

**PROPOSED**

**ENVIRONMENTAL AND SOCIAL MANAGEMENT AND  
MONITORING PLAN (ESMMP)**

**FOR**

**THE AIM TO ESTABLISH AND OPERATE A SMALL  
STARTUP WELDED MESH MANUFACTURING FACILITY  
IN WINDHOEK, KHOMAS REGION**

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**FOR**

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*SMARTCRETE  
MANUFACTURING SOLUTIONS  
NAMIBIA*

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**Prepared by:**

Nico E. Willemse  
[info@earthwiseesg.com](mailto:info@earthwiseesg.com)  
Cell: 081 469 3631

**3 APR 2024**

<b>Project</b>	<b>Environmental and Social Management and Monitoring Plan (ESMMP) for the aim to establish and operate a small startup welded mesh manufacturing facility in Windhoek, Khomas region</b>
<b>Report date</b>	3 April 2024
<b>Prepared for</b>	Smarterete Manufacturing Solutions Namibia
<b>Prepared by</b>	Nico E. Willemse
<b>Contact details</b>	<a href="mailto:info@earthwiseesg.com">info@earthwiseesg.com</a> <a href="mailto:jeano@iway.na">jeano@iway.na</a>

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## **1. Proposed ESMMP for Smartcrete Manufacturing Solutions Namibia CC**

### **1.1. Objectives**

This Environmental and Social Management and Monitoring Plan (ESMMP) outlines the commitment of Smartcrete Manufacturing Solutions Namibia cc in accordance with the Environmental Management Act (2007) and its Regulations (2012) to proactively prevent and address any potential adverse impacts.

The ESMMP encompasses crucial aspects such as identifying the key issues, evaluating potential impacts, proposing effective mitigation measures, designating responsible parties, establishing timelines, and estimating the necessary budget.

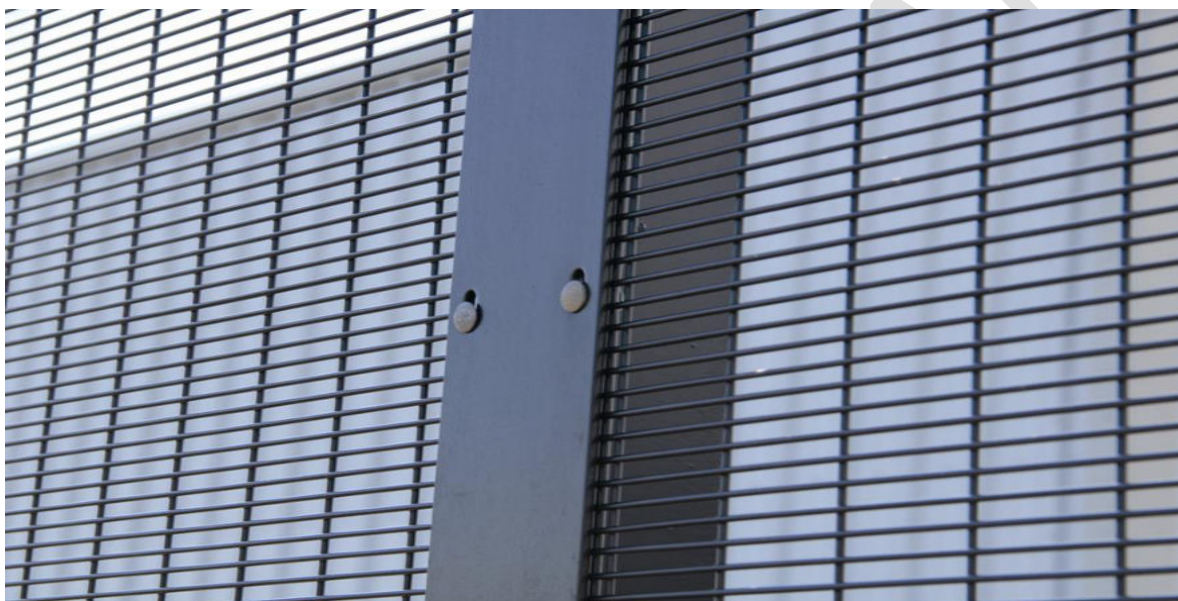


Figure 1: The welded mesh fence is an integral part of our product, providing a secure and durable barrier. Once the panels are installed, the fence takes shape and transforms into a complete and functional product. With its sturdy construction and precise welding, our welded mesh fence offers reliable protection and enhances the aesthetic appeal of any property.

## **2. Project Overview, Key Issues and Potential Impacts**

### **2.1. Project Overview**

Mr. Jeano van Taak, a Namibian citizen, is the project proponent who aims to establish and operate a small to medium enterprise in Namibia. The focus of this business will be the manufacturing of various welded mesh products, with a particular emphasis on welded mesh panels for fencing. In order to ensure the viability of this venture, a comprehensive assessment of the technological, financial, environmental, and social aspects has been conducted. As part of the overall enviro-social impact assessment, this proposed ESMMP (Environmental and Social Management and Monitoring Plan) is being presented.

This project involves the following key elements: 1. The establishment, testing, and operationalization of a manufacturing facility with state-of-the-art machinery for welded mesh solutions. 2. The utilization of an existing small warehouse in Windhoek, preferably Lafrenz

Industrial, with a minimum area of 100 m<sup>2</sup> and three-phase power. This location offers convenient access to major highways, facilitating efficient distribution. 3. The sourcing of raw materials primarily from local companies Kalahari Wire Products and Benthin African Agencies. In the event that local sourcing is insufficient, we also have the option to directly import raw materials from South Africa. By leveraging our strategic location, advanced machinery, and reliable local suppliers, we are poised to establish a highly efficient manufacturing operation.

Consequently, we will distribute our manufactured products directly to our main target market, which primarily comprises established retailers. These retailers include Agra, Pupkewitz Megabuild, Build It, Kaap Agri, Bargain Building Supplies, and Ark Trading, along with their numerous outlets. It is important to note that our proposal has been presented to their head buyers, who have already given their endorsement for this project.

The project has been carefully designed to ensure no impact on the ground conditions, soil, underground and surface water, as well as the surrounding flora and fauna. We have taken all necessary precautions to prevent any disturbance or negative effects on plants, animals, habitats, ecosystems, and landscapes. Our aim is to not only achieve our manufacturing and trading goals but also to prioritize environmental sustainability and conservation. We understand the importance of preserving nature and are committed to conducting our business in a sustainable and responsible manner. Rest assured; our project will not pose any negative impacts on the environment.

All production activities will be conducted within the existing warehouse. Raw materials will be transported to the warehouse via road or imported cross-border through trucking. The distribution of products to clients in Namibia and the SADC region will utilize road and rail transport. It is important to note that the greenhouse gas emissions generated from these activities are considered negligible when compared to the overall GHG emissions baseline for Namibia. Whenever feasible, we will prioritize the use of railways to reduce costs and lower the risk of road accidents associated with road transportation. By implementing these measures, we aim to maximize efficiency and minimize any potential negative impacts on the environment.

## 2.2. Key issues and potential impacts

- **Socio-economic:** The initial production line will have two to three employees. Another employee will handle administration and management. The goal is to expand production capacity by adding more lines once the business is financially stable. This approach avoids excessive debt and allows for manageable operations and repayment.
- **Economic:** Contribution to the Gross Domestic Product (GDP), corporation taxes (exceeding N\$300K per annum), local authority utilities such as water and electricity, and levies and tax payments (estimated to be between N\$5K and N\$10K per month) are significant aspects of Smartcrete Manufacturing Solutions operations as a Namibian company. Our commitment is aligned with investing, banking, and sourcing locally, whenever feasible.
- **Electricity use:** The monthly electricity usage is not expected to be high due to the low input voltages required for both the top-of-the-line spot welder and the state-of-the-art computer numerical control system. Est. N\$5K – N\$8K/month

- **Water use:** The manufacturing process of the business does not require any water usage. Any water consumption without our operations is limited to necessities such as toilets and water basins.
- **Wastes and emissions:** The top-of-the-line spot welder is a specialized piece of equipment that distinguishes itself from conventional welding devices by eliminating the use of rods, welding wire, gas, smoke, and sparks. Instead, it utilizes a current to seamlessly fuse two wires together, resulting in a clean and precise weld with only a minimal spark. Because of precision welding no waste material will be left or generated. Everything will be used in the product.
- **Transport:** The raw materials, which will be sourced locally, will be transported by small trucks utilizing the existing road infrastructure. The distances covered during transportation will be relatively short, as we plan to lease a warehouse near the local suppliers. Similarly, the same transportation method will be employed for delivering finished products to the distributors.
- **Biodiversity:** Based on our analysis, we have determined that this project will have no direct or indirect impacts on biodiversity. Our comprehensive assessment considers various factors such as the location of the project, the manufacturing process, and the materials used. Additionally, we prioritize the use of sustainable resources and materials, which further reduces our ecological footprint. We are thus confident that our project will have no detrimental impacts on biodiversity.
- **Human occupational health and safety (OHS):** No heavy-duty welding goggles are required for our spot-welding machine, unlike conventional welding which involves an intense arc. Although our proposed activities in manufacturing carry inherent safety risks, we prioritize the well-being of our staff. Therefore, all employees will receive comprehensive training in Occupational Health and Safety (OHS), as well as in the proper handling and usage of equipment, raw materials, and tools. To further enhance safety throughout our operations, the warehouse will feature appropriate signage, floor markings, and designated spaces. Additionally, we will provide all staff with adequate personal protective equipment (PPE).

### 3. Approval

This ESMMP is a working document that Smartcrete Manufacturing Solutions will regularly review and revise to address critical issues related to our production system and processes. We will ensure that all SMS staff are familiar with the ESMMP, and its implementation will be included in the job descriptions of specific staff members.

The Smartcrete Manufacturing Solutions Namibia manager will be responsible for providing guidance and supervision during the implementation of the ESMMP. They will also handle the updating and submission of reports to the MEFT.

### 4. Project Phases

There are two project phases: plant assembly and plant operation. Both phases do not have any negative environmental and social impacts, except for the potential risk of injury during plant

operation. Let's take a closer look at each phase, followed by the proposed Environmental and Social Management and Monitoring Plan (ESMMP).

#### **4.1. Assembly Plant Establishment, Testing and Commissioning**

This phase is estimated to last approximately 20 to 24 weeks, which is roughly 6 months, with a variation of 2 to 3 months for the initial order and importation of the manufacturing machinery from overseas. Once the machinery arrives, our focus will shift towards preparing the warehouse to accommodate the manufacturing equipment. Our objective is to optimize the floor plan to ensure efficient assembly operations, while giving top priority to safety and accessibility. We will designate specific areas for different activities and make arrangements for the provision of electricity and raw materials. Following the warehouse setup, we will proceed with the machinery setup and optimization, which is expected to take around 1 to 2 months. This timeframe allows us to ensure that everything is in order for smooth operation and minimize any potential setbacks. While we do not anticipate any significant negative environmental or social impacts, it is possible that minor injuries may occur during the movement and installation of the assembly machinery. As for staffing, we will proactively recruit and train all personnel well in advance. Once the installation and operation of the machinery are completed, the trained staff members will undergo an additional month of training. This approach not only facilitates a smoother implementation process, but also equips our team for future maintenance and servicing of the technology. To prioritize the well-being of our staff, we will provide them with appropriate personal protective equipment (PPE) to ensure their safety.

#### **4.2. Assembly Plant Operation**

Following the commissioning of the facility after its initial setup, Smartcrete Manufacturing Solutions Namibia cc's manufacturing plant will enter into commercial operation. This is an exciting milestone for the company as it marks the beginning of our journey towards growth and success. We anticipate that the plant's operations will steadily expand year by year, contributing to our overall business growth and market presence. With each passing year, we will aim to enhance our manufacturing capabilities, optimize production processes, and meet the increasing demand for our high-quality products in Namibia and beyond. Our commitment to innovation, quality, and customer satisfaction will be the driving force behind our continuous improvement and expansion in the manufacturing sector.

**Table 1: Proposed Environmental and Social Monitoring and Management Plan for Smartcrete Manufacturing Solutions Namibia**

Key Issue	Potential Environmental and Social Impacts	Negative Impact Avoidance/ Mitigation	When to mitigate?	By whom?	At what cost?
<b>Socio-economic:</b>	The initial production line will have (2) employees, with potential to add a (1) more employee depending on production demand. In addition to this, there will be (1) employee dedicated to handling administration and management tasks. As Smartcrete Manufacturing Solutions Namibia cc expands and adds more production lines, we plan to create new permanent employment opportunities. With each new production line, we anticipate hiring (2) additional individuals to support our growing operations. This expansion not only allows us to meet the demand for our products but also contributes to the creation of more jobs and the overall growth of the company.	None required. Monitor ongoing in case action is required in future.	N.A.		N\$0
<b>Economic:</b>	Contribution to the Gross Domestic Product (GDP), corporation taxes (exceeding N\$300K per annum), local authority utilities such as water and electricity, and levies and tax payments (estimated to be between N\$5K and N\$10K per month) are significant aspects of Smartcrete Manufacturing Solutions' operations as a Namibian company. Our commitment is aligned with investing, banking, and sourcing locally, whenever feasible.	None required. Monitor ongoing in case action is required in future.	N.A.		N\$0



Key Issue	Potential Environmental and Social Impacts	Negative Impact Avoidance/ Mitigation	When to mitigate?	By whom?	At what cost?
<b>Electricity use:</b>	The monthly electricity usage is not expected to be high due to the low input voltages required for both the top-of-the-line spot welder and the state-of-the-art computer numerical control system. Tarriff Three phase and single phase (Business) N\$13.20 x Amp x circuit Est. N\$5K – N\$8K/month	None required.  Monitor ongoing in case action is required in future.	N.A.	EST-Financial controller	N\$0
<b>Water use:</b>	The manufacturing process of the business does not require any water usage. Any water consumption without our operations is limited to necessities such as toilets and water basins. Tarriff (Business) N\$20.87-unit price KI with N\$578.81 Deposit Est. N\$700 – N\$800/month	None required.  Monitor ongoing in case action is required in future.	N.A.	EST-Financial controller	N\$0
<b>Wastes, emissions and pollution:</b>	The top-of-the-line spot welder is a specialized piece of equipment that distinguishes itself from conventional welding devices by eliminating the use of rods, welding wire, gas, smoke, and sparks. Instead, it utilizes a current to seamlessly fuse two wires together, resulting in a clean and precise weld with only a minimal spark. Because of precision welding no waste material will be left or generated. Everything will be used in the product.	Ensure waste collection bins are removed each week upon waste collection. Bins are visible throughout the warehouse; ensure regular and proper waste disposal.	Upon gaining access to the warehouse, estimated from Jun - Jul 2024.	Warehouse complex Manager Regular Bin removal part of rental agreement	N\$0
<b>Transport:</b>	The raw materials, which will be sourced locally, will be transported by small trucks utilizing the existing road infrastructure. The distances covered during transportation will be relatively short, as we plan to lease a warehouse near the local suppliers. Similarly, the same transportation method will be employed for delivering finished products to the distributors.	None required.  Monitor ongoing in case action is required in future	N.A.	EST-MD	N\$0

Key Issue	Potential Environmental and Social Impacts	Negative Impact Avoidance/ Mitigation	When to mitigate?	By whom?	At what cost?
<b>Biodiversity:</b>	<b>No direct or indirect impacts on biodiversity is foreseen for this project.</b> Based on our analysis, we have determined that this project will have no direct or indirect impacts on biodiversity. Our comprehensive assessment considers various factors such as the location of the project, the manufacturing process, and the materials used. Additionally, we prioritize the use of sustainable resources and materials, which further reduces our ecological footprint. We are thus confident that our project will have no detrimental impacts on biodiversity.	None required.  Monitor ongoing in case action is required in future.	N.A.	EST-MD	N\$0
<b>Occupational health and safety:</b>	No heavy-duty welding goggles are required for our spot-welding machine, unlike conventional welding which involves an intense arc. Although our proposed activities in manufacturing carry inherent safety risks, we prioritize the well-being of our staff. Therefore, all employees will receive comprehensive training in Occupational Health and Safety (OHS), as well as in the proper handling and usage of equipment, raw materials, and tools. To further enhance safety throughout our operations, the warehouse will feature appropriate signage, floor markings, and designated spaces. Additionally, we will provide all staff with adequate personal protective equipment (PPE).	Ensure adequate training, keep an updated training register; ensure clear signage and guidance throughout the workshop; ensure sufficient PPE and safe storage space for raw materials, equipment and tools; Implement and maintain an employee wellness program.	Aug - Sept	EST-MD	N\$3000,00 Including all PPE and safety materials. Warehouse demarcations, signage already associated upon renting.

## **5. Smartercrete Manufacturing Solutions Environmental and Social Framework**

Smartercrete Manufacturing Solutions Namibia cc has aligned itself with the National Planning Commission of Namibia (NPC) and the Namibian Association of Metal Fabrication, both of which oversee the manufacturing sector in Namibia. Additionally, the business has adopted the International Finance Corporation (IFC) and World Bank's Equator Principles as a general framework to identify and address relevant environmental, social, and governance issues. In the first year of operation, Smartercrete Manufacturing Solutions will develop its own operation-specific Environmental and Social Policy Framework.

Furthermore, we have developed a draft Standard Operating Procedure (SOP) for the manufacturing process of welded mesh solutions. This SOP will ensure that our welded mesh products are of high quality and meet the required standards. During the facility testing phase, the SOPs will be tested and refined to provide comprehensive guidance during commercial operations.

In addition to the SOP, we are committed to establishing our own Occupational Health and Safety Policy within the initial months of operation. This policy will provide clear guidance and direction to ensure the safety and well-being of our employees.

### **5.1. Standards and Certifications**

#### **5.1.1. Namibian standard**

Smartercrete Manufacturing Solutions Namibia cc has implemented the annual operation plan of the metal fabrication growth strategy in 2017, which was developed in collaboration with the Ministry of Industrialisation, Trade, and SME Development. This strategic plan aligns with the ministry's industrialization policy and Growth at Home strategy, which aims to drive industrialization in line with Namibia's Vision 2030 goals.

In addition, Smartercrete Manufacturing Solutions Namibia cc has notified the Employment Equity Commission (ECC) and has obtained valid employer status in accordance with section 20 of the Affirmative Action (Employment) Act. This recognition, as stated in the Government Gazette, No. 275 of 15 September 2022, positions Smartercrete Manufacturing Solutions Namibia cc as a relevant employer.

Once products are produced on our assembly line at the facility, Smartercrete Manufacturing Solutions Namibia cc will undertake quality testing and inspection certification at the Namibia Standards Institution (NSI). Furthermore, we will trademark our products at Bipa to raise awareness and recognition within the community we aim to trade with.

These initiatives demonstrate our commitment to operational excellence, adherence to industry standards, and our dedication to ensuring quality products for our customers.

#### **5.1.2. International Standards Organisation**

Once our assembly plant is operational, Smartercrete Manufacturing Solutions Namibia cc plans to pursue ISO 9001 and 14001 certifications. These globally recognized standards would not only allow us to export our welded mesh solutions to markets beyond Namibia but also expand our reach into the African market. This certification would ensure that our products meet

international and regional quality and environmental standards, establishing our credibility and enhancing our competitiveness in the industry. By adhering to these standards, we will demonstrate our commitment to delivering high-quality products and minimizing our environmental impact. Obtaining ISO certifications will also open up opportunities for partnerships and collaborations with international businesses and organizations. We are dedicated to continuously improving our processes and maintaining the highest standards of quality and sustainability.

## **6. Implementation and Adherence to the ESMMP**

The developer of Smartcrete Manufacturing Solutions Namibia CC is responsible for monitoring and reporting on the Environmental and Social Management and Monitoring Plan (ESMMP).

Prior to the establishment of the plant, all staff and associates will be introduced to the ESMMP, and any issues relevant to the plan will be shared with them as they arise.

The ESMMP will be reviewed and updated at least once per quarter to ensure it remains current and adaptable.