HANDLING FACILITY IN WALVIS BAY FOR KING CHARCOAL: ENVIRONMENTAL MANAGEMENT PLAN	
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I Wessel M. Coorssen acting as the Proponent's representative (King Charcoal Namibia (Pty) Ltd), hereby confirm that the project description contained in this report is a true reflection of the information which the Proponent has provided to Geo Pollution Technologies. All material information in the possession of the Proponent that reasonably has or may have the potential of influencing any decision or the objectivity of this assessment is fairly represented in this report.

Signed at Walvis Bay on the 31 day of January 2022.


King Charcoal Namibia (Pty) Ltd

2013/0606/07
Registration Number

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1 BACKGROUND AND INTRODUCTION

King Charcoal Namibia (Pty) Ltd (the Proponent) requested Geo Pollution Technologies (Pty) Ltd to renew the existing Environmental Clearance Certificate for operation of their charcoal processing and handling facility, on a portion of Farm 38, Walvis Bay. Once the renewal application was registered with the Ministry of Environment, Forestry and Tourism (MEFT), the ministry requested that the Proponent submit an updated Environmental Management Plan (EMP). This updated EMP is based on the environmental impact assessment conducted for the project (Bosman et al., 2019). In general, operations of the facility involve:

- ◆ Receipt of charcoal as transported by heavy motor vehicles;
- ◆ Processing (industrial sieving) and sorting the charcoal into various sizes;
- ◆ Using the dust from sieving for briquetting making,
- ◆ Packaging and storage of various products.

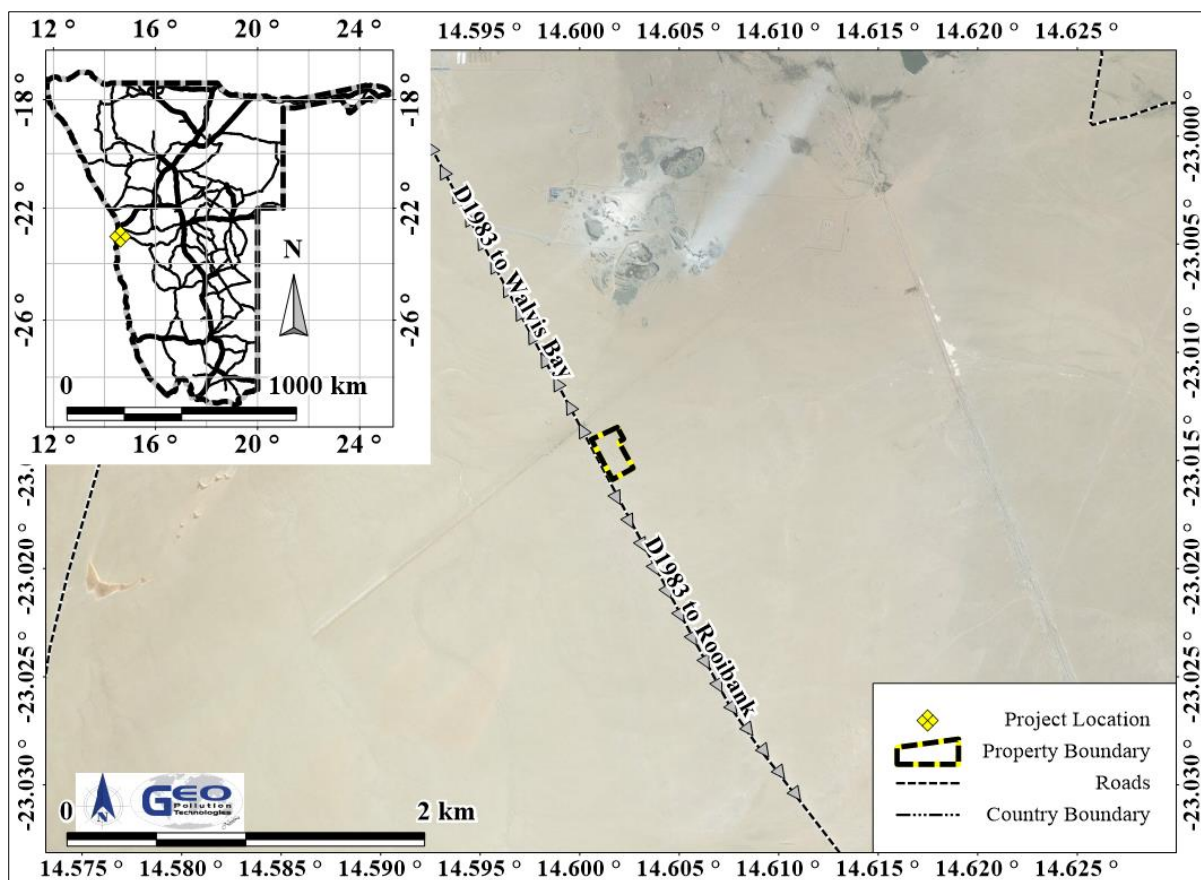


Figure 1-1. Location map

2 FACILITY OPERATIONS AND RELATED ACTIVITIES

Operations being undertaken by the Proponent are as per the original proposed facility operations with no additional activities being added to operations. However, the Proponent has identified an expansion area next to current operations which now accommodates the briquetting plant. The size of the initial site was 10,000 m² which has now been increased to 20,000 m².

2.1 CONSTRUCTION

All earthworks required for site establishment were completed and the municipal pipeline, proposed to service the site with water, was installed. However, the local municipality has altered the original connection point. The initially proposed and actual pipeline are indicated in Figure 2-3. Key components which were established during the construction phase include the following:

- ◆ Access road (from the municipal service road),
- ◆ Exit road (onto the D1983 district road),
- ◆ Weigh bridge,
- ◆ Water supply line from the existing NamWater pipeline,
- ◆ Waste water holding tanks,
- ◆ Power supply (combination of solar and generator),
- ◆ Warehouse (enclosed),
- ◆ Processing plant (sieving operations, holding bins, bagging machines, briquetting plant),
- ◆ Office complex,
- ◆ Worker amenities (kitchen, shower and restrooms), and
- ◆ Container storage.

The current site layout is presented in Figure 2-1. It depicts infrastructure which was established during the various phases of the project.

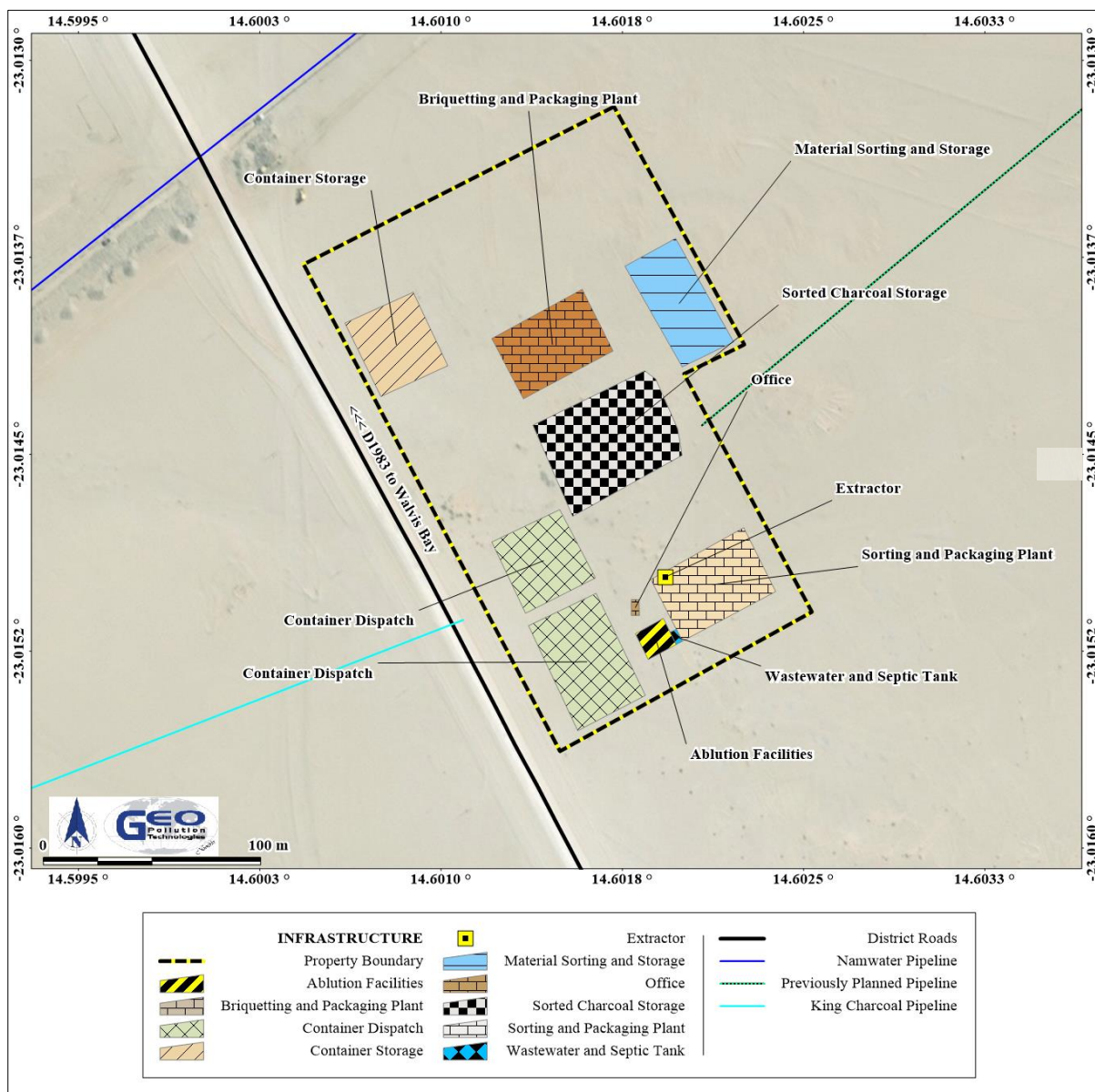


Figure 2-1. Site lay-out

2.1.1 Access and Exit Roads

An access road is used from the existing municipal service road, which has a 15 m road reserve (as surveyed), adjacent to the north-western boundary of the erf. An agreement was reached

with the municipality for the use of this road during operations. Therefore vehicles enter the erf via the municipal road reserve from the D1983 district road and drive to the northern side of the premises. A separate exit gate and road was constructed to link directly with the D1983 District Road as illustrated in Figure 2-2. The route and movement of trucks into, through and out of the yard is also indicated in Figure 2-2. All internal roads are compacted with a gravel cover.

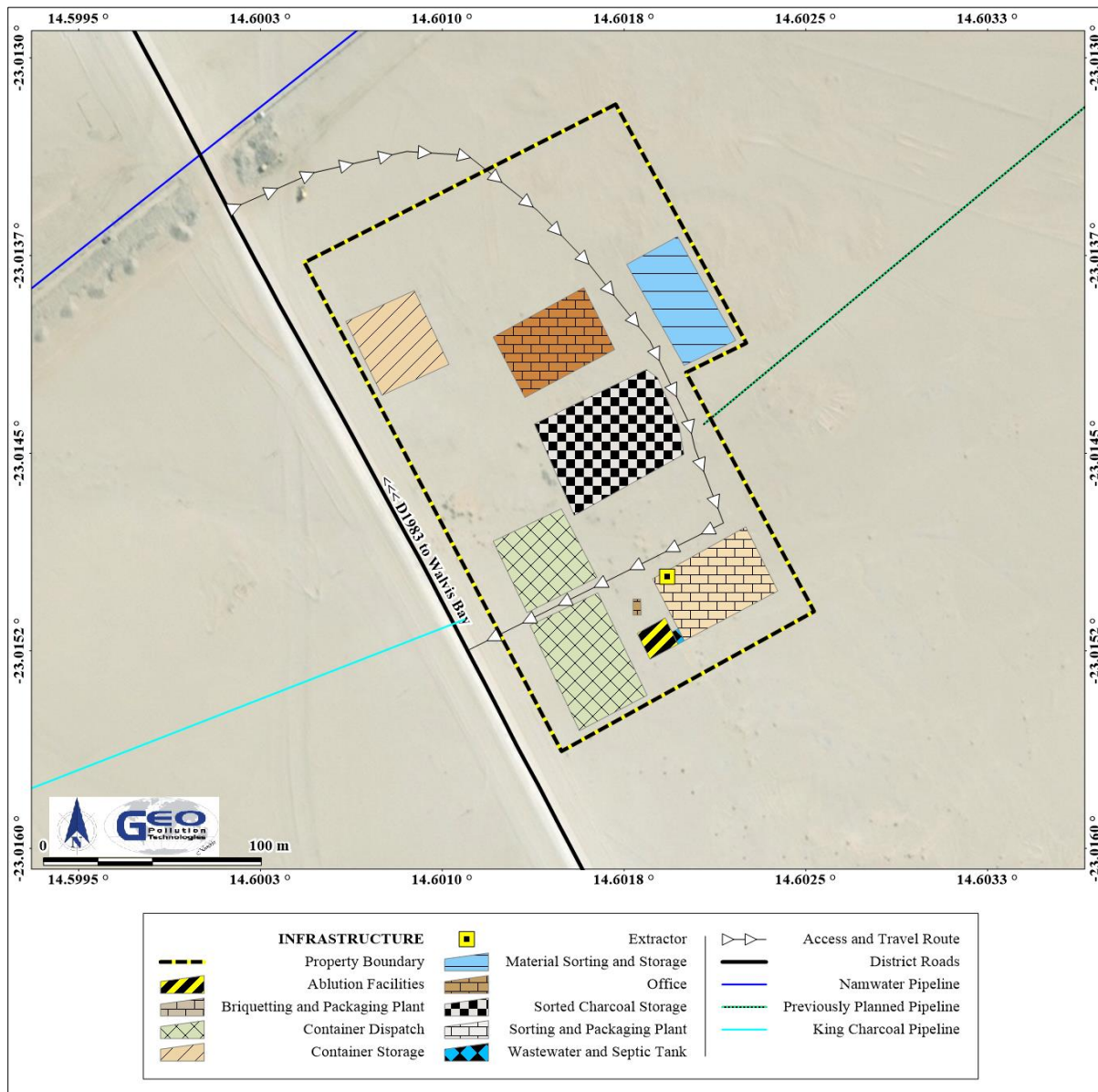


Figure 2-2. Schematic presentation of site access, exit and vehicle travel route

2.1.2 Weigh Bridge

A weigh bridge was constructed adjacent to the site entrance on the north-eastern portion of the site. The weigh bridge was constructed according to approved specifications.

2.1.3 Water Pipeline

There are two NamWater pipelines in the vicinity of the site. These pipelines are used for bulk water transfers by NamWater. Initially a metered connection was planned by the Municipality to be north-east of the site. However since the project initiation, the Municipality built another connection linking the site to a bulk supply line, south-west of the site.

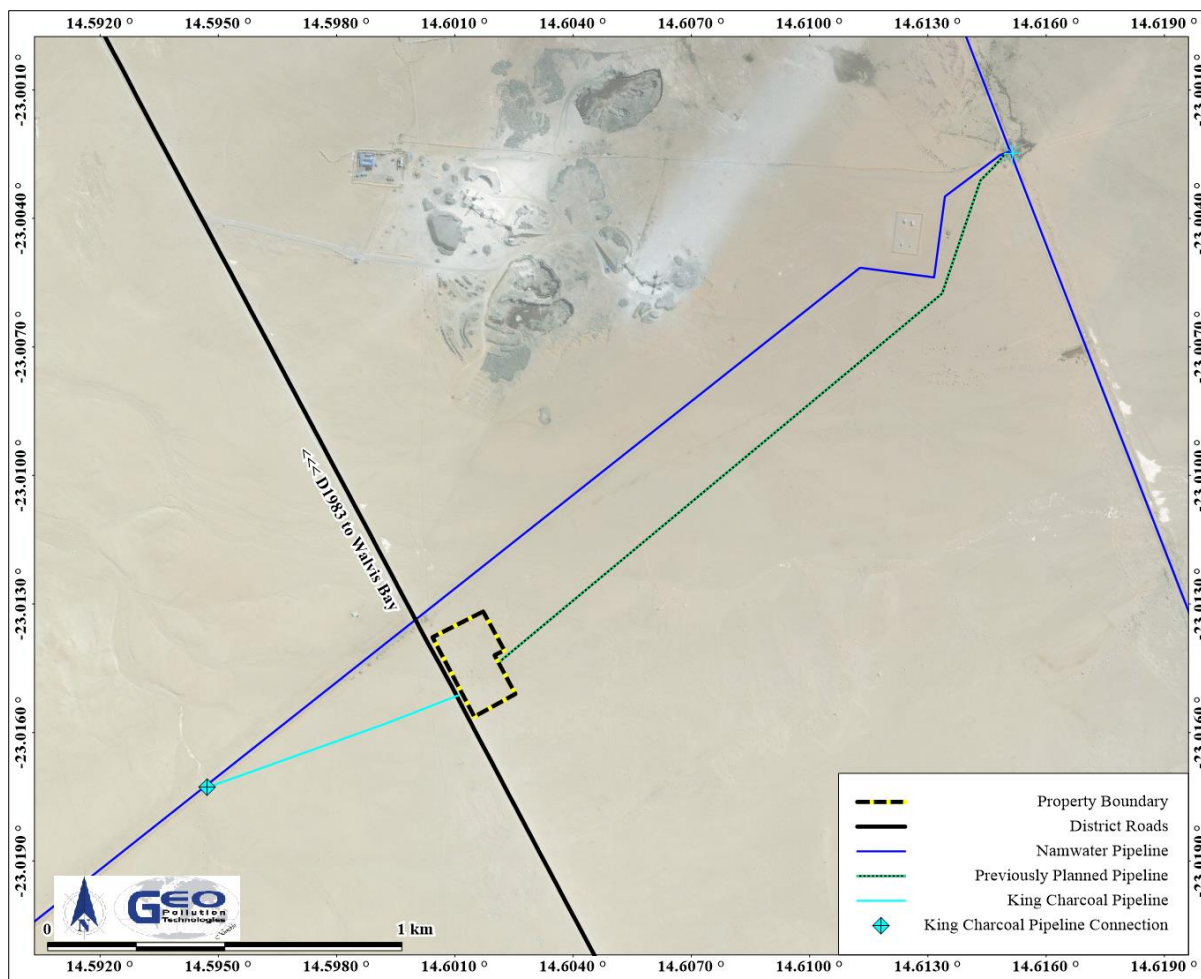


Figure 2-3. Initially planned vs constructed water pipeline

2.1.4 Waste Water

Initially the Proponent wanted to install four 10 m³ holding tanks to accommodate grey and black water generated on site. A single tank was constructed to ease municipal collection.

2.1.5 Electricity Supply

The initial electricity demand was estimated at approximately 50 kVa and was planned to be supplied with a photovoltaic system. Upon start-up of operations the Proponent utilised a 50 kVa diesel driven generator for electricity provision, however has started using the photovoltaic system as per original planning. The solar panels for the photovoltaic system were installed on the roofs of the buildings and the generator is now used for backup electricity supply.

2.1.6 Processing Plant and Warehouse

The processing plant is largely covered and enclosed. Components of the plant include offloading conveyors, a sieving plant, holding bins, briquette plant, two bagging plants and all conveyors between such components. A large warehouse was constructed to accommodate storage of the packaged products.

2.1.7 Additional Infrastructure and Buildings

An office building, a kitchen, shower and toilet facilities were constructed. The Proponent further plans to construct a solid wall on the western boundary of the site to act as a wind-break and sand retention structure.

2.2 OPERATIONAL ACTIVITIES

Approximately 3,000 ton of charcoal is packed and exported per month. Continued operations are reliant on continual maintenance and servicing of all equipment.

2.2.1 Receipt of Unprocessed Charcoal

Charcoal is received on a daily basis. Every truckload is sifted and binned upon receipt. Trucks arriving at the site are weighed on the weighbridge upon arrival. The charcoal is then offloaded on a conveyor that runs into the enclosed facility for sieving. The trucks are thereafter required to exit and re-enter the site, now empty, to be weighed again, prior to departure.

2.2.2 Charcoal Sieving and Binning

Charcoal is loaded onto vibrating screens that sieve it into various sizes with different classifications. Thereafter the charcoal is weighed and measured individually. The scale for measuring the weight is continuous along a conveyor system (continuous scale). The charcoal is conveyed to holding bins for each classified size.

2.2.3 Bagging Plant

From the holding bins, all of the products (different sized charcoal) are sent to the bagging plant where it is mechanically put into bags for commercial purposes. The barbecue and restaurant charcoal (as classified) are conveyed from their holding bins through a wall to two separate, mechanised bagging machines via a belt conveyor. Once the charcoal has been bagged, these bags are stitched closed manually and moved by conveyor to the palletizing station located in another room.

Charcoal fines (which is a separate classified product) is also bagged separately. Dust from the dust extractor is added to this mix.

2.2.4 Palleting (Stacking)

Packed charcoal product is placed onto pallets for easy internal movement and storage. Charcoal packages are stacked 2.7 m high on a pallet and then the pallet and stack is industrially wrapped with plastic. Once wrapped the palletized charcoal is either transported to the warehouse for storage, or directly into containers for shipment to the harbour for export.

2.2.5 Briquetting Plant

All dust extracted around the industrial sieve and bagging plant, is used by adding it to the charcoal fines (as mentioned above) or by producing briquettes. To produce briquettes, a crusher pulverises the charcoal fines within an enclosed area. The pulverised charcoal fines is mixed with collected dust from the dust extractor and further mixed with a binding agent. Once bound, the product is forced through rollers which cut the bound product into equally shaped briquettes, which are then dried by passing through a "continuous oven", built around the conveyor system. The cooled briquettes is thereafter packed in a dedicated bagging plant for shipment.

2.2.6 Storage and Shipping

The packaged products are stored in enclosed warehouses or containers until being transported to the harbour for shipment.

2.2.7 Dust Extraction

The majority of dust is generated during sieving, binning and packaging. Industrial dust extraction is conducted during these processes. The dust extractor is connected to duct piping around the facility, to extract and convey the dust. These duct pipes are located above the three screening machines (sieving stations), the holding bins and above the bagging stations.

2.2.8 Maintenance and Waste Handling

Regular maintenance and cleaning of the infrastructure is performed. The water pipeline between the NamWater main line and yard is maintained by the Proponent while the metered

connection remains the responsibility of the Municipality of Walvis Bay. The municipality is not able to remove solid waste from the site. The Proponent therefore made an agreement with a contractor for solid waste disposal. Sewage waste is removed from the onsite storage tanks on a weekly basis by the Municipality of Walvis Bay, for disposal through their sewage treatment facility in Walvis Bay.

2.2.9 Labour

All employees are provided with appropriately rated and relevant personal protective equipment (PPE). Such equipment include overalls, dust masks, gloves, boots, safety hats, protective glasses, as needed. All employees are remunerated as per industry standard while additional benefits such as medical aid are provided. All employees are transported to site.

2.2.10 Property Access

Both the property entrance and exit roads are maintained by the Proponent during the lifetime of operations. The access points are maintained according to the requirements of the Roads Authority. Maintenance of the municipal service road remains the responsibility of the Municipality of Walvis Bay, unless otherwise agreed by both parties. The D1983 is maintained by the Roads Authority.

2.2.11 Transporting / Logistics

Transportation of charcoal from the suppliers to the site is managed and arranged by the Proponent. Similarly, all transportation from the site to the harbour, as well as the movement of empty containers to the site, is arranged and managed by the Proponent.

3 OBJECTIVES OF THE EMP

The EMP provides management options to ensure impacts of the development 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 both the construction and operations associated with the project 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 prescribe the best practicable control methods to lessen the environmental impacts associated with the planning, construction, operation and decommissioning 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.

4 IMPLEMENTATION OF THE EMP

Section 5 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. Delegation of mitigation measures 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 (ECC) must be communicated to the site managers. A copy of the ECC and EMP should be kept on site. All monitoring results must be reported on as indicated. Reporting is important for any future renewals of the ECC and must be submitted to the Ministry of Environment, Forestry and Tourism. Renewal of ECC will require six monthly reports based on the monitoring prescribed in this EMP.

5 MANAGEMENT OF IMPACTS

5.1 CONSTRUCTION AND OPERATIONS

The following section provide management measures for both the operational phase as well as construction activities related to project.

5.1.1 Planning

During the phases of planning for future operations, construction and decommissioning of the facility, it is the responsibility of the 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) activities and operations of the project remains 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 biannual reports to MEFT as their requirements and to ensure future renewal of the ECC.
- ◆ Appoint a specialist environmental consultant to update the EA and EMP and apply for renewal of the environmental clearance certificate prior to expiry.

5.1.2 Skills, Technology and Development

During various phases of the facility, training has been and will be provided to a portion of the workforce to be able to maintain and operate various components of the facility. Skills are also transferred to the unskilled workforce for general tasks. The technology required for the development of the facility remains unique to the local industry, aiding in operational efficiency. Development of people and technology are key to economic development.

The employees have emergency and evacuation plan training while the supervisors and identified employees have fire-fighting training.

Desired Outcome: To see an increase in skills of local Namibians, as well as development and technology advancements in the industry.

Actions

Enhancement:

- ◆ 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.
- ◆ Employees to be informed about parameters and requirements for references upon employment.
- ◆ The Proponent must employ Namibians where possible. Deviations from this practise should be justified appropriately.

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.

5.1.3 Revenue Generation and Employment

The project has led to an increase and change in the way revenue is generated and paid to the local municipality. Employment is sourced locally while skilled labour/contractors may be sourced from other regions. In addition, an expansion of operations has led to an increase in export of locally manufactured goods to international markets. Increased exported product will increase contributions to the national economy and contribute to a positive trade balance. The facility further contributes to the transport sector as well as the charcoal industry at large.

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

Actions

Enhancement:

- ◆ 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.
- ◆ Financial Auditing

5.1.4 Demographic Profile and Community Health

It is not foreseen that the expansion of the project will 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 uneducated financial expenditure. An increase in foreign people in the area may potentially increase the risk of criminal and socially/culturally deviant behaviour. However, such trends have not been observed among the employees since the facility became operational. Community health is therefore considered not to be exposed to significant health risks.

Desired Outcome: To prevent the spread of communicable disease and prevent / discourage socially deviant behaviour.

Actions:

Prevention:

- ◆ Employ only local people from the area, deviations from this practice should be justified appropriately.
- ◆ Adhere to all municipal by-laws relating to environmental health.
- ◆ Prohibit substances abuse on the site.
- ◆ Educational programmes for employees on HIV/AIDs and general upliftment of employees' social status.
- ◆ Appointment of reputable contractors.

Responsible Body:

- ◆ Proponent

Data Sources and Monitoring:

- ◆ Facility inspection sheets, for kitchen, toilets and showers, or any area 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.

5.1.5 Traffic

An increase in traffic to and from the site may increase congestion and increase the risk of incidents and accidents, especially along the national and district routes to the site and the harbour. In addition, unprocessed charcoal being transported to the site may have fly-off particles which may increase incidents. Access points onto the municipal service road, the site and the D1983 District Road will carry additional traffic loads.

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

Actions

Prevention:

- ◆ Erect clear signage regarding access and exit points at the facility. Clear indications of charcoal deliveries areas.
- ◆ Upgrade of access points according to the requirements of the Roads Authority when required.
- ◆ All contractors or employees driving heavy motor vehicles should have appropriate training and qualifications to operate such vehicles.
- ◆ All vehicles to be roadworthy and appropriately licensed.
- ◆ All loads to be covered or appropriately secured.

Mitigation:

- ◆ If any traffic impacts are expected, traffic management should be performed to prevent these.

Responsible Body:

- ◆ Proponent

Data Sources and Monitoring:

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

5.1.6 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 and handling of the charcoal, poses risks to employees. Employees are exposed to elevated levels of dust. Security risks are related to unauthorized entry, theft and sabotage.

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

Actions

Prevention:

- ◆ Clearly label dangerous and restricted areas as well as dangerous equipment and products.
- ◆ Implement a hazardous dust inspection, testing, housekeeping and control program.
- ◆ Use proper dust collection systems and filters.
- ◆ Minimize the escape of dust from process equipment or ventilation systems.
- ◆ Use surfaces that minimize dust accumulation and facilitate cleaning.
- ◆ Equipment must be locked away on site and 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 / handling of hazardous substances and PPE, especially the importance of dust masks.
- ◆ All Health and Safety standards specified in the Labour Act should be complied with.
- ◆ Implementation of a maintenance register for all equipment and hazardous substance storage areas.

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.
- ◆ Implement and maintain an integrated health and safety management system, to act as a monitoring and mitigating tool, which includes: colour coding of pipes, operational, safe work and medical procedures, permits to work, emergency response plans, housekeeping rules, MSDS's and signage requirements (PPE, flammable etc.).
- ◆ Security procedures and proper security measures must be in place to protect workers and clients, especially during cash in transit activities.
- ◆ Strict security that prevents unauthorised entry during construction phases.
- ◆ Inspect for dust residues outside enclosed areas at regular intervals.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ Any incidents must be recorded with action taken to prevent future occurrences.
- ◆ All employees to routinely be subject to medical examination.
- ◆ Bi-annual report?

5.1.7 Fire

Operational activities may increase the risk of the occurrence of fires. Charcoal dust is considered as a potential combustible material which has a low explosion risk. Charcoal and charcoal dust, to be processed on site, are not likely to spontaneously combust. Dust extractors and related filters pose an additional explosion and fire risk.

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

Actions:

Prevention:

- ◆ Ensure all chemicals are stored according to MSDS instructions.
- ◆ Maintain regular site, mechanical and electrical inspections and maintenance.
- ◆ Fire-fighting training to be provided to staff.
- ◆ Use only vacuum cleaners approved for dust collection.
- ◆ Use appropriate electrical equipment and wiring methods.
- ◆ Control static electricity, including bonding of equipment to ground.
- ◆ Control smoking (designated smoking areas), open flames, and sparks.
- ◆ Control mechanical sparks and friction and ensure all mechanical parts are maintained and efficiently lubricated.
- ◆ Use separator devices to remove foreign materials capable of igniting combustibles from process materials.
- ◆ If ignition sources are present, use cleaning methods that do not generate dust clouds.
- ◆ Separate heated surfaces from dusts.
- ◆ Regularly inspect the dust extractor duct and filter system.
- ◆ A holistic fire protection and prevention plan is needed. This plan must include an emergency response plan and firefighting plan.
- ◆ Maintain firefighting equipment, good housekeeping and personnel training (firefighting, fire prevention and responsible housekeeping practices).

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ A register of all incidents must be maintained. This should include measures taken to ensure that such incidents do not repeat themselves.
- ◆ Inspect for dust residues at regular intervals.
- ◆ A report should be compiled every 6 months of all incidents reported. The report should contain dates when fire drills were conducted and when fire equipment was tested and training given.

5.1.8 Air Quality

Handling of charcoal and especially the processing thereof, creates dust. As part of the operations, a dust extractor unit was installed at the industrial sieving, bagging and conveying operations. Some dust is further generated by the general handling of the charcoal. This dust is carried around the site by strong south-westerly trending winds. The Proponent plans to erect a solid wall along the western boundary to act as a windbreak.

Desired Outcome: To prevent health impacts and minimise the dust generated and transported from the site.

Actions

Prevention:

- ◆ Personnel issued with appropriate masks where excessive dust are present.
- ◆ A complaints register should be kept for any dust related issues and mitigation steps taken to address complaints where necessary e.g. dust suppression.
- ◆ Employees should be coached on the dangers of charcoal dust.
- ◆ Dust extraction duct pipes must be properly placed and maintained.
- ◆ Employ dust monitoring systems and implement dust abatement measures where required.
- ◆ Establish dust monitoring equipment and systems

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ Any complaints received regarding dust should be recorded with notes on action taken.
- ◆ On site dust monitoring to be conducted.
- ◆ All information and reporting to be included in a bi-annual report.

5.1.9 Noise

Noise pollution exist due to heavy motor vehicles accessing the site to offload and transport charcoal. The handling facility itself produces limited noise. Construction (maintenance and upgrade) may generate excessive noise.

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

Actions

Prevention:

- ◆ Follow World Health Organization (WHO) guidelines on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment.
- ◆ All machinery must be regularly serviced to ensure minimal noise production.
- ◆ Hearing protectors as standard PPE for workers in situations with elevated noise levels.

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.

5.1.10 Waste Production

Various waste streams are produced during the operational phase. Waste presents a contamination risk and when not removed regularly may become a fire and/or health hazard. Construction waste may include building rubble and packaging material.

During operations the waste stream consists of liquid waste, which will include all sewage effluent and solid waste. Sewage effluent is captured on site in a storage tank. The municipality regularly remove the contents of the tank for disposal at their sewage treatment plant. Solid waste is gathered on the facility and removed from site by the Proponent or by an appointed contractor.

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

Actions

Prevention:

- ◆ Regular sewage storage tank level monitoring to prevent overflow
- ◆ Waste reduction measures should be implemented and all waste that can be re-used / recycled must be kept separate.
- ◆ Ensure adequate storage facilities are available.
- ◆ Ensure waste cannot be blown away by wind.
- ◆ Prevent scavenging (human and non-human) of waste.

Mitigation:

- ◆ Sewage storage tank overflow should be contained and spillage removed as solid waste.
- ◆ Solid 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.

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.

5.1.11 Ecosystem and Biodiversity Impact

During the construction phase, the entire site was disturbed. All habitats associated with the site were altered. No species of importance was however identified on site. The nature of the operational activities is such that the probability of creating a habitat for flora and fauna to establish is low.

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

Actions.

Prevention:

- ◆ 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.

Responsible Body:

- ◆ Proponent

Data Sources and Monitoring:

- ◆ Any sightings and related reporting to be included in a bi-annual report.

5.1.12 Groundwater, Surface Water and Soil Contamination

Operations entail the storage and handling of charcoal which present a visual contamination risk. Contamination may either result from failing handling facilities, or uncontained dust. Chemical spillages related to materials used either during the construction phase or as required for cleaning and maintenance during the operational phase, including fuel for the generator. Such spills may also relate to heavy motor vehicle breakdowns on site and related hydrocarbon spillage.

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

Actions

Prevention:

- ◆ All charcoal handling should be conducted within contained, surfaced areas which can be easily cleaned.
- ◆ 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 employees must be conducted on a regular basis.
- ◆ Regular cleaning of surfaces where charcoal dust may settle and accumulate, to reduce build-up.
- ◆ Ensure all dust extractors are in proper working conditions.
- ◆ The sewage waste tanks must be maintained to industry accepted standards and emptied regularly by an approved contractor.
- ◆ All construction machines should be maintained to be in a good working condition during operations.
- ◆ Employ drip trays and spill kits during construction when onsite servicing / repairs of equipment are needed.
- ◆ Spill control structures and procedures must be in place according to SANS standards or better and connection of all surfaces where fuel is handled, with an oil water separator.
- ◆ All fuelling should be conducted on 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 operators must be conducted on a regular basis (Fuel handling, spill detection, spill control).

Mitigation:

- ◆ Spill clean-up means must be readily available on site as per the relevant MSDS.
- ◆ Any spillage of more than 200 litre of fuel must be reported to the relevant authority (Ministry of Mines and Energy).
- ◆ Any spill must be cleaned up immediately.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ Record keeping of sewage waste tank overflow and chemical spills.
- ◆ Bi-annual reporting?

5.1.13 Visual Impact

The nature of the facility is contrary to the existing landscape character. In addition, charcoal dust is dark and starkly contrast the existing soil colour. However, the facility is located in an area which has been demarcated by the Municipality of Walvis Bay for industrial development. Therefore, in time, it is expected that the surrounding sites and ultimately the landscape character will be changed to become largely industrial. The fencing and erection of a solid barrier on the western boundary of the site will serve to shield the facility from any road users. Due to the nature of charcoal, the facility may easily appear to be dirty. Therefore the facility should be regularly maintained and cleaned.

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

Actions

Prevention:

- ◆ 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.
- ◆ Regular cleaning of surfaces to prevent charcoal dust build-up.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

Data Sources and Monitoring:

- ◆ A report should be compiled every 6 months of all complaints received and actions taken.

5.1.14 Cumulative Impact

Possible cumulative impacts associated with the operational phase include increased traffic in the area. This will have a cumulative impact on traffic flow on the national and district streets.

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

Actions

Prevention:

- ◆ 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:

- ◆ Reviewing bi-annual reports will give an overall assessment of the impact of the operational phase.

Appendix A: Current Environmental Clearance Certificate



REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT AND TOURISM

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Windhoek
Namibia

20th May 2019

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

Managing Director
King Charcoal Namibia (Pty) Ltd
P.O. Box 4543
Walvis Bay
Namibia

Dear Sir/Madam

SUBJECT: ENVIRONMENTAL CLEARANCE CERTIFICATE FOR THE PROPOSED CONSTRUCTION AND OPERATION OF A CHARCOAL PROCESSING AND HANDLING FACILITY FARM 38 IN WALVIS BAY, ERONGO REGION

Environmental Scoping Report and Environmental Management Plan submitted are sufficient as these have made an adequate provisions of the environmental management concerning the proposed activities. From this perspective regular environmental monitoring and evaluations on environmental performance should be conducted. Targets for improvements should be established and monitored from time to time.

This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project. I issue the clearance with the condition that a consent must be obtained from Walvis Bay Municipality.

On the basis of the above, this letter serves as an environmental clearance certificate for the project to commence. However, this clearance letter does not in any way hold the Ministry of Environment and Tourism accountable for misleading information, nor any adverse effects that may arise from this project's activities. Instead, full accountability rests with King Charcoal Namibia (Pty) Ltd and his/her consultant.

This environmental clearance is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office.

Yours sincerely,


Fredrick Mupoti Sikabongo
DEPUTY ENVIRONMENTAL COMMISSIONER



“Stop the poaching of our rhinos”

All official correspondence must be addressed to the Permanent Secretary