

SCOPING ENVIRONMENTAL IMPACT ASSESSMENT FOR OPERATION OF AN EXISTING CHARCOAL PROCESSING PLANT IN OTJIWARONGO, OTJOZONDJUPA REGION

MEFT PROJECT NO.: 250422005734

Afri-United Charcoals Trading CC



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MAY 2025

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ENVIRONMENTAL AUTHORIZATION INFORMATION

Please note that the environmental clearance certificate should be issued out to the client. All comments and enquiries during the evaluation of this document must be addressed to the Environmental Consultants. Please forward the Environmental Clearance Certificate to the consultant.

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Appendix A - Public Consultation Process (Adverts, Register, Questionnaires, Letter sent to Municipality of Otjiwarongo & Background Information Document (BID))

- Appendix B Consent letter
- Appendix C Environmental Management Plan (EMP)
- Appendix D CV's of Consultants

ACRONYM

ACRONYM	MEANING		
BID	Background Information Document		
EIA	Environmental Impact Assessment		
EAP	Environmental Assessment Practitioner		
EMP	Environmental Management Plan		
I&APs	Interested and Affected Parties		
PCP	Public Consultation Process		
ToR	Terms of Reference		

EXECUTIVE SUMMARY

Proponent

Afri-United Charcoals Trading CC being the proponent proposes to make an application for an Environmental Clearance Certificate (ECC) for the operation of an already existing charcoal processing plant in Otjiwarongo, in the Otjozondjupa Region. Afri-United Charcoals Trading sources the charcoal from surrounding farms. The charcoal is then transported to the site, screened, packaged, stored and then transported for distribution to the customers.

The charcoal processing plant is located in the industrial area on Plot no: Pin 23/14, Iron Street, Otjiwarongo and the coordinates are; -20.453882: 16.645104. The area of the site is 4440m². The proponent employees at most 20 employees. Afri-United Charcoals Trading CC is also a registered Namibian company.

Environmental Assessment Consultants

The scoping Environmental Impact Assessment (EIA) was conducted by Eco-Wise Environmental Consulting cc. The study was carried out according to the requirements of the Environmental Management Act (Act No.7 of 2007) and its regulations of 2012.

Objectives of the EIA

- Generally, the main objective of the study was, to determine the potential environmental and socio-economic impacts derived from the operation of the charcoal processing plant.

Specific objectives included:

- To identify potential environmental impacts derived from the charcoal processing activities.
- To establish baseline environmental conditions so that relevant impacts could be projected and sufficient mitigation measures could be designed
- To consult with key, interested and affected stakeholders so that their concerns are considered in the formulation of the scoping EIA report and implementation of the Environmental Management Plan
- To design an EMP with sound and relevant mitigation measures
- Coordinate the whole application process of the ECC until the issuance of the certificate.

Environmental Impact Assessment Methodology

The methodologies which were used during the study include; desktop studies, observations through site visit, public consultation and mapping. **See Appendix A,** for questionnaires and adverts.

Environmental Impact Assessment

The Environmental Consultant undertook this scoping EIA study to predict the impacts associated with the operation of the project on the environment and to propose mitigation measures. The scoping EIA covered the following aspects; project description, baseline studies, public consultation process, environmental, socio-

economic impact assessment and environmental management. All identified impacts were addressed and mitigation measures were brought forward.

Key	environmental	impacts	associated	with the	e project a	are as follows:
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Positive impacts	Negative impacts		
- Employment creation	- Noise will be generated from the trucks offloading and collecting the charcoal.		
- Generation of revenue for government through taxes paid by the proponent	- Charcoal dust will be generated mainly during the screening phase		
- Generation of revenue for the farmers given that the proponent buys the charcoal from nearby farmers	- General dust will be generated by the trucks during delivering and collecting charcoal.		
 Value addition – value will be added to intruder bush by processing it into charcoal 	- Occupational Health and safety hazards on employees working at the site- charcoal dust which is mainly generated during screening can affect the employees		

Draft Scoping Report

All impacts identified through the site visit and professional expertise were incorporated in the report. An Impact Assessment matrix was used to establish the environmental risk of the overall project. In a bid to ensure that the proposed mitigation measures will be implemented, an Environmental Management Plan was developed to guide all activities of the project throughout the operation phase.

Final Scoping Report and EMP

The final report was sent to the Proponent and Ministry of Environment Forestry and Tourism: DEA. The competent authority will be Ministry of Environment Forestry and Tourism.

CHAPTER ONE: BACKGROUND

1.1 INTRODUCTION

Afri-United Charcoals Trading CC being the Proponent is operating a charcoal processing plant in Otjiwarongo, Otjozondjupa Region. The following activities are being conducted; offloading, screening, packaging, storage and distribution and to not, no charcoal is burnt at the site.

Eco-Wise Environmental Consulting being an independent consultant was hired to conduct a scoping EIA for the operation of an existing charcoal processing plant. Eco-Wise Environmental Consulting cc conducted a site visit on 15 April 2025. The consultant was mainly guided by the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (2012) during the process of the EIA. The EIA regulations (2012) states all the activities, which require an ECC and this project is classified under:

WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES

2.2 Any activity entailing a scheduled process referred to in the Atmospheric Pollution *Prevention Ordinance*, 1976. The project generates charcoal dust mainly during the screening stage.

1.2 NEED FOR THE PROJECT

1.2.1 Generation of Revenue

The project is currently generating revenue for the government through taxes. Revenue generated through taxes will be used for economic development. In addition, the proponent buys the charcoal from the farmers, by doing so the proponent will be generating income for the farmers.

1.2.2 Employment creation

The proponent is creating employment both directly and indirectly. Directly the proponent is employing around 20 people who are registered with Social Security Commission. Indirectly, the farmers who supply the proponent with the charcoal employes people to burn the bushes hence the proponent creating employment indirectly.

1.2.3 Invasive Plant Control

Afri-United Charcoals Trading's charcoal production such as Acacia Mellifera, actively contributes to the control of invasive plant species. This not only aids in restoring ecosystems but also mitigates the adverse effects of bush encroachment in Namibia

1.3 SCOPE OF THE PROJECT

The scope of the study required the consultant to conduct a scoping environmental impact assessment putting into consideration relevant Namibian legislations (Environmental Management Act (No 7 of 2007) and its regulations of 2012).

1.4 TERMS OF REFERENCE

The approach to undertake the work was guided by the following ToR, which were provided by the Proponent;

- Conduct a scoping environmental impact assessment.
- Design an EMP with sound and relevant mitigation measures for monitoring purposes.
- Coordinate the whole application process of the ECC until the issuance of the certificate.

1.5 OBJECTIVES

The objectives of the study were derived from the ToR and they are as follows:

1.5.1 General objective

- To determine the potential environmental impacts derived from the operation of the charcoal processing activities

1.5.2 Specific Objectives

- To identify possible environmental impacts derived from operational activities at the charcoal processing plant.
- To establish baseline environmental conditions so that relevant impacts could be projected and sufficient mitigation measures could be designed
- To consult with key, interested and affected stakeholders so that their concerns are considered in the formulation of the scoping EIA report and implementation of the Environmental Management Plan
- To design an EMP with sound and relevant mitigation measures
- Coordinate the whole application process of the ECC until the issuance of the certificate.

1.6 METHODOLOGY USED FOR THE STUDY

- a) **Desktop Study** This involved review of documents and relevant legislatives. Documents containing geological, vegetation, climatic, demographic and hydrological data for Namibia were reviewed.
- b) **Site Visits** –The Consultant visited the site on 15 April 2025. The site assessment enabled the Consultant to gather information on the state of the environment.
- c) **Public Consultation** -Consultation was done through advertisement and physically visiting the neighbors to the site. The Consultant distributed the BID and questionnaires to the neighbors and the employees of Afri-United Charcoals Trading.
- d) **Mapping-**More data was obtained from the maps which included; hydrogeology and location maps.
- e) **Reporting** all data gathered was used to compile a scoping EIA and EMP report which was submitted to Ministry of Environment Forestry and Tourism.

1.7 LAND OWNERSHIP

The land is within the industrial area of Otjiwarongo and the proponent is renting the property, see **Appendix B consent letter** from the owner.

1.8 OVERVIEW OF EIA REPORT

The remaining part of this report has been designated for the following aspects;

- Project Description.
- Relevant legislation
- Description of the affected environment
- Public Consultation
- Assessment of environmental impacts
- Environment Management and Monitoring Plan
- Conclusions and Recommendations.

CHAPTER TWO: PROJECT DESCRIPTION

The following issues will be clarified under project description;

- Project location.
- Project activities.
- Project cost.

2.1 PROJECT LOCATION

The charcoal processing plant is located in the industrial area on Plot no: Pin 23/14, Iron Street, Otjiwarongo in the Otjozondjupa Region. The coordinates are; - 20.453882: 16.645104. The area of the site is 4440m². Figure 1 below shows the Location Map and Table 1 the coordinates and the area of the study area.

Table 1: shows project location information for the charcoal processing plant

Address	Town & Region	Coordinates of the Project Site	Area (Square Meters)	Nearby Neighbors
Plot no: Pin 23/14, Iron Street	Otjiwarongo Otjozondjupa Region	-20.453882: 16.645104	4440m ²	 Lucky Star Transport and Services Jan Van Zyl Otjiwarongo Panel Beaters



Figure 1: shows location map

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2.2 SURROUNDING LAND USES

Afri-United Charcoals Trading CC is surrounded by small scale industries which mainly deal with vehicle repair and maintenance. The site is accessed via iron street, Otjiwarongo. Images below show the neighbours to the site.



a) Immediate neighbour to the south (the facility is not in use)



b) Further property to the south (the facility is not in use)



c) Otjiwarongo Panel Beaters further south



d), Immediate neighbor to the west Jan Van Zyl



e) Immediate neighbor to the east Lucky Star Transport and Services Site image 1: shows surrounding features (a-e)

2.3 PROJECT ACTIVITIES

2.3.1 OPERATION PHASE

The operational phase of the charcoal processing plant involves the following activities; offloading, screening, packaging, storage and distribution. To note, no burning is done at the site, the proponent buys the charcoal from the farms. Currently the proponent is buying Acacia Mellifera and to note, the proponent is no longer buying mopane and in cases that pieces of mopane are found within the offloaded stock, they are removed during the screening phase. Mopane was suspended by the government. The good quality charcoal which is obtained after screening is exported and the fines are sold to Ohorongo Cement. The following activities are conducted at the charcoal processing plant;



Figure 2: shows project operational activities

1) Offloading:

The charcoal is sourced from surrounding farms and packaged into 50kg bags. The charcoal is then transported and offloaded at the site. The offloading is done manually by the employees. Generally, three trucks offload the charcoal per week or 30-40 tonnes is offloaded per week.



Site image 2: Offloaded charcoal

2) Screening:

The charcoal is then separated according to size and quality through a process called screening. A screener which is operated manually is used during the screening phase. Handpicking is also done to separate the charcoal according to size and quality. The charcoal is separated according to the sizes of 50mm-250mm (big), around 30mm- 50mm (medium) and 0mm-30mm (fines). In most cases, 90% will be charcoal and 10% fines.



a)





Site image 3: screening process (a-b)

3) Packaging:

The charcoal is then packaged into 50kg bags and weighing is done to ensure the kilogrammes. Care is also taken to ensure the charcoal is dry before sealing to prevent molds. The fines are also packed and kept separately to be sold at Ohorongo Cement.



Site image 4: packaging



Site image 5: fines packed in 50kg bags and covered

4) Storage:

The charcoal is stored for fourteen days before it is distributed into the market. The charcoal is stored in a dry, well-ventilated warehouse and regular checks are done to ensure the bags remain sealed and undamaged. A fire extinguisher was available in the warehouse during the site visit.



Site image 6: charcoal stored in the warehouse

5) Distribution:

This is the final phase when packaged charcoal is distributed to the end users.



Site image 7: truck loading the charcoal

2.3.2 DECOMMISSIONING PHASE

Decommissioning phase is when the project comes to an end. The main issue at this stage will be rehabilitation. All affected areas will be rehabilitated so as to try to restore the environment to what it was before. Activities which will be done include, removal of site equipment which is mainly the screener and cleaning the site. The warehouse will remain there as it belongs to the owner of the facility.

2.4 HUMAN RESOURCES, INFRUSTRUCTURE AND SERVICES

1) ACCESS ROAD

The site is accessed via iron street, Otjiwarongo.



Site image 8: access road to the site

2) WORKERS AND ACCOMMODATION

Generally, the proponent employees around 20 people and they do not stay on site. During busy days they work Monday to Friday from 8am- 5pm and also Saturdays 8am-12 pm. When it's not busy days, they work Monday-Friday from 8am-1pm. The operations at the site are done manually. During the site visit, it was observed that the employees did not have adequate PPE.



Site image 9: employees working on site

3) WATER SUPPY AND USE

NamWater is the supplier of the water within the area. Water is required for human consumption and use in the ablution facilities. At the site, there is a tap and ablution facilities for both male and female and the employees can shower after work. Both domestic water and wastewater is contained through underground pipes.



Site image 10: ablution facilities and tapped water

4) ELECTRICITY RETICULATION

Electricity is used at the site and electricity lines run from the south to the **north of the site.** No telecom lines were seen in the vicinity.

5) WASTE MANAGEMENT

Empty bags are mainly the waste generated at the site. The bags are sorted and sent back to the supplier for reuse. Non-recyclables are disposed of in accordance with the regulations.



Site image 11: empty bags

6) FIRE PROTECTION

The site is cleared and this should always be maintained so as to prevent fires. A serviced fire extinguisher was available at the site.



Site image 12: fire extinguisher

2.4 PROJECT COST

The total funding that was used to set up the project was not established.

CHAPTER THREE: ANALYSIS OF ALTERNATIVES

Alternatives to the project are different options, other possibilities or other course of action, which can be adopted. According to the Environmental Management Act, No. 7 of 2007 and its regulations, alternatives considered should be analyzed. This will ensure that during the design evolution and decision-making process, potential environmental impacts, costs, and technical feasibility have been considered, which leads to the best option(s) being identified. Afri-Untied Charcoals Trading is operating an existing facility with existing footprint and no further alternatives have been considered.

CHAPTER FOUR: RELEVENT LEGISLATION

The project will be guided by various applicable legislations relevant to the project. The objective is to ensure that the project comply with Namibia's relevant laws, policies and regulations. Table 3 below indicates laws and policies relevant to the project.

Aspect	Legislation	Relevant Provisions	Relevance to the Project	
The Constitution	Namibian Constitution First Amendment Act 34 of 1998	 According to article 91(c) it provides for duty to guard against "the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia" Article 95 (l) deals with the "maintenance of ecosystems, essential ecological processes and biological diversity" and sustainable use of the country's natural resources. 	 Proponent is guarding and protecting the environment by ensuring that they do not buy restricted wood e.g mopane Proponent is committed to engage with the locals and this has been done through providing employment. 	
Environmental Environmental Management Act 7 of 2007		 States that, projects with significant environmental impacts are subject to an environmental assessment process (Section 27). Requires for adequate public participation during the environmental assessment process for interested and affected parties to voice their opinions on a project (Section 2). 	 The Environmental Management Act should guide the management of this project. Adverts should be published in two local newspapers twice and notices placed on site The public and relevant authorities should be consulted during the process of public participation as per the requirement of the act 	
	EIA Regulations (2012)	- Lists all activities, which cannot be undertaken without an EIA.	- This project is listed under waste management, treatment, handling and disposal activities	

Table 2: shows relevant legislations related to the project

			 2.2 Any activity entailing a scheduled process referred to in the Atmospheric Pollution Prevention Ordinance, 1976. The project generates charcoal dust mainly during the screening stage.
	Nature Conservation Ordinance No. 4 of 1975	Chapter 6 provides for legislation regarding the protection of indigenous plants	- Mopani has been restricted to be used for charcoal. In addition, protected plants should be protected hence the proponent should continuously ensure that they buy charcoal from trees which are not restricted.
	Environmental Assessment Policy of Namibia (1995)	The Policy seeks to ensure that the environmental consequences of development projects and policies are considered, understood and incorporated into the planning process, and that the term "environment" is broadly interpreted to include biophysical, social, economic, cultural, historical and political components.	- The EIA considers this term of "environment".
Soil	Soil Conservation Act 6 of 1969	This act covers the prevention and combating of soil erosion; the conservation, improvement and manner of use of the soil and vegetation; and the protection of water sources	- Prevent possibilities of soil contamination from fuels, oils and greases of trucks visiting the site
Water	Water Act 54 of 1956	- Prohibits the pollution of underground and surface water bodies.	- Contamination from fuels and oils from trucks should be avoided so as to prevent pollution of water resources.

Health and Safety	Labour Act (No 11 of 2007)	 This act emphasizes and regulates basic terms and conditions of employment, it guarantees prospective health, safety and welfare of employees and protects employees from unfair labour practices. The proponent will be obliged to create a safe working environment for the personnel working at the site. The proponent will have to comply with health and safety policies, including the compulsory use of specific PPE in designated areas to ensure adequate protection against health and safety risks.
	Public Health and Environmental Act, 2015	 The act mainly emphasis on proper management of the environment, to prevent negative health impacts. The act promotes proper waste management. Proper waste management should be promoted to prevent nuisance, which can consequently affect public health. Recycling, reuse and reduce must be practised at all times
	Heritage Act	 The Heritage Act of 2004 makes provision for the developer to identify and assess any archaeological and historical sites of significance. The existence of any such sites should be reported to the Monuments Council as soon as possible. The Council may serve notice that prohibits any activities as prescribed within a specified distance of an identified heritage/archaeology site. In an event that, the proponent comes across any archaeological or historical sites of significance, they should report immediately to the Monuments Council as soon as possible. The Council may serve notice that prohibits any activities as prescribed within a specified distance of an identified heritage/archaeology site.

N.B: The Proponent shall be required to comply with the legislations. Where there is need to engage independent consultants to facilitate compliance, the Proponent is encouraged to consult qualified personnel. The Environmental consultant is supposed to conduct monitoring assessments and produce bi-annual reports, which will be required during the renewal of the environmental clearance certificate.

CHAPTER FIVE: DESCRIPTION OF THE AFFECTED ENVIRONMENT

This chapter describes the environmental setting of the project, which includes the biophysical environment and the socio-economic environment. The baseline information will assist in the monitoring of the environmental impacts during the operation phase.

5.1 BIO-PHYSICAL ENVIRONMENT

5.1.1 Climate

Annual temperatures in Otjiwarongo are around 20-22°C and average maximum temperatures can reach 32-34°C (Mendelsohn etal 2003). The hottest month is December and colder months (July to August), the average minimum temperature reaches 4-6°C but barely drops below 0°C (Mendelsohn etal 2003).

Moreover, Otjiwarongo receives an average annual rainfall of 550-600mm per year and peak rainfall is received in January and February (Mendelsohn etal 2003). Otjiwarongo is one among a few areas in Namibia with 45-50 days per year which receives 1 mm or more of rainfall per year (Mendelsohn etal 2003). Table 3 below briefly describe the general climatic conditions experienced within the area of study, as deduced from the Atlas of Namibia, by Mendelsohn et al 2003.

Average Annual rainfall:	Rainfall in the area is averaged to be 550-600 mm per year								
Variation in rainfall:	Variation in annual rainfall is averaged to be 30-40 % per								
	year								
Average evaporation:	Evaporation in the area is averaged to be between 1960-								
	2100mm per year.								
Precipitation:	January & February receives high rainfall, with February								
	being the wettest.								
	June and July being the driest month								
Water Deficit:	Water deficit in the area is averaged to be between 1300-								
	1500mm per year.								
Temperatures	Annual temperatures are around 20-22 °C per year								
	Average maximum temperature 32°C-34°C								
	Hottest month December								
	Average minimum temperatures 4-6°C								
	Coldest month July & August								
Wind direction	Winds blow from SW to NE								
Humidity	Most humid month is March with 70%-80% and								
	September being the least with 10%-20%								

Table 3: shows general climate data

(Source: Atlas of Namibia, 2003)

5.1.2 Topography, Hydrology and Geology

The generally topography of the region comprises of a flat landscape with a few topographic extremes like the Omatako Mountains. Regional altitudes range from 1400m to 1600m amsl. The terrain of the study area is fairly flat.

The nearest river is Ugab which is approximately 45km north of the site. Nearest stream is Samanab which is approximately 1km northeast of the site. Southwest there is Otjihase which is approximately 3.8km. Even though the streams in the area are dry most of the time, except during the heavy raining season, it is important to take precaution so as to avoid water and soil pollution. In addition, the nearest borehole is 5089 which is approximately 24km south of the site and followed by borehole 29494 which is 25km northeast of the site. Furthermore, the general geology of the study area is the Damara supergroup and gariep complex see Figure 2: Hydrogeological Map below. There were also rock outcrops at the site as shown on site image 13 below.



Site image 13: rocks on site

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Figure 3: shows hydrogeological map

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5.1.3 Soils

In the Otjiwarongo district there are different types of soils but the most dominate ones are the eutric soils. According to Mendelsohn etal (2003), the dominant soil type in the study area is Ferralic Arenosols. Ferralic soils are soils with a high content of combined oxides of iron and aluminium (sesquioxides). Arenosols are formed from wind-blown sand and usually extent to a depth of at least one metre, with sand generally making up more than 70% of the soil (Mendelsohn etal 2003). The study area is dominated by loam soils. The soils around the screening area are colorized black with the charcoal fines.



Site image 14: soil type at the study area

5.1.4 Vegetation of the study area

The project area is located within the Acacia tree and shrub savanna specifically under thorn bush shrub land (Mendelsohn et al, 2003). The vegetation structure is classified as dense shrub land. Generally average plant production is extremely high and variation in green vegetation biomass is medium (10-15%) (Mendelsohn et al, 2003). Furthermore, the acacia tree and shrub savanna is characterized by large open expanses of grasslands dotted with Acacia trees. The most important grass species for grazers are *Schmidtia Kalahariensis* and *Cynodondactylon*. Otjiwarongo area is dominated by large herds of cattle mainly because the area has good grazing lands. The most important plant species found in the area of Otjiwarongo is the devil's claw and Tsamma melon (Mendelsohn et al, 2003).

In addition, the area of Otjiwarongo has invasive species. Alien or invasive species can be seen as problematic species due to their abundance and their likelihood of causing bush encroachment. Bush encroachment is a big problem in Namibia especially in areas with a high number of grazing and browsing animals. Problem species identified in the study area and in the Otjozondjupa region is the Acacia Mellifera.

At the site there is no vegetation except for a one big tree. Outside the fence boundary of the site on the northern side, there is mainly dense small-medium thorn trees.



Site image 15: vegetation on site

5.1.5 Fauna

The area of Otjiwarongo receives rainfall which makes it possible to domesticate animals. During the site visit, movement of animals like sheep and goats was observed as shown on the site images below. Table 4 below indicate the general fauna data for small creatures in the region.

Table 4: shows summary of general fauna data

Mammal Diversity	91-105 Species
Bird Diversity	201-230 Species
Reptile Diversity	81-85 Species
Frog Diversity	16 - 19 Species
Termite Diversity	10 - 12 Genera
Scorpion Diversity	12 - 13 Species

Source: Atlas of Namibia (2003)



Site image 16: shows sheep & goats outside the fence boundary of the site

5.2 SOCIO-ECONOMIC ENVIRONMENT

Otjozondjupa is one of the bigger regions of Namibia and is located in the northern half of the country, bordering the Khomas and Omaheke regions in the south, the Erongo and Kunene regions in the west and the Oshikoto, Kavango-West and Kavango-East regions in the north.

5.2.1 Population

The population density of the Otjozondjupa Region is low (1.5 persons per km²) when compared to the national average, and the current total population of the region was estimated at 154,342 in 2016 (NSA, 2017). In 2011 the population of Otjiwarongo was 28,249 and with a generalized urbanization growth rate of 4.0% the current estimated population is estimated to be 40,200 residents (NSA, 2017).

5.2.2 Education Profile

According to NSA (2011), the regional literacy rate is 83.2%, with no major differences between males and females. The literacy rate in urban areas stood at 90.9 %, while in rural areas it stood at 73% (NSA 2011). Moreover, according to NSA (2011) Otjozondjupa region had 72 schools, 60 are state owned and 12 are privately owned. Primary school are 48 and 40 are state owned and 8 are private schools whilst secondary schools are 13 and 12 are state owned and one privately owned. The number of teachers is around 1315 and only 100 are without training (NSA 2011). It is vital to comment that the educational system in the region can be classified as good given that the literacy rate and the number of teachers is high.

5.2.3 Employment Opportunities

According to NSA (2011), 63.2 % of the economically active population aged 15 years and above is employed and 36.8 % unemployed in Otjozondjupa region. There were slight differences between urban and rural areas, whereby 69 percent were employed in rural areas compared to the 58.8 percent in urban areas (NSA, 2011). The agriculture, fishing and forestry sectors employ most of the region's economically active population and according to NSA (2011), 12 526 are employed in these sectors. However, in Otjiwarongo urban people mainly depend on wages and salaries and business activities which constitute 65.8% and 12.7% respectively (NSA, 2011).

The region is linked by rail and by main roads running from the south to the north. Communication systems among the towns in the region (Okahandja, Otjiwarongo and Grootfontein) are also of a high standard. Otjiwarongo is located on the B1 road and it links between Windhoek, the Golden Triangle of Otavi, Tsumeb and Grootfontein, and Etosha National Park.

CHAPTER SIX: PUBLIC CONSULTATION

Public consultation process is a fundamental principal of the EIA process and it involves engaging members of the public to express their views about a certain project. Public involvement is a valuable source of information on key impacts, potential mitigation measures and the identification and selection of alternatives. The Environmental Management Act (No 7 of 2007) and the Environmental Impact Assessment Regulations of 2012 empowers the local community to participate in projects conducted within their jurisdiction. Section 21 to 24 of the EIA regulations of 2012 describe the public consultation process. During the public consultation of the project, the following principals were used: inclusivity, transparency and relevance.

6.1 OBJECTIVES OF THE STAKEHOLDER CONSULTATION PROCESS

The objectives of the public consultation are;

- To inform I&AP about the activity and to give them the opportunity to express their views, concerns or opinions.
- To reduce conflict through early identification of contentious issues
- To gather potential negative and positive environmental impacts associated with the project from the stakeholders' perspectives.
- To engage stakeholders for the effective mitigation and enhancement of negative and positive impacts arising from the project respectively.

6.2 PRINCIPLES GOVERNING PUBLIC CONSULTATION

The following principals were used during the public participation:

6.2.1 Inclusivity

The public participation was open for everyone; invitation to make comments was announced in the local newspapers, New Era and The Namibian. To ensure that all stakeholders were involved, the consultant compiled a list I&AP. The Affected parties were the neighbors to the site and the employees of Afri-United Charcoals Trading. The Interested parties was the Municipality of Otjiwarongo.

6.2.2 Open and transparency

The consultant took time to explain the background of the project and both positive and negative impacts associated with the project. All people who registered as I&AP were also given a BID.

6.2.3 Relevance

The consultant remained focused on subjects related to the project. I&AP were supposed to make comments relating to socio-economic and environmental impacts associated with the project. Political and other non-related comments were considered not relevant.

6.3 NOTIFICATION OF INTERESTED AND AFFECTED PARTIES

The consultation was facilitated through the following means:

6.3.1 Background Information Document (BID)

The consultant prepared a BID, which was circulated to I&AP. A BID is a short document, which briefly gives the background of the project. The main aim of distributing the BID to I&AP is to bring awareness and clarity about the project. **A copy of the BID is provided in Appendix A.**

6.3.2 Advertisement

Adverts were placed in two local newspapers namely, New Era and The Namibian as shown in table 5 below.

Newspaper	Area of Distribution	Language	Date Placed
The Namibian	Country Wide	English	14 April 2025
The Namibian	Country Wide	English	22 April 2025
New Era	Country Wide	English	14 April 2025
New Era	Country Wide	English	22 April 2025
Site notices	Afri-United Charcoals Trading	English	15 April 2025
	Lucky Star Transport and Services		
	Municipality of Otjiwarongo		

Table 5: shows details of the public notification for the project

(See Appendix A)

6.3.3 Questionnaires

The consultant visited the neighbors to the site and provided them with a BID and a questionnaire. Distribution of questionnaires was also done to allow stakeholders to air their views. The questionnaires were open –ended whereby the respondent was free to express their views and ideas. **The questionnaires are attached in Appendix A**.

6.3.4 Public Notices

Notices with project information were placed at the site, Lucky Star Transport and Services and at Municipality of Otjiwarongo. Site images below show the notices.





Site image 17: shows public notices at the site, at Lucky Star Transport and Services & at Municipality of Otjiwarongo

6.4 SUMMARY OF STAKEHOLDERS CONSULTATION.

The neighbors to the site were consulted and these include Lucky Star Transport and Services, Jan Van Zyl and Otjiwarongo Panel Beaters. Lucky Star Transport and Services and Jan Van Zyl responded and they both indicated that they do not have a problem with the operations at Afri-United Charcoals Trading. In addition, the employees at Afri-United Charcoals Trading were also consulted and no issues were highlighted. For the responses, see the attached questionnaires. Municipality of Otjiwarongo was also consulted and the following issues were highlighted;

- 1. Health and safety of the employees at the processing plant.
- 2. Pollution mitigation, especially from the charcoal dust.

6.4.1 Stakeholders' Recommendations

The Municipality of Otjiwarongo recommended that the employees should be provided with suitable protective clothing, including a suitable respirator, to protect them from dust exposure. In addition, they also recommended that appropriate mitigation should be given to prevent charcoal dust.

CHAPTER SEVEN: ASSESSMENT OF ENVIRONMENTAL IMPACTS

This section serves to identify all the potential impacts both negative and positive. In identifying these potential impacts, mitigation measures have been proposed so that the Proponent may carry out the process in an environmentally sound manner. The methodology, which was used to assess impacts include the following:

- Public consultation
- Site visit
- Professional experience

7.1 IDENTIFICATION OF POTENTIAL IMPACTS OF THE PROJECT

Positive Impacts

- Employment creation _
- Generation of revenue government through taxes
- Generation of revenue for the Land Environment farmers

Negative impacts

- **Air Environment**
- for Dust
 - Noise _

 - Generation of waste
 - Impact on flora and fauna
 - Impact on soil

Water Environment

- Impact on surface and groundwater sources
- **Socio** -Economics
- Occupational Health and Safety risks.
- Indirect Impacts
- Cumulative impacts

7.2 IMPACT ANALYSIS

In this section, the impacts of the project on human and biophysical environment are evaluated and analyzed. Following the identification of the various potential environmental impacts, the matrix method was used to evaluate the impacts.

Table 6: ranking matrix

	Temporal scale						
	Short term	Less than 5 years	1				
	Medium term	Between 5 and 20 years	2				
	Long term	Between 20 and 40 years (a generation) and from a	3				
		human perspective almost permanent.					
	Permanent	Over 40 years and resulting in a permanent and lasting	4				
		change that will always be there.					
		Spatial Scale					
	Study area	The proposed site /within immediate area of the activity	1				
	Beyond project boundary	Surrounding area outside the project boundary	2				
	Regional	District and Provincial level					
	National	Country	4				
	International	Internationally	5				
		Severity Benefit					
	Slight/Slightly	Slight impacts on the Slightly beneficial to the	1				
	Beneficial	affected system(s) or affected systems(s) or					
<i>.</i>		party(ies) party(ies)					
5	Moderate/Moderately	Moderate impacts on the An impact of real benefit	2				
E E	Beneficial	affected system(s) or to the affected system(s)					
Ē		party(ies) or party (ies)					

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	Severe/Beneficial	Severe impacts on the A substantial benefit to	4						
		affected system(s) or the affected system(s) or							
		party(ies) party(ies)							
	Very Severe/Very	Very severe change to the A very substantial benefit	8						
	Beneficial	affected system(s) or to the affected system(s)							
		party(ies) or party(ies)							
	Likelihood								
A	Unlikely	The likelihood of these impacts occurring is slight	1						
8	May occur	The likelihood of these impacts occurring is possible	2						
Ĥ,	Probable	The likelihood of these impacts occurring is probable							
E	Definite	The likelihood is that this impact will definitely occur							
LII									

Table 7: ranking matrix for environmental significance

Environment	tal Significance	Positive	Negative
LOW	An acceptable impact for which mitigation is desirable but not essential. The impact by itself is insufficient even in combination with other low impacts to prevent development.	4-7	4-7
MODERATE	An important impact, which requires mitigation. The impact is insufficient by itself to prevent the implementation of the project but which, in conjunction with other impacts may prevent its implementation.	8-11	8-11
HIGH	A serious impact, which, if not mitigated, may prevent the implementation of the project. These impacts would be considered by society as constituting a major and usually long-term change to the natural and/or social environment and result in severe negative or beneficial effects.	12-15	12-15
VERY HIGH	A very serious impact, which may be sufficient by itself to prevent the implementation of the project. The impact may result in permanent change. Very often, these impacts are unmitigable and usually result in very severe effects or very beneficial effects.	16-20	16-20

Table 8: matrix to show environmental significance

	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2	5	6	7	8	9	10	11	12	13	14	15	16	17	18
3	6	7	8	9	10	11	12	13	14	15	16	17	18	19
4	7	8	9	10	11	12	13	14	15	16	17	18	19	20

7.3 IMPACT EVALUATION

The evaluation was based on the current operational activities on site which are; offloading, screening, packaging, storage and distribution.

7.3.1 Negative impacts associated with operation phase:

1. Charcoal Dust

Identified			Effect			Dist	0	0		
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	Likelihood	Score	Significance	
Charcoal Dust Unmitigated	Short term	1	Beyond project boundary	2	Moderate impact	2	Definite	4	9	
Mitigated	Short term	1	Study area	1	Slight impact	1	Definite	4	7	

Charcoal dust is mainly generated during screening stage. As the workers will be pouring the charcoal from the bags into the screener, the fines pollute the air and affect the visual especial of the area around the screener. Depending with the severity of the wind, during times when winds are strong, the charcoal fines are expected to travel over longer distances and during weak winds, the fines will travel over shorter distances which will be mainly within the study area. In addition, the severity of the impact will also depend on the quality of the charcoal, some bags will have minimum fines hence less charcoal dust to be produced.

The impact only happens within working hours and in some cases less hours are likely to be spend during days when there is minimum or no work. The employees are the ones who are highly at risk of being affected by the charcoal dust, the neighbors to the site are a distance from the site hence less likely to be affected and at the site there is no significate vegetation except one big tree. The outside vegetation is less likely to be affected by the charcoal dust as it is a distance and also to note most of the surroundings are cleared as the area is an industrial area. The impact is however expected to be of low environmental significance thus with mitigation measures.

- Install a shade which is well ventilated around the area of the screener
- Provide the employees with appropriate PPE e.g face masks/respirators, goggles, protective clothing
- Good housekeeping especially around the screener
- Use of water sprays so as to suppress dust
- Use of vegetation buffers, planting trees and vegetation around the screening area so as to trap dust particles and reduce wind dispersion.

2. General dust

Identified			Effect			Dials or	50070	O rromo 11		
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	Likelihood	Score	Significance	
General Dust Unmitigated	Short term	1	Study area	1	Slight impact	1	May occur	2	5	
Mitigated	Short term	1	Study area	1	Slight impact	1	May occur	2	5	

Dust is likely to be produced by frequenting trucks. Around three trucks per week offload the charcoal at the site. The dust produced is likely to affect the study area and dust may still occur with or without mitigation. The severity of the impact is expected to be slight given the low volume of trucks which frequent the site. The overall environmental significance will be low.

- The drivers should minimize their speed to avoid emitting more dust
- Use of dust suppression methods e.g., sprinkling water

3. Noise impact

Idontified		Eff	ect							
Impact	Temporal Scale	Score	Spatial Scale	Spatial Score Severi Scale Score of imp		Score	Risk or Likelihood	Score	Overall Significance	
Noise Unmitigated	Short term	1	Study area	1	Slight impact	1	May occur	2	5	
Mitigated	Short term	1	Study area	1	Slight impact	1	Unlikely	1	4	

Noise might be generated locally from frequenting trucks. Noise generated is likely not to affect outside the boundaries of the site. The impact of noise will remain of low environmental significance with or without mitigation.

- Noise should be addressed and mitigated at an early stage.
- Proper and timely maintenance of trucks

4. Generation of waste

Identified			Effect						
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	Risk or Likelihood	Score	Overall Significance
Impact of waste Unmitigated	Short term	1	Study area	1	Slight impact	1	Unlikely	1	4
Mitigated	Short term	1	Study area	1	Slight impact	1	Unlikely	1	4

Waste might be generated from oils and fuel leakages, food leftovers and empty charcoal bags. If the impact is to happen, it is expected to be a slight impact given that no fuel or oils are kept onsite, rather these can come from leakages from trucks which will be frequenting the site. During the site visit, it was observed that a lot of empty bags are produced after emptying the charcoal but the proponent keeps them in the storage room. Both offloaded charcoal and fines are kept in the 50kg bags and covered with big plastic bags. If waste is to be generated it will likely affect the study area and will be of slight impact.

- Contaminated waste in the form of soil, litter and other material must be disposed off at an appropriate disposal site.
- Strictly, no burning of waste at the site or at the disposal site is allowed as it possess environmental and public health impacts.
- Place well labelled bins at the site

5. Impact on soil

Idontified			Effect						
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	Risk or Likelihood	Score	Overall Significance
Soil Unmitigated	Short term	1	Study area	1	Slight impacts	1	May occur	2	5
Mitigated	Short term	1	Study area	1	Slight impacts	1	Unlikely	1	4

Soil might be partly affected by oil or fuel leakages from frequenting trucks. The impact is expected to affect only the immediate study area and the probability of soil being contaminated is unlikely if the trucks are well maintained.

- Proper care should be taken so that there is no spill that would cause soil contamination
- If any hazardous waste is produced it should be properly handled and sent for disposal to appropriate disposal areas
- Fuels shall not be kept/stored at the site.

Identified			Effect						
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	Risk or Likelihood	Score	Overall Significance
Surface & groundwater Unmitigated	Short term	1	Study area	1	Slight impact	1	Unlikely	1	4
Mitigated	Short term	1	Study area	1	Slight impact	1	Unlikely	1	4

6. Impact on surface and groundwater sources

There will be no storage of oils and fuel on site, however there is risk of spillage of hydrocarbons from trucks which may result in environmental contamination. It is essential to note that, there are no nearby rivers which will make surface water sources less likely at risk. The nearest river is Ugab which is approximately 45km from the site. Groundwater sources are also less likely to be affected given that less trucks frequent the site. The nearest borehole is approximately 25km from the site.

Mitigations and recommendation

- No maintenance of trucks on site and the trucks should be regularly serviced
- Waste oils and fuels from drip trays on stationery trucks should be disposed off as hazardous waste at a licensed disposal facility.

7. Impact on fauna and flora

Identified			Effect						
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	Risk or Likelihood	Score	Overall Significance
Impact on fauna & flora Unmitigated	Short term	1	Study area	1	Slight impact	1	May occur	2	5
Mitigated	Short term	1	Study area	1	Slight impact	1	Unlikely	1	4

The site is already cleared with only one big tree hence no vegetation will be affected at the site. Outside the boundary of the site there is a built environment except on the northern side where the vegetation is mainly thorny bush trees. The nearest distance to the outside vegetation is approximately 11m. During the times of strong winds, the fines might be blown away but the impact on the outside vegetation is expected to be of low environmental significance. In addition, within the study area animals do not get inside as the area is fenced. However, animals such as sheep and goats were observed outside the fence boundary. The only impact which might affect them is charcoal dust and noise from frequenting trucks.

Mitigations and recommendation

- Install a shade which is well ventilated around the area of the screener
- Good housekeeping especially around the screener
- Use of water sprays so as to suppress dust

8. Fire risks and occurrences

Identified			Effect						
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	ore Risk or Likelihood		Overall Significance
Fire risks Unmitigated	Short term	1	Study area	1	Moderate impact	2	May occur	2	б
Mitigated	Short term	1	Study area	1	Slight impact	1	Unlikely	1	4

Operational activities may cause the risk of fire occurrences. Fire risks may result in property damage and possible injuries.

- Fire protection and a prevention plan, with inclusion of an emergency response
- Fire extinguishers

7.3.2 Negative socio-economic impacts associated with operation phase:

Identified	Effect								
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	Risk or Likelihood	Score	Overall Significance
O.H.S Unmitigated	Short term	1	Study area	1	Moderate impacts	2	Probable	3	7
Mitigated	Short term	1	Study area	1	Slight impact	1	Unlikely	1	4

1. Occupational Health and Safety Risks

Charcoal dust mainly produced at the screening stage might affect employees stationed at the area. Continuous exposure can cause increased risks of cough, chronic bronchitis, bronchial asthma, skin irritation and eye problems. In addition, continuous lifting of charcoal bags during offloading and after packaging when they are moved to the warehouse can cause ergonomic hazards to the employees. The main areas of concern for ergonomic hazards at the site include; lifting of the charcoal bags, rolling of the screener and extreme temperatures given that its an open area where screening is done. Occupational stress and injuries are also hazards which might be encountered during work. Moreover, work pressure on employees can also cause stress which can result into accidents.

Mitigation and recommendation measures:

- Install a well-ventilated shade at the screener to reduce the effects of extreme temperatures.
- Provide the employees with appropriate PPE e.g; work suits, safety shoes, gloves, masks/respirators, goggles etc and this should be frequently done
- Employees must frequently exchange duties so as to avoid repetition, awkward postures, stationary positions and continuous direct pressure which can cause wear and tear of the body.
- Conduct Hazard identification and risk assessments
- Comply with all Health and Safety standards specified in the Labor Act.
- Conduct safety talks before commencement of work this will help employees to recognize and control hazards at the workplace.

- Training of employees on aspects such as dust hazards, safe handling practices, proper use of protective equipment, good housekeeping etc.
- Maintain cleanliness in ablution facilities and ensure readily available stations with soap
- No eating or drinking in work areas, prevent ingestion of dust by restricting food consumption in dusty areas.
- Provision of First Aid at the site
- Provisions of immediate accident/incident reporting and investigation.

2. Heritage impact

Identified			Effect			-			
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	Risk or Likelihood	Score	Overall Significance
Heritage impact Unmitigated	Short term	1	Study area	1	Slight impact	1	Unlikely	1	4
Mitigated	Short term	1	Study area	1	Slight impact	1	Unlikely	1	4

At the site, there are no known heritage areas or artefacts deemed to be impacted by the operations. In addition, if the proponent come across archaeological features or objects that possess cultural values (e.g. Pottery, bones, shells, ancient clothing or weapons, ancient cutlery, graves etc.), the area should be barricaded off and the relevant authorities should be contacted immediately.

- All works are to be immediately ceased should an archaeological or heritage resource be discovered.
- The National Heritage Council of Namibia (NHCN) should advise with regards to the removal, packaging and transfer of the potential resource.

3. Cumulative Impacts

Identified			Effect							
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	Risk or Likelihood	Score	Overall Significance	
Cumulative impact Unmitigated	Short term	1	Study area	1	Moderate impact	2	Probable	3	7	
Mitigated	Short term	1	Study area	1	Slight impact	1	Unlikely	1	4	

Charcoal dust is going to be generated and blown away which will have an impact of reducing the air quality and also affecting the employees work at the site, mainly at the screener.

Mitigation measures and recommendations:

- Install a shade which is well ventilated around the area of the screener
- Provide the employees with appropriate PPE e.g face masks/respirators, goggles, protective clothing
- Good housekeeping especially around the screener
- Use of water sprays so as to suppress dust
- Use of vegetation buffers, planting trees and vegetation around the screening area so as to trap dust particles and reduce wind dispersion.

7.3.3 Positive impacts associated with the project

1. Employment creation

Identified			Effect						
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	Risk or Likelihood	Score	Overall Significance
Employment creation Unmitigated	Long term	3	National	4	Very beneficial	8	Definite	4	19
Mitigated	Long term	3	National	4	Very beneficial	8	Definite	4	19

Jobs have been created and around 20 people are being employed. Indirect employment has also been created as truck drivers who distribute the charcoal and workers who burn the charcoal are indirectly employed.

2. Generation of Revenue

Identified		Effect							
Impact	Temporal Scale	Score	Spatial Scale	Score	Severity of impact	Score	Risk or Likelihood	Score	Overall Significance
Revenue Unmitigated	Long term	3	National	4	Very beneficial	8	Definite	4	19
Mitigated	Long term	3	National	4	Very beneficial	8	Definite	4	19

Afri-United Charcoals Trading CC will pay tax hence generating revenue. More taxes will also be generated through contracted companies.

7.3.4 Decommissioning Phase

The stage of decommissioning is expected to have minimum effects to the environment. No much equipment will be removed from the site. The warehouse on site belongs to the owner of the facility hence even if the project come to an end, the infrastructure will have to remain there.

However, during the decommissioning phase, precaution must be taken to avoid employees from being injured. Waste generated should also be disposed at an approved waste facility and not dumped in the surrounding areas.

7.4 SUMMARY & ANALYSIS OF IMPACTS

All the rated impacts fell under low environmental impacts with or without mitigation except the impact of charcoal dust if unmitigated can reach moderate impact. This therefore implies that; it's an important impact, which requires mitigation. The impact is insufficient by itself to prevent the implementation of the project but which, in conjunction with other impacts may prevent its implementation.

CHAPTER EIGHT: ENVIRONMENT MANAGEMENT AND MONITORING PLAN

Environmental planning and management as a concept seek to improve and protect environmental quality for both the project site and the neighborhood through segregation of activities that are environmentally incompatible. Environmental planning and management integrate land use structure, social systems, regulatory law, environmental awareness and ethics. Environmental Management Plan (EMP) is a vital output for an Environmental Impact Assessment as it provides a checklist for project monitoring and evaluation.

EMP for the project is aimed at providing a logical framework within which identified negative environmental impacts can be mitigated and monitored. **See Appendix C**, for the EMP.

CHAPTER NINE: CONCLUSIONS AND RECOMMENDATIONS 9.1 CONCLUSION

The social and economic rating for this project is positive. The project does not pose serious negative environmental impacts. Mitigation measures have been proposed to address any of the negative impacts arising from the project. Should the Proponent implement all the suggested mitigation measures, the consultant recommends the issuance of the Environmental Clearance Certificate.

9.2 RECOMMENDATIONS

The following recommendations have been brought forward:

- Install a shade which is well ventilated around the area of the screener
- Provide the employees with appropriate PPE e.g face masks/respirators, goggles, protective clothing and this should be frequently done
- Environmental monitoring by an independent environmental consultancy must be carried out to monitor environmental compliance. Bi-annual reports should be written and submitted to MEFT. These monitoring reports should accompany the application for renewal of the environmental clearance certificate after 3 years

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