

Environmental Assessment (EA) Scoping report and Impact Management Plan (IMP) for the proposed redevelopment of ERF 492 Divundu Extension 1 (from public open space to various business land uses) for the Divundu Village Council in Namibia - August 2022.

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PREAMBLE

This report remains the property of Divundu Village Council and its Town and Environmental Planners. Retrieval and publications are strictly for reviewing purposes by authorized government departments.

LIST OF ACRONYMS

| | |
|-------|--------------------------------------|
| EMA: | ENVIRONMENTAL MANAGEMENT ACT |
| MET: | MINISTRY OF ENVIRONMENT AND TOURISIM |
| DVC: | DIVUNDU VILLAGE COUNCIL |
| RKPC: | RITTA KHIRA PLANNING CONSULTANTS |
| UNDP: | UNITED NATIONS DEVELOPMENT PROGRAMME |
| EMP: | ENVIRONMENTAL MANAGEMENT PLAN |
| IMP: | IMPACT MANAGEMENT PLAN |
| EIA: | ENVIRONMENTAL IMPACT ASSESMENT |
| SHE: | SAFETY HEALTH AND THE ENVIRONMENT |
| MDGs: | MELLENIUM DEVELOPMENT GOALS |

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SUMMARY

Divundu Village Council (DVC) intends to do a re-development/ rezoning of ERF 492 a public open space to a business ERF. The ERF will be subdivided into 5 portions and the Remainder to allow for the development of preferably a lodge, a private school, and various businesses.

Ritta Khiba Planning Consultants (RKPC) is appointed by Divundu Village Council to conduct an Environmental Impact Assessment and draft an Environmental Management Plan (EMP) for the redevelopment/rezoning. A request for an environmental clearance certificate from the Ministry of Environment and Tourism is being made here per the Environmental Management Act of 2007 and the Impact Assessment Regulations (MET). That is, to ensure that the redevelopment of public open space is done in an environmentally friendly way.

The project's objectives are to meet the daily demands of Namibia's rising population, as well as lucrative tourism operations in Divundu and Kavango East, and urbanization. It is also a project goal to ensure that the project planning, construction, and operating stages are carried out in a manner that is environmentally friendly and per the Sustainable Development Goals.

Introduction

This document summarizes the environmental concerns raised by the proposed redevelopment/rezoning of ERF 492, a public open area, into a business ERF. The project proponent proposes to build a multi-business setting that includes retail stores, a private school, and a leisure and hospitality centre. ERF 492 was previously a public open space that was surrounded by ERFs for Business, Education, Government, and Special Business. The project proponent and the Architects discussed the scope of deeds thoroughly, and the Architects devised an appropriate layout in which this project will bear the fruits of long-term project development. The following are the proposed structures to be erected on the proposed project site:

- a) Rezoning a public open space
- b) Subdivision of ERF 492 into three (3) business portions, institutional, hospitality, and remainder.

A public meeting was convened on-site on November 21, 2021, to engage Interested and Affected Parties (I&APs) after a call for public engagement was published in two independent

national publications. As a result, the application is being made per the Environmental Management Act of 2007 and its Regulations. Stakeholders, the Ministry of Environment and Tourism (MET), and other relevant agencies will express their opinions on the proposed redevelopment of ERF 492 Divundu EXT 1 from public open space.

1.1 Objectives

1.1.1 Main objective:

To do a redevelopment of ERF 492 Divundu Ext 1 from public open space to accommodate various business activities and a private school.

1.1.2 Specific objective:

To ensure the land-use change of ERF 492 Divundu Ext 1 is done in an environmentally friendly manner.

The above objective will be achieved by: Ensuring that the proposed project has done a comprehensive Environmental Assessment.

Ensuring that the proponent had done the subdivisions as per local guidelines/ jurisdictional law/s

Implementation thorough Environmental Management Plan for re-development.

1.2 The Environmental Assessment (EA) Process

Concerning the guide of the Environmental Management Act No 7 of 2007, no one (including private bodies and Government bodies) can carry out any listed activity without an environmental clearance certificate. If an environmental clearance certificate is required, the Environmental Commissioner may first require an environmental assessment. In some cases, an environmental clearance certificate can be issued without an environmental assessment depending on the minister's decision.

Environmental assessment serves the following purposes:

Ensure that activities that may have a significant effect on the environment follow the principles of environmental management planning and development process.

Analyse the possible environmental impacts of activities and look at ways to decrease negative impacts and increase positive ones.

Make sure that the environmental effects of activities are given adequate consideration before the activities are carried out and

Provide an opportunity for public participation in considering the environmental impact of a project.

This Environmental Assessment (EA) scoping report was compiled for the project under discussion because the proposed development falls under listed activities that cannot be undertaken without a clearance certificate as stated in the EMOA No 7 of 2007-Part (VII) of No 27: 2(a). In summary, these activities involve projects relating to, land use transformation. Subsections No 28, the Minister may in a notice under section 27 make provision for the granting of an exemption in respect of an activity.

Provisions relating to the listing of activities

- (a) Adding an activity to the list.
- (b) Removing an activity from the list; or
- (c) Making other changes to the particulars on the list.

In addition to this, the proposed project involves various activities associated with the planning, construction, operational, and decommissioning phases as follows:

- a) Rezoning of re-development/ rezoning of ERF 492 a public open space to a business ERF.
- b) Project site clearance.
- c) Subdivision of ERF 492 as designed by the town planners (see the list of appendices for subdivision layout).

These listed activities form part of the Scope of Works of the EA and are considered in all the phases of the project.

1.3 Scoping Report Team

DVC engaged Ritta Khiba Planning and Environmental Consultants to carry out a scoping report and an Environmental Management Plan for the proposed rezoning of public open space. In compliance with the Environmental Management Act of 2007 and the Impact assessment regulations application is here being done to get an environmental clearance certificate from the Ministry of Environment and Tourism. All public consultations were carried out by the scoping team and no objections to the development were raised. An Environmental Scoping Report and Environmental Management Plan for the re-development of ERF 492 will be designed and submitted to the reviewing authorities.

1.4 Approach to EA process

The EA process was executed following the Terms of reference as highlighted by the EMA of 2007. The screening phase was done by an experienced assessment team. Divundu Village Council has Occupational Safety and Health specifications bringing into practice the Occupational Health and Safety Act. Based on the requirements of the Environmental Management Act (Act 7 of 2007), the EA includes three phases, namely:

Phase 1: The screening Phase was initiated in March 2021 with the main objective to consult with the various affected parties to establish their concerns and recommendations regarding a strategy for implementation. After applying the screening process sensitive issues were identified across the proposed project site assessment namely:

- a) Identification of affected parties, Mapping and
- b) Identification of key sensitive issues like wetlands, cultural heritage, and protected ecosystems, (in the case under study none of the listed issues were applicable).

Phase 2: Scoping Phase was launched on the 15th of April 2021. A review of baseline information was included for the study including information about the legislative framework, the receiving biophysical and social environment, and any other information that could be used to elaborate on or substantiate the current baseline conditions. The main objective of scoping is

to identify key issues of concern that should be addressed in the assessment of the Plan and the appropriate level of detail to which they should be considered. The scoping exercise should answer the following questions:

- a) What are the relevant significant issues to be addressed by the EA;
- b) Evaluation of potential Environmental Concerns and
- c) Reduction or mitigation measures for potential impacts/ Environmental concerns through EMP design.

Phase 3: Detailed Assessment Phase requires an in-depth analysis of the impacts related to the moderate to highly sensitive issues. Using the information collected during the scoping report, other literature available of the area of study, and after collecting information from key informants, the primary aim will be to perform a detailed EA.

A full description of the approach followed for the EA is included in **Appendix IV, (Terms of Reference)**.

Stakeholder Consultation will be undertaken during all phases of the project to ensure a focused and effective public consultation process as required by the EMA and its regulations. Stakeholder consultation will form the basis of the entire EA process ensuring that all Namibians are informed and have an opportunity to participate in the process.

1.5 Project Location

Divundu Village Council in Mukwe Constituency, Kavango East Region has newly proposed extensions of its municipal plots stretching for a good 2km westwards along the Trans-Capriivi/Zambezi highway comprising of approximately two hundred and fifty-seven (257) erven. Divundu is situated two hundred (200) kilometres east of Rundu along the Trans-Capriivi/Zambezi Highway on the south-eastern banks of the Kavango River in the Kavango East Region. This area is situated strategically and is regarded as a gateway to four neighbouring countries as Angola, Botswana, Zambia, and Zimbabwe. According to the latest census results (2011), it has approximately five thousand four hundred and thirty (5 430) residents. On the opposite, the north-eastern banks of the river lay Karatjtja Village along the Angolan border, and

the two settlements are linked via a nearby border post. Today, Divundu is the third biggest settlement of the Kavango region, after Rundu.

The proposed ERF 492 Divundu Extension 1 lays North of Divundu and is approximately a km from the Trans-Caprivi Highway. The area under study measures approximately 15.4392Ha in extent. The Portion is semi-developed as shown on *plate 1* overleaf.



Figure 1: Aerial photograph of ERF 492 Divundu Extension 1

Source Google Earth Pro

| Coordinate number | Latitude | Longitude |
|-------------------|----------------------------|---------------------------|
| 1 | -18 ⁰ 06'10'' S | 21 ⁰ 32'52'' E |

Table 1: The Proposed Project site coordinates.

1.6 Project Desirability or Drivers

1.6.1 The Urbanisation Challenge

According to AFDB Report, (2012), "The proportion of the world's urban population is expected to increase to about 57% by 2050 from 47% in 2000. More than 90% of future population growth will be accounted for by the large cities in developing countries. In the developing world, Africa has experienced the highest urban growth during the last two decades at 3.5% per year and this rate of growth is expected to hold into 2050. Projections also indicate that between the years 2010 and 2025, some African cities will account for up to 85% of the total population. In 2010 the share of the African urban population was about 36% and is projected to increase to 50% and 60% by 2030 and 2050 respectively. Rolling down to the national level, Namibia like any other developing country, is becoming increasingly urbanized owing to migration and natural population increase. With current population projections, the Namibia Statistics Agency (NSA) estimates that the country's population will increase from 2.1 million in 2011 to 3.4 million by 2041, representing an increase of 63 percent.

Tapering down to the regional level, according to the latest NSA report, the population of the Kavango East Region where Divundu is located as mentioned before will increase from 90,596, as indicated by the 2011 census, to 183,000 by 2030, representing an increase of 91,000 people. It is further stated that the number of people living in rural areas is expected to gradually shrink while those living in urban areas are projected to increase sharply by 2041.

The population of the Kavango East Region has been growing steadily since the 2001 Census and indicates a population increase and annual growth rates between 2001 and 2011. The annual growth rate for Kavango Region between 2001 and 2011 was 1.0 percent. Furthermore, the annual growth rate for urban areas was 2.5 percent, which is significantly higher than that of rural areas (0.8%). At the constituency level, Kavango Urban has recorded the highest growth rate of (2.2%) between the 2001 and 2011 period. The continued increase in the number of people living in urban areas without corresponding infrastructural growth results in demand overstripping the supply of goods and services. In turn, this exerts pressure on the available goods

and services. The continued pressure results in physical, economic, societal, and environmental challenges.

1.6.2 Addressing the Challenges

To address the urbanization challenges in Namibia, the Village town is hereby proposing to do a re-development of ERF 492 Divundu Ext 1 from public open space to accommodate various business activities and a private school.

1.7 Project Alternatives

An alternative to the proposed project might be related to the anti-development point of view. The available space on ERF 492 is entrusted to DVC and was reserved for the future development of the town.

The urbanization challenges in Namibia will also express the need for adequate services supporting the development goals of DVC. The objective is to ensure the sustainable development of all Village towns. This scoping report details the desirability or suitability of ERF 492 Divundu Extension 1 for development.

Alternative one (1): With Project Scenario – redevelopment of ERF 492

Employment creation increased GDP per capita income with business agglomeration and increased infrastructural development.

Alternative two (2): Without Project Scenario

Without the project, Divundu Village Council shall continue its business as usual with the existing business operations unlikely to contribute to the Gross Domestic Product (GDP) of the country. There will be no possibilities of employment creation in the region affecting the economically active group. This will be against the Chief Executive Officer personal vision which he pointed out in an interview with the New Era dated February 28, 2017, quoted as,

‘New Era: What is your vision for Divundu?’

Athanasius Maghumbo: "My vision for Divundu is to guide and grow the village up to the attainment of town status within the next five years. The growth will add value to the well-being of the residents in the advancement of their socio-economic status."

This alternative considered is a **"No Action"** alternative, which addresses the situation with no Project implemented i.e., the public open space forming ERF 492 will remain unutilized. In general, the **"No Action"** alternative is applied concerning the Project as a whole. In this case **"No Action"** alternative will lead to the following consequences:

- a) Urbanization challenges,
- b) Reduction of access to key services the most vulnerable groups, and
- c) The decline of the socio-economic situation

Based on the above listed it may be stated that the potential negative consequences of the "No Action" alternative greatly outweigh the environmental risks associated with the Project implementation.

1.8 Land Ownership

The ERF under discussion measures approximately 15.4392 Ha is owned by the Council. It is important to mention that the actual portion has been demarcated and its locality is indicated on the layout plan attached to the list of appendices.

The subdivisions on the ERF will be reserved for the following purposes:

- a) Creation of a tourism and hospitality subdivision,
- b) Creation of a private educational subdivided portion,
- c) Creation of a business subdivided portion,
- d) The remainder will be public open space.

| PORTION NO. | SIZES (HECTARES) | RESERVE EXTENSION NO. |
|--------------------|-------------------------|------------------------------|
| PORTION A | 15.4392 HA | Erf 492 Divundu Ext. 1 |

Table 2: The portion size

ERF 492 Divundu Extension 1 will create a multi-business environment comprising retail shops, a private school, a recreational and hospitality Centre. The land is owned under the Village council which in the long run is inevitably to reach a town status.

1.9 Topography

Subdivisions of land do not occur in a vacuum and are largely influenced by the surrounding natural features as well as the existing settlement structures. The planning area is relatively flat and lies at about 1 000 -1 200 meters above sea level. Divundu is relatively close to the Okavango River but there are signs of erosion in the planning area likely to emanate from arable activities being practiced. There are no significant hills, and the area is relatively flat making it easy and cost-effective for development.

1.10 Geology and Soils

Soils in the Kavango are completely dominated by sand, especially fine wind-blown sands deposited as a mantle across the region during much drier times long ago. The loose sands also known as the Kalahari sand are usually as deep as one (1) meter. Apart from the sand, which generally makes up than 70% of the body of the soil, the Kavango region also consists of less than 10% of the soil consisting of clay and silt. The sand texture allows for water to drain away rapidly, leaving very little moisture at depths to which most plant roots can reach. The porous sand also holds very few nutrients, and the loose structure of sand also holds very few nutrients, and the loose structure of the sand means there is very little run-off and soil erosion.

1.11 Fauna and Flora

The vegetation type of any area is influenced by both soil type and the climate conditions of the area. The Kavango region is home to a more diverse community of plants and animals than most other areas in Namibia. Most of the diversity in the Kavango region is linked to the variety of habitats along and near the Okavango River. The plant and wildlife especially within the

conservancies or parks along the Okavango are very abundant. Along the large flood plains of the Okavango impressive woodlands and individual baobabs can be found. Amongst the abundant wildlife consists of elephants, buffalo, zebra, giraffe, and hydrophilic antelopes like Rietbok and Letchwe, not to forget crocodiles and hippopotamus.

The proposed project site is less densely vegetated and is already showing signs of degradation since illegal settlers were considering the land arable and domestic animal trails. Short sparse bushes of the Acacia type of vegetation are witnessed by plate 2 below.

1.12 Terms of Reference

The terms of reference for this assessment were set per the EM Act OF 2007 and its regulations and guidelines and must include -

- a) A description of all tasks to be undertaken as part of the assessment process like an evaluation of the following: geology, soils analysis, social, cultural heritage, sedimentation, erosion, loss of sense of ownership, socio-economic environment, health, safety and traffic, noise and dust generation and there was no need for a specialist in the case.
- b) Application to be made to the Environmental Commissioner is to be
- c) Consulted; for a re-development of ERF 492 Divundu Ext 1 from public open space to accommodating various business activities and a private school.
- d) A description of the proposed method of assessing the environmental issues and alternatives.
- e) The nature and extent of the public consultation processes to be conducted during the Assessment
- f) An Environmental Management Plan to be executed during the project life cycle
- g) Site layout plans

1.13 Climate

With an annual average of 500 – 600 mm and a semi-arid terrain, it receives adequate rains compared to the rest of the country. In the sand savanna of the Kalahari Basin south of the

Okavango, the rainfall seeps away quickly thus hardly any surface water is found. During the summer it experiences warmth to excessive temperatures. The frequency of strong winds starts to increase in winter and usually peaks during November, before the onset of the rainy season making the winter season a bit drier. Dry spells are sometimes experienced over the past decade which can be linked to climatic change.

1.14 Socio-economic status

The socio-economic status in Divundu and the entire Kavango East region where the proposed project site is situated is characterized by Agro Marketing and Tourism industry. Large numbers of tourists are recorded to visit Divundu and its neighbouring tourist attraction areas. Attraction features like wildlife national parks, Popa Falls, and Okavango River which favour aquatic ecosystems contribute to the socio-economic status of Divundu. It is also a transport networking village town from Angola, Bots, and Zambia and apart from that, it is also Kavango East regional second administrative village town. The village town is characterized by low-income earners, rapid population growth, development, and large vast tracks of land.

1.14.1 Socio-economic benefits

The unavailability of serviced land negatively impacts the economic growth and socio-economic development of the village town council. The council is dependent on the physical growth of the town and the expansion of land ownership for increased revenue flows through property tax and rates. Future housing projects have the potential to generate several employment opportunities directly and indirectly during and after the construction phase.

More so, land development is the source of livelihood (directors and employees) of the owner(s) and partners hence such honest sources of livelihood should be encouraged and supported. Furthermore, the proposed development is in line with the Harambee Prosperity Plan, especially on the social progression pillar (residential, land delivery, housing, and sanitation), thus the proposed development will enhance government exertions in ensuring 'housing for all.

1.15 Hydrology (surface and ground water)

According to the survey done by NSN Earth & Science Works Namibia cc, the hydrogeology of the area is characterized by both alluvial and fractured aquifers. Alluvial aquifers are found along

paleo-riverbeds draining north to the northeast towards the Kavango River and consist of mainly medium-grained white sand. In the study area, these aquifers are found on both sides of the Kavango River, and south of the township development area. The fractured aquifer mainly consists of weathered schist and fractured quartzite of the undifferentiated formations of the Damara Sequence.

Information based on available maps and borehole drilling records indicates that the depth of the alluvial aquifer tends to increase eastward from a depth of 14 m at Andara to 35 m at Bagani, see Appendix II for detail.

1.16 Services and Infrastructure

Divundu has the following services: Potable water and water reticulation system, waterborne sanitation (oxidation ponds sewerage system) as well as electricity. These bulk services will be extended from the existing municipal network in phases to the new settlement area except the sewerage treatment at which the council opted for an Integrated Sustainable approach towards a green ecology resulting in a new plant erection.

1.16.1 Infrastructure

The provision of bulk services will be the sole responsibility of the Council through initiatives such as PPP joint venture (Council and Infrastructural development). However, all bulk services will be designed and constructed up to the satisfaction of the Standard Engineering regulations of the Council.

1.16.2 Roads

The proposed project development will be connected to the existing road and street network and has provided a functional road hierarchy to cater for different land uses and functionality of the whole proposed Portion A. Internal streets between ERFs were designed at an average width of 15 meters (m) and an average of 20 m on the main streets which gives room for drainage mechanisms.

1.16.3 Water

The proposed project will be connected to the existing bulk water service network of the Village Council.

1.16.4 Sewerage

Currently, the existing setup is well serviced with oxidation ponds at which during the visit the assessment team noted that the evaporation pond was $\frac{1}{4}$ full, well lined and the pump well serviced. The existence of invasive reeds was noted in one of the ponds at which advice was given to clear them out.

1.16.5 Electricity

There is an existing 60 m wide NamPower servitude further east of the proposed site. The proposed redevelopment will be connected to the existing electrical networks in the area. It is also proposed that the private developer engage NamPower for electricity supply to the proposed site. Solar-generated power sources will be encouraged in any way applicable to the village town standards.

1.16.6 Solid Waste Management System

An existing dumpsite will service the proposed development in all phases. The existing dumping site is located southwest of the proposed project site approximately ten (10) kilometres (km) from the proposed site. The dumpsite is underutilized due to the absence of refuse collections. Only a small percentage of Divundu residents make use of the dumping area. The key factor being the dumping site cannot be reached with residents who don't have vehicles for transportation of waste. This is resulting in the illegal dumping of refuse. Plate 2 below shows how residents are dumping solid waste along the road to the dumpsite. The illegal dumping can be geocoded using the following coordinates -18, 13026 – 21,52022 - +/- 10m – accessed on 14/07/2018 09:20 during a site visit.



Figure 2: Illegal Solid waste dumping

The implementation of the project under discussion will help the Council to come up with a refuse or garbage collection program supported by legitimate residents and businesspeople. The proposed development is most likely to lure

reputable recycling companies to operate in Divundu as well. Legalizing the dumpsite and refurbishment to meet standards is a project underway. Currently, the dumpsite is having a security fence an unlocked gate.

1.17 The potential impacts of the proposed development

The main potential impacts of the proposed project development in all phases include the following:

- a) Air pollution (Noise, dust, and Vibration)
- b) Landscape and Visual changes (Soils, Geology, soil erosion)
- c) Ecology disturbance (Introduction of alien or exotic species, existing Flora and Fauna)
- d) Water quality issues (surface and groundwater)
- e) Socio-Economic and human geography (reallocation of land, employment creation, traffic increase)
- f) Increased Solid waste generation (secondary sludge, household waste, and general waste)
- g) Urbanization (Culture dilution, population increase, illicit dealings)
- h) Occupational Safety, Health, and the Environmental related issues (for construction and general workers)

Possibilities are shown for the increase of positive characteristics and the neutralization of negative impacts of the project archived through the Environmental Management Plan (EMP). Measures to compensate the environment will be done through establishing recreation facilities, raising awareness, and monitoring compliance.

1.18 Funding Status

The project developer Divundu Village Council will ensure funding and administration means are in place for the smooth running of the project from the planning phase up to the operational phase.

1.19 Planning Phase

The planning phase will be characterized by the planning of development activities which involves site identification and surveying, drawing of the site plan, site pegging, infrastructure designing, and feasibility studies (research).

1.19.1 Preliminary Plans and Specifications

The desire to do infrastructural refurbishment by the Village council was done before the Local Authorities Act; 1992. This was done in a bid to archive its vision to reach a town status by 2023. This led to the engagement of consulting Engineers, Town Planners, and Procurement and logistics firms for preliminary plans and to generate specifications for the subdivision development. The plans include the road layout, the preliminary structure designs (including the number of residential plots, municipal office and administrative portion, recreational space, light industrial portion, sources of energy and layout of electric lines (either overhead or underground), the layout of the water lines, and solid waste management system. Typically, the preliminary plans and specifications are sketches with preliminary cost estimates.

When the preliminary plans and specifications were completed, the developer coordinated its plans with the appropriate authority like the Namibian Advisory Planning Board (NAPB).

1.19.2 Final Plans and Specifications

Divundu village council worked with its consulting engineers to finish the final working drawings for the proposed development. This included final engineering drawings for the roads, a title survey of the stands, as well as any engineering drawings regarding earthmoving, and utility layouts. These final plans and specifications will be coordinated with the construction team and the appropriate utility companies. Once the final construction working plans and specifications were completed after having this EIA approved will implement the development plan. The project proponent (DVC) intends to sell the sub-divided portions to business developers, and it will remain the supervising board during the construction and operational phases of the project.

1.19.3 Construction

During the initial phases of the development, DVC engineers shall supervise with a construction team for the building of roads, setting of sewage drains and water pipes on the proposed site as well as installation of utilities. The project construction phases will be done in stages since different contractors will be engaged for different services. Also, during construction, the developer will initiate advertising and other promotion to stimulate presale residential stands as well as business stands

1.20 The Development Activities

Construction activities will resume as soon as the project proponent sells the ERF to businesspeople. Services like Electricity, Roads, water, and sewer will be set to allow development. The availability of resources and natural events like the weather will determine the speed of development.

The construction process involves bush clearance, trenching at the project site, and the installation of solar-powered streetlights. Construction involves land excavation thus disturbing soil physical and chemical properties. Construction also results in producing of large waste materials.

- a) Removal of topsoil during road construction
- b) Excavation of trenches for sewage and waterworks
- c) Roads or streets Construction
- d) Mapping

1.20.1 Ground Assessment

Land-use suitability was confirmed by a ground assessment done by land surveyors and the EIA team, looking at aspects like ground elevation, soil texture, depth particle size, and stability. The ground assessment will also ensure that the area is not a wetland and come up with matrices and correlations on how the proposed land use type will interact with land resources such as underground water resources and general ground stability.

1.20.2 Earthwork

Once all the mapping, soil studies passed actual groundwork can begin. Construction site notices to be placed and the removal of bushes will commence. After the contracted personnel have cleared the brush, they place construction stakes on the Centreline, slope stakes, stakes for culverts, storm drains, and curbs. Necessary Personal protective gear must be worn always. Dust suppression, observing normal working hours (during the day), and observation of local cultural norms should be considered.

1.20.3 Landscaping, Paving and installation of Key structures

Workers place blue stakes every 100 meters and begin to landscape the ground to meet the pre-mapped elevation benchmarks. With the "blue tops" on the surface, engineers performed a final touch on the structures.

1.20.4 Maintenance

The council will be mandated to carry all responsibilities directly or indirectly to be erected with the proposed project. Stormwater drains must be de-silted seasonally or during the commencing of each rain season. Maintenance of public places, submission of annual, Environmental reports to MET among others will be responsibilities of Divundu Village Council.

1.21 Water Reticulation System

The existing potable water and water reticulation system will offer extended services from the existing municipal network in phases to the new settlement area. An underground water borehole will be installed southwest of the proposed project site to supplement drinking water. Recycled water from the sewage treatment plant to be stored and pumped back for domestic purposes. Regular ambient water sampling should be done to monitor the recycled water to ensure the health and safety of residents

1.21.1 Design Requirements

Traditional Potable water reticulation mains are defined as mains of 100 mm to 300 mm diameter used to convey potable water to properties. These main sizes are specific to the Traditional Portable systems within the Divundu area where the project is to be implemented.

1. All water supply system mains shall be designed and certified per the following Provisions:
2. Council's general criteria as set out in these Guidelines and Council's Standard Specifications and Drawings that are based on the Desired Standards of Service.
3. The current NAMWATER water planning guidelines for Water Supply and Sewerage Schemes.
4. For general guidance on infrastructure elements not contained within Council's documents and
5. The designer shall note Health and Safety and the design shall include the required Safety Design Report.

1.21.2 Water Reticulation – Design Requirements

This Guideline aims to provide developers general criteria to ensure that:

- a) Potable water is adequate in quality, pressure, and volume of flow for the proposed project for domestic purposes and firefighting where required.
- b) All water supply schemes conform to the National and Village Council's goals and objectives.
- c) The reliability, safety, and effectiveness of Council's water supply are maintained.
- d) Water supply infrastructure is of adequate quality to minimize maintenance costs; and
- e) Water losses are minimized using appropriate Pressure and Leakage Management installations.

This encourages sustainable development through conserving natural resources, especially potable water which proved to be a scarce commodity in many cities and towns across the country.

1.21.3 Surface Water Drainage

Gutters and storm drain shall be constructed to cater for surface drainage during rainfalls. Storm drains and gutter plays an important part in curbing soil erosion in the sense that it reduces the spread of surface flow. As surface flow increases, the velocity of the flow is most likely to increase and so will be the erosive power of the water flow. The drainage design shall follow the

principles of Sustainable Drainage Systems (Su. DS), which will limit the surface water runoff from the development. The drainage design will provide a series of treatment systems, which combine to ensure that surface water runoff entering the receiving watercourse is of a high level in water quality. For example, twigs and other suspended substances will be trapped using a colander before the surface water runoff enters receiving watercourses.

2.0 Policy, Legal and Administrative Framework

2.1 Introduction

Combined, policy, legal and administrative frameworks, facilitates sustainable development. Mentioned below are acts and policies that have relevance to the rezoning open space to business, tourism, recreational and educational activities. These pieces of legislation include the environmental Management Act of 2007, Environmental Impact Assessment Policy, Water Act, and many other Occupational Health, Safety and Environmental Management Statutory instruments and legislations.

The Environmental Management Act 7 of 2007 is the principal defender to the environment aiming to:

Promote the sustainable management of the environment and the use of natural resources by establishing principles for decision making on matters affecting the environment; to establish the Sustainable Development Advisory Council; to provide for the appointment of the Environmental Commissioner and environmental officers; to provide for a process of assessment and control of activities which may have significant effects on the environment, and to provide for incidental matters.

Section 56 of the Environmental Management Act, 2007 (Act No.7 of 2007), the Minister has made the protocols for Environmental Impact Assessment as set out in the Schedule of Government Notice No. 30 (2012).

These protocols necessitate that all developments/projects that have a detrimental effect on the environment must be accompanied by an EIA Under section 27 of the Environmental Management Act, 2007 (Act No. 7 of 2007), and after following the consultative process referred to in section 44 of that Act, the Minister lists in the Annexure to the above-mentioned Schedule, activities that may not be undertaken without an environmental clearance certificate. In both the Environmental Management Act and its guidelines, all activities that may not be undertaken without an environmental clearance are listed.

The fruits of sustainable development are conducted by a comprehensive statutory framework which was used in this section. All the relevant legal instruments and prescribed procedures have been acknowledged.

2.2 Environmental Impact Assessment Regulations

Relevant provisions

These regulations are very important in the implementation of the project because this project falls under prescribed projects that must have an Environmental Impact Assessment undertaken before the project is given a green light for implementation. This Act and its regulations should enlighten and guide this EIA process. Cost and benefits analyses of the project are weighed systematically to find the suitability of the project in terms of economic, social, and biophysical environmental.

These regulations also make it possible that both negative and positive environmental impacts are identified and weighed in their significance and relentlessness to determine whether the project will be given permission to be carried out. This is attained through the appointment of a qualified and experienced EAP whom the project proponent chooses to do the preliminary Environmental Assessment and compilation of scoping report submitted per the regulations. It mandates the Assessment process to be done per the EMA Act and its regulations.

In short, this policy makes all other policies, legal and administrative frameworks to be considered before the project can be allowed to be implemented. The Environmental Impact Assessment (EIA) regulatory framework was published on the 18th of January 2012.

Relevance to the project

This Act and its regulations should enlighten and guide this EIA process.

2.3 Environmental Management Act (2007)

This act is the most powerful in the country when it comes to environmental management. Environmental Management Act supersedes all other environmental laws. The act was enacted to supervise, monitor, audit, control, and govern the entire environment sector as well as to disseminate environmental awareness to the public. The Act is set, (To promote the sustainable management of the environment and the use of natural resources by establishing principles for decision making on matters affecting the environment; to establish the Sustainable Development Advisory Council; to provide for the appointment of the Environmental Commissioner and environmental officers; to provide for a process of assessment and control of activities which may have significant effects on the environment, and to provide for incidental matters)

2.3.1 Part II of the Act provides the principles of environmental management

1. Principles of environmental management:

- (a) Renewable resources must be used on a sustainable basis for the benefit of present and future generations.
- (b) Community involvement in natural resources management and the sharing of benefits arising from the use of the resources must be promoted and facilitated.
- (c) The participation of all interested and affected parties must be promoted and decisions must consider the interest, needs, and values of interested and affected parties.
- (d) Equitable access to environmental resources must be promoted and the functional integrity of ecological systems must be considered to ensure the sustainability of the systems and to prevent harmful effects.
- (e) Assessments must be undertaken for activities that may have significant effects on the environment or the use of natural resources.

- (f) Sustainable development must be promoted in all aspects relating to the environment.
- (g) Namibia's cultural and natural heritage including, its biological diversity, must be protected and respected for the benefit of present and future generations.
- (h) The option that provides the most benefit or causes the least damage to the environment, at a cost acceptable to society, in the long term as well as in the short term must be adopted to reduce the generation of waste and polluting substances at source.
- (i) The reduction, re-use, and recycling of waste must be promoted.
- (j) A person who causes damage to the environment must pay the costs associated with the rehabilitation of damage to the environment and to human health caused by pollution, including costs for measures as are reasonably required to be implemented to prevent further environmental damage.
- (k) Where there is sufficient evidence that establishes that there are threats of serious or irreversible damage to the environment, lack of full scientific certainty may not be used as a reason for postponing cost-effective measures to prevent environmental degradation; and
- (l) Damage to the environment must be prevented and activities that cause such damage must be reduced, limited, or controlled.

2.3.2 Part VII of the Act section 27: Projects for which environmental impact assessment required

The proposed development falls under listed activities and prohibition in respect of listed activities mentioned in Subsection 2 of the ACT. The following may include activities in respect of the proposed redevelopment on ERF 492 Divundu Extension 1 and its convenient services:

Subsections 2(a) Land use and transformation; (b) water use and disposal; (c) resource removal, including natural living resources; (d) resource renewal; (f) industrial processes; (l) waste and sewage disposal; chemical treatment.

2.3.3 Relevance to the proposed project

About the proposed project development, This Act and its regulations will be observed as a guide this EIA process.

2.4 Nature Conservation Ordinance 4 OF 1975

The main Objectives of the Ordinance were aimed: To consolidate and amend the laws relating to the conservation of nature; the establishment of game parks and nature reserves; the control of problem animals; and to provide for matters incidental thereto. About the project site, it was concluded that neither associated game parks nor nature reserves are in the proposed project area.

2.5 Climatic Change Polices

2.5.1 National Climate Change Strategy & Action Plan 2013 – 2020

The climate change action plan identifies Climatic Change as a critical threat to sustainable development. Therefore, it must be addressed in a holistic approach.

Relevance to the project

There are several activities to be done because of project development. Concerning the Climate Change strategy, appropriate measures to combat climate change have been implemented from the initial stages of project designing.

(a). Deforestation

The project activities will include the clearance of bushes on the proposed site. Based on the conclusion drawn during the site visit, the EIA team observed very little spaced vegetation to be cleared.

(b). Emissions of Green House Gases (GHGs)

There are four main types of forcing greenhouse gases: carbon dioxide, methane, nitrous oxide, and fluorinated gases. The main feedback greenhouse gas is water vapor. The general physical layout of the proposed project minimizes all possible activities contributing to global GHGs emissions in either way.

2.5.2 United Nations Framework Convention on Climate Change

Relevant provisions

It is also vital to note that there are international conventions that aim to protect the environment. Namibia is a signatory to some of the conventions for example the 1992 United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC was adopted to regulate levels of greenhouse gas concentration in the atmosphere, to avoid the occurrence of climate change on a level that would impede sustainable economic development or compromise initiatives in food production. The Parties are to protect the climate system for present and future generations. The developed country Parties (and International Environmental Law from a Namibian Perspective 54 other Parties listed in annex I) commit themselves to take special measures to limit their anthropogenic emissions of greenhouse gases (GHGs) and to enhance the capacity of their sinks and reservoirs for the stabilization of such gases

Relevance to the proposed project

All anthropogenic emissions of GHGs to be used during all phases will be strictly very limited, closely monitored by qualified personnel.

2.6. National Heritage Act 27 of 2004

Relevant provisions

Section 48(1) states that "A person may apply to the Namibian Heritage Council (NHC) for a permit to practice any activities which might directly or indirectly disturb protected areas or National heritage

Relevance to the proposed project

Concerning the proposed project development site, there are no National Heritage values on the project area and its nearby environs.

2.7 Soil Conservation Act 76 of 1969

Relevant provisions: The soil Conservation Act makes provision for the prevention of soil erosion. It promotes the protection and up keeping the soil structure and vegetation and all-natural resources in the soil of the Republic of Namibia

Relevance to the proposed project

Not many modifications of the soil structure since the project area is partially used as arable land. Tar and concrete paving would be done to avoid further disturbance. However, the landscaping will be done to make sure the drained water will join other municipal-designed waterways. Reforestation, planting of lawns and flowers will also conserve the soil structure if done in open spaces.

2.8 Water Act 54 of 1956

Relevant provisions

Certification in terms of Sections 21(1) and 21(2) of the Water Act is required for the disposal of industrial or domestic wastewater and effluent. Prohibits the pollution of underground and surface water bodies (S23) (1) and Accountability for costs to be met in remedying the environment as soon as project abandonment (S23 (2)).

Relevance to the proposed project

The protection of ground and surface water resources should guide the project construction phase. No Hazardous substances should be disposed of in any case for example spillages.

2.9 Labor Act (No 11 of 2007)

In concurrence the Labour Act (No. 11 of 2007) with Regulation 156, 'Regulations Relating to the Health and Safety of Employees at a working place'.

Relevant provisions

Section 135 (f) of the Ministry of Labour and Social Welfare specifies that "the steps to be taken by the owners of premises used or intended for use as factories or places where machinery is used, or by occupiers of such premises or by users of machinery about the structure of such buildings of otherwise to prevent or extinguish fires, and to ensure the safety in the event of a fire, of persons in such building.

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.

Relevance to the proposed project

The project will offer several jobs to both semi-skilled and skilled locals and it will be the proponent or the contracted company's responsibility to ensure that the workplace is safe from Hazards. Occupational Safety and health practitioners should be hired to provide adequate safety and health training to key personnel. This will comprise put on suitable hazard management plans.

2.10 Public Health and Environmental Act, 2015

Relevant provisions

No person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.", Under this act, in section 119.

Relevance to the proposed project

The proponent shall guarantee compliance with the terms of the Act.

2.11 Road Ordinance 1972 (Ordinance 17 of 1972)

The ordinance set the width of proclaimed roads and road reserve boundaries (S3.1) Infringements and obstructions on and interference with proclaimed roads. (S37.1) Distance from proclaimed roads at which fences are erected (S38) Control of traffic during construction activities on the trunk and main roads (S27.1)

Relevance to the proposed project

All the distances and specifications in the ordinance should be thoroughly observed during the construction and operation phases.

2.12 Pollution and Waste Management Bill (draft)

Relevant provisions

The draft of the Pollution and waste management bill clearly defines different types of pollution. It also notifies how the Government intends to control different types of pollution to uphold a clean and safe environment for all.

The bill expresses the mandatory for everyone to comply with waste management to reduce pollution in any form. The failure to comply with the obligatory is considered a punishable offense.

Relevance to the proposed project

The operations of the project should be done in accord with the pollution and waste management bill to reduce all types of pollution within the vicinity of the project site during the construction and operation phases. The existence of a fenced dumpsite will ensure adequate solid waste management if correctly used.

During the operation phase of the proposed development activities, the municipality will be entitled to undertake refuse collections and provisions for solid waste receptacles to be put in place.

2.13 Waste Management Regulations: Local Authorities ACT (1992)

Relevant provisions

Waste Management Regulation: Local Authorities of 1992 provides guidelines on waste management, it mandates the occupier of properties must provide a secure, hygienic, adequate, and readily accessible waste storage place or area on the premises.

Relevance to the project

The waste management on-site will be executed in an environmentally sound manner using a registered existing dumping area. All solid waste generated during the construction and operational phase will be handled and disposed of using recommended skip plastic bins, bin

liners to make sure the right procedural disposing methods. Alternatively, a sustainable approach can be done, see *Appendix I* for recommendations.

2.14 The Namibian Constitution Act, (1990)

Relevant provisions

The Constitution of Namibia encourages wise and sustainable use of resources. According to Article 95 of Namibia's Constitution, it states that the State shall actively promote and maintain the welfare of the people by adopting policies aimed at the maintenance of ecosystems, essential ecological processes and biological diversity of Namibia, and utilization of living natural resources in a sustainable way for the benefit of all Namibians, both present and future. This article recommends that a relatively high level of environmental protection is called for in respect of pollution control and waste management.

Relevance to the proposed project:

The project will enable the full execution of the right to practice any profession, or carry on any occupation, trade, or business by availing necessary provisions such as practicing any profession or carrying on any occupation, trade, or business in the country.

The implementation of the environmental management plan will ensure conformity to the constitution in terms of environmental management and sustainability.

2.15 Namibia's Draft Wetland Policy

Namibia's Wetland Policy Vision is to manage national and shared wetlands wisely by protecting their vital ecological functions, life support systems for the current and future benefit of people's welfare, livelihoods, and socio-economic development. The objectives of the policy are to:

- a) protect and conserve wetland diversity and ecosystem functioning to support basic human needs.
- b) provide a framework for enduring use of wetland resources.
- c) promote the integration of wetland management into other sectoral policies; and to
- d) Recognize and fulfill Namibia's international and regional commitments concerning shared wetlands and wetlands of international importance.

Relevance to the proposed project

The project site is characterized by sandy loamy soils which were considered less likely to store groundwater for longer periods. The project site is not recognized under wetlands in Namibia.

2.16 Conclusion

These pieces of regulations should be observed throughout the project's life cycle. Any deviations from these policies, regulations, and administrative frameworks may have catastrophic results to the environment (including manpower) and the work environment. These laws bring about rational work ethics that support the protection of the environment. Strict monitoring by relevant authorities will bring about sound environmental practices. Divundu Village Council shall enforce these regulations on its area of jurisdiction and constant monitoring will be done in form of inspections and audits.

3.0 PUBLIC AND STAKEHOLDERS' CONSULTATIONS

3.1 Introduction

This chapter gives a summary of the interests, affected and stakeholders reached by the EIA team. A background Information document and the layout plans were made accessible upon request.

3.2 Public Participation for EIA

The public participation process was undertaken per the requirements of the Environmental Management Act of 2007 and its guidelines. The process is mandatory, and it is very important as it serves various purposes. It helps in sustainable project implementation and decision-making processes giving equitable contributions towards project design.

3.3 Notification of Public and Stakeholders

The involvement of the public was done before the fulfilment of the EM Act and the comments were recorded electronically and manually.

3.3.1 Background Information Document

A background Information Document (BID) for the proposed developments was made available during the public consultations. It was distributed upon request by interested parties. **Appendix IV** is the BID designed for the interested and affected parties.

3.3.2 Newspaper adverts

Notification of interested and affected parties was done through the newspapers twice in the Sun and Republikein, newspapers. This was done before the fulfilment of the EM Act. Public notices were placed on the weekly newspapers dated 20th October 2021 and 27th October 2021.

3.3.3 Site and Public notices

Site notices were placed all around Divundu notice boards and public places calling interested and affected members to attend a public meeting which was scheduled on the 20th of November 2021 at 10 am at which 15 attendants were recorded. Plate 3 below shows one of the public notices placed on a public place in the informal settlement.



Figure 3: Public notice

Source Fieldwork 2021

3.4 Public meeting

A public meeting was held on the 20th of November 2021 and Conserver Investment delegates were facilitating the meeting. The EIA team gave a briefer summary of the meeting with the aid of Divundu Village Council Chief Executive Officer, the Councillor, and the residents. The site plan maps were available circulating, and the bid was available on request.

3.5 Public and Stakeholders comments

Some of the concerns which arose from interested and affected residents include compensation or reimbursements packages, employment issues, affordability of stands, and land degradation issues. Their concerns were recorded and all-encompassed in the EMP accompanying this Environmental Assessment scoping report.

It was also noted that the Council still needs to address its land allocation issues as well as residential and business plots. The responsible authorities were responsible for the questions which were regarding the allocation of stands.

3.6 Conclusion

The public and stakeholder consultations were done for the EMA and the outcomes gave a green light for the project implementation that is if the IMP designed by the Environmental consultants is instrumental.

4.0 ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS ASSOCIATED WITH THE PROPOSED PROJECT IMPLEMENTATION

4.1 Introduction

The **key environmental and socio-economic issues** associated and identified with the proposed redevelopment on ERF 492 Divundu Extension 1 includes air pollution (Noise, dust, and Vibration), landscape and Visual changes (Soils, Geology, soil erosion), ecology disturbance (Introduction of alien or exotic species, Flora and Fauna), water quality issues (surface and groundwater), Socio-Economic and human geography (reallocation of land, employment creation, traffic increase), increased Solid waste generation (general waste), urbanization (Culture dilution, population increase, illicit dealings), occupational Safety, Health, and the Environmental related issues (for construction and general workers).

4.2 Impact Assessment Methodologies

To identify probable impacts this EIA study used different methodologies which include but are not limited to:

- a) Desktop studies involving comparative analysis of similar projects within and around Namibia.
- b) Geographic Information Systems (GIS) and remote sensed data.
- c) Checklists and approved standards and relevant legislature.
- d) Desk reviews of secondary sources to determine specialized biodiversity or habitat suitability models.
- e) Networking and with stakeholder consultation methodologies including questioners, semi-public meetings, and interviews with different stakeholders.
- f) Matrices are done through scientific analysis and field observations.
- g) Briefing and Overlays consultation and Workshops and
- h) Other computer-aided methods.

4.2.1 Checklists

Because of their advantage of simplicity, the assessment team used a checklist approach. They bring structure to gathering and classifying information, identifying potential environmental impacts, and thinking about possible mitigation options. They also help in reaching tentative conclusions on the extent of environmental impact. It is important to note that, no matter what the structure of checklists, a variety of sources can be used to develop them, local individuals, experts, and other concerned parties.

Checklists are widely used in EIA processes to guide decision-making, especially during the pre-feasibility and planning phases of the project lifecycle, when it is most critical to anticipate adverse impacts and to include mitigating measures in projects. Checklists are designed:

- a) To help **identify significant negative impacts** by providing the right questions to ask regarding the various project activities and the respective environmental components that may be affected. Checklists can be used to determine environmental impact thresholds, thus indicating whether a full-scale EIA is needed for a particular project.
- b) To provide a **systematic approach** to the environmental screening of development projects. A checklist forces the assessment to consider a standardized set of activities or effects for each proposed action, thus bringing uniformity to the assessment process.

- c) To indicate **how and why certain project activities have environmental impacts** which will allow planners to transfer those principles to the screening of projects not specifically addressed by the checklists.
- d) To assist in **identifying appropriate mitigation measures** to be incorporated into the project design; and,
- e) To **increase environmental awareness and understanding** of the relationship between environmentally sound practices and sustainable development.

Checklists provide a variety of methods varying in complexity and characteristics and all share the common basis of an index of environmental factors or development activities as follows:

- a) *Simple checklists*
- b) *Descriptive checklists*
- c) *Questionnaire checklists*
- d) *Weighting-scaling checklists*

Advantages of Simple Checklists

- a) Used as ‘aide memoir’ to identify impacts
- b) Can provide structure to initial part of scoping stage
- c) Used as ‘aide memoir’ to identify impacts
- d) Can provide structure to initial part of scoping stage
- e)

Limitations when using Simple Checklists

Provide assessor with a list of factors to be considered, but no information provided on:

- a) Specific data needs
- b) Methods of assessing importance of impacts
- c) Ways of measuring change to environmental factors

Table 3 overleaf showing Potential Impacts of the construction and operation phases of the proposed project obtained as *simple checklists*.

Table 3: Potential Impacts of the construction and operation phases

| IMPACT | | CONSTRUCTION PHASE | OPERATION PHASE |
|---|----------------------------------|--------------------|-----------------|
| ECOLOGICAL IMPACTS | Flora | XX | X |
| | Fauna (other than humans) | X | X |
| QUALITY ASPECTS | Air Quality | XX | x |
| | Solid waste | X | XX |
| | Surface and ground Water Quality | XX | X |
| | Landscape and Visual changes | XX | X |
| SOCIO-ECONOMIC AND HUMAN GEOGRAPHY | Traffic Increase | X | XX |
| | Employment | XX | X |
| | Relocation | X | XX |
| | Urbanization | X | XX |
| OCCUPATIONAL SAFETY, HEALTH AND THE ENVIRONMENTAL RELATED ISSUE | | XX | X |
| KEY <i>Significance of Impacts</i> X = single chance XX= double chance | | | |

A *descriptive checklist* was used to assess the potential or anticipated impacts of redevelopment on ERF 492. Table 4 below summarizes how environmental aspects were analyzed.

Table 4 overleaf showing analysis of potential Impacts during Construction and Operation phases of the proposed project development using a descriptive checklist.

Table 4: Analysis of potential Impacts during Construction and Operation phases

| Environmental Aspects | No effects | Positive Impact | Negative Impact | Beneficial | Adverse | Problematic | Short term | Long term | Reversible | Irreversible |
|--|------------|-----------------|-----------------|------------|---------|-------------|------------|-----------|------------|--------------|
| Land Pollution | | | x | | | x | x | | x | |
| Underground Water extraction | | X | x | X | | x | x | | | X |
| Land Degradation | | | x | | | x | x | | x | |
| Natural Drainage (Soil Characteristics) | | | x | | | x | | x | | X |
| Wildlife | | | x | | | | x | | x | |
| Endangered Species | x | | | | | | | | | |
| Exotic Vegetation | | X | | X | | x | | x | x | |
| Biodiversity loss | | | x | | | x | | X | x | |
| Air Quality (dust) | | | x | | | x | x | | x | |
| Health and Safety | | | x | | x | x | x | x | x | x |
| Economic Values (GDP, jobs, urban development) | | X | | X | | | x | x | | |
| Recreation | | X | | X | | | x | x | | |
| Noise | | | x | | | | x | | x | |

Limitations when using Descriptive checklists

- a) It only recognizes impact
- b) Does not offer quantitative information

Questionnaire checklists

The assessment team also utilized a Questionnaire checklist to gather all likely impacts. Attached to this report are a bunch of questionnaires that were distributed to the residents during a public

consultation meeting held on the 21 November 2021 Divundu open market. The questionnaires were distributed on a random sampling technic. Founding on random sampling sixteen (16) responses (questionnaires) was recorded from the residents. Affected residents to be relocated were selected using a purposive sampling technique. Their questionnaires are marked, (affected members).

4.2.2 Benefits of checklists

- a) Comparatively simple method,
- b) Not necessarily project specific.
- c) Once established, can be used in many different situations

4.2.3 Limitations of checklists

- ✓ It only recognizes impact and provides no quantitative information
- ✓ Can never be considered as definite or complete
- ✓ Do not help to identify secondary or higher order impacts
- ✓ Tend to compartmentalize

4.3 Overview of Impacts Associated with the Project

Table 5: Summary of the potential impacts that are related to the proposed activities.

| | | |
|-------------------------------|----------------------|------------------|
| KEY: E – ENVIRONMENTAL | -VE- NAGATIVE | H- HEALTH |
| SE- SOCIO-ECONMIC | +VE- POSITIVE | |

| Impact | Description | Effects | Class | Type | Likelihood | Extent | Action/ Responsibility |
|--|---|---|-------|------|------------|---------|---|
| Effluent discharge, wastewater, and human waste. | Wastewater and human waste effluent will be produced from all facilities erecting as part of the development phase of the project. It will be channelled to the main sewerage drainage to the existing oxidation ponds. | If waste is improperly managed through leakages, blockages, and disposal of raw sewer in any way will pollute the natural environment especially the nearby river/streams through surface runoff and seepage. | E | -VE | Likely | Minimal | The project proponent should ensure maintenance of pipes and the treatment plant. -emergency response personnel/plumbers on duty |
| Underground water extraction | -Water shall be used in the construction and operational phase for dust suppression and domestic use respectively- - The water used shall be | Increased underground water extraction from the water table will cause water table fluctuations | E | -VE | likely | Minimal | - Apply supply and demand model -Reuse and recycling -user pays |

| | | | | | | | |
|------------------------|--|--|----|-----|-------------|----------|--|
| | obtained from existing bulky water system as well as underground borehole to be sunk Southwest of the project site. | | | | | | principal |
| Solid waste generation | <ul style="list-style-type: none"> ▪ Waste emanating from construction activities, light industrial, domestic and office waste will increase solid waste to be disposed at the landfill. ▪ Littering from fast foods, pedestrians, motorists will be an order of the day | <ul style="list-style-type: none"> ▪ Water and soil pollution. ▪ suffocation of pets and kids ▪ reduction of scenery view ▪ increased landfilling or waste in the dumping site | E | -VE | Likely | Moderate | <ul style="list-style-type: none"> - Create a waste - managing strategy that is adhered to. - Raise awareness among workers on proper and suitable waste disposal systems. - Recycling any recyclable material. |
| Employment creation | -Employment creation will be increased directly and indirectly through construction works, municipal operations and | <ul style="list-style-type: none"> -Increases disposable income leading to social rest - Rural to urban | SE | +VE | Most likely | Moderate | <ul style="list-style-type: none"> - Provide information detailing how many extra workers will be |

| | | | | | | | |
|---|--|---|--------------|-------------|-------------------|---------------|---|
| | maintenance of the sewerage treatment plant | migration - Increased country GDP by taxed employees | | | | | employed by the operational phase. - Conduct transparent recruitment of workers |
| Impacts | Description | Effects | Class | Type | Likelihood | Extent | Action/ responsibility |
| Population increase resulting in immoral behaviours/ illicit dealings | -Congregated many people on an urban set up is usually associated with immoral behaviour among workers and residents. Illicit dealings like prostitution, drug abuse and theft are very common. | -Increase in HIV/AIDS and other sexual diseases. -Increase in assaults and burglaries. | SE | -VE | Most likely | Minimal | -education and awareness on promiscuity and HIV/AIDS issues by the council. -creation of a neighbourhood watch programs. -NAMPOL engagement |

| | | | | | | | |
|-------------------------------|--|--|---|-----|-------------|----------|---|
| Noise Pollution and vibration | <p>-Construction phase will generate noise through heavy machinery</p> <p>- Operation phase will increase traffic influx in the area</p> | -Noise will be a nuisance to the residents | E | -VE | Less Likely | Minimal | <p>- use of well serviced efficient machinery by the contractor</p> <p>-observing working hours (during the day) by the contractor</p> |
| Safety and Health risks | <p>- Safety and health risks can cause injuries, health risks to construction workers and the nearby residents.</p> <p>- solid waste pickers, sewerage treatment plant operators and other general workers during operation phase are subjected to potential health and safety risks</p> | -Injuries to workers. | H | -VE | Likely | Moderate | <p>Contractor should:</p> <p>- Equip workers with adequate personal protective clothing.</p> <p>-Safety, health education and awareness.</p> <p>-Safety and Health practitioner</p> |

| | | | | | | | |
|--|--|--|---|-----|-------------|---------------------|---|
| | | | | | | | appointment |
| Introduction of invasive alien species | -The operation phase of the project can be associated with introduction to invasive species like flowers, lawns, shrubs originating from foreign lands | -In a long run imported plant species grows rapidly and unmanaged species might spread to nearby environs | E | -VE | Less Likely | Low | -Use of environmentally friendly decorating species by the project developer -regular maintenance of alien species |
| Biodiversity loss | -The biodiversity on the project site and its immediate environs will be lost because of land clearance, topsoil disturbance and construction activities | -Disturbance of existing biodiversity composition, introduction of alien materials, modification of soil structure and establishment of permanent structures | E | -VE | Most Likely | Moderate to Extreme | -compensation to the biodiversity loss through introduction of eco-friendly decorating species - use of live fencing |

| | | | | | | | |
|--------------------------------|---|--|-------|------|-------------|----------|--|
| Paving or Surface modification | Construction of tar marked roads, concrete paved surfaces, compacted surfaces, houses might form | -Reduced infiltration increasing surface runoff likely to cause soil erosion. | E | -VE | Most Likely | Moderate | -integrated municipal drainage system designing |
| Impacts | Description | Effects | Class | Type | Likelihood | Extent | Action |
| | Impermeable surfaces resulting in high chances of surface runoff | Pollution to nearby waterbodies and to some extent flooding | | | | | Construction of storm Drains -use of gutters from roof surfaces. |
| Socio-economic changes | <ul style="list-style-type: none"> ▪ Business opportunities will open during the operation phase. ▪ construction of new infrastructure, dynamic businesses ▪ Lifestyle changes | <ul style="list-style-type: none"> ▪ Opens business agglomeration opportunities | SE | +VE | Most likely | High | <ul style="list-style-type: none"> ▪ Creating a conducive business environment to attract investors |

4.4 Overall Site Sensitivity

This assessment report came up with an overall site sensitivity matrix, considering the preliminary site visits, public consultations, and experience. Anticipated impacts (positive and negative) can therefore be monitored and moderated to ensure sustainable project implementation. In general, the proposed project can bring modifications to the environment at which if the Environmental management Plan, specialist surveys drafted for the assessments are practically taken into practice, sound sustainable project development can be archived with much respect to the environment. Table 6 overleaf provides a significance rating for each impact before and after mitigation.

Table 6: Overall Site sensitivity

| Impact | Unmitigated | Overall Significance | Mitigated | Overall Significance |
|--|--------------------|-----------------------------|------------------|-----------------------------|
| CONSTRUCTION PHASE | | | | |
| Dust | 7 | Moderate | 4 | Low |
| Noise | 5 | Low | 3 | Very Low |
| Biodiversity loss | 4 | Low | 4 | Low |
| Effects on Groundwater | 7 | High | 5 | Moderate |
| Impact on soil | 7 | High | 5 | Low |
| Generation of waste | 6 | Moderate | 4 | Low |
| Occupational Health and Safety | 6 | Moderate | 4 | Low |
| Spread and risk of HIV /AIDS | 7 | High | 5 | Low |
| Traffic impact | 5 | Low | 3 | Very Low |
| Heritage impact | 4 | Low | 3 | Low |
| OPERATION PHASE | | | | |
| Traffic impact | 6 | Moderate | 5 | Low |
| Population Increase (Spread and risk of HIV /AIDS) | 6 | Moderate | 4 | Low |
| Economic Values (GDP, jobs, urban development) | 8 | High | 8 | High |
| Occupational Health and Safety | 6 | Moderate | 5 | Low |
| Solid waste generation | 8 | High | 5 | Low |
| Effluent waste (blockages and leakages) | 5 | Low | 3 | Low |
| Underground water extraction | 6 | Moderate | 4 | Low |
| Increased surface runoff | 6 | Moderate | 4 | Low |

KEY: SCORES RATING FROM (0 TO 10)

4.5 Risk Analysis

Based on the impacts identified by this study as from site visit, process analysis, desk study, and stakeholder consultations conducted, an integrated (environmental) risk analysis was carried out using a Sustainable Project Implementation approach, as well as the international Procedures. The risk analysis showed generally life over the entire lifespan of the whole project the public and the workers are at a very low risk to the impact and hazards associated with the project if compliance with the EMP is observed. However, compliance inspections should be always done to guarantee the protection of the environment.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The proposed re-development of ERF 492 Divundu Extension 1 will result in land-use change. The operation of the proposed project should be done per sound environmentally sustainable technologies and methods, constant monitoring should be carried out to ensure the operations are done in a sustainable and environmentally friendly manner. The project implementation is a good initiative for the economy and the society, but research has revealed that land-use changes if improperly accomplished will damage the environment in a way that can be detrimental to the survival of humans and animals in the locality.

5.2 Recommendations

The following recommendations should be strictly adhered to. To alleviate any negative impacts that may emanate from the construction and operation phases of the proposed project development under discussion.

- a) Relevant and cost-effective management, which ensures hiring of qualified personnel, on serviceable components like electricity, roads, and waste recycling companies,
- b) Mitigation measures should be put in place always,
- c) Consulting Environmental Engineers, Town Planners, and the Town Council on issues that arose during Project life cycles and

- d) In the cases of decommissioning of the project, an application for decommissioning should be done with a qualified Environmental Engineer or consultant to the Ministry of Environment and Tourism.

6.0 ENVIRONMENTAL MANAGEMENT PLAN

6.1 Introduction and Background

Ritta Khiba Town and Environmental Planners have been appointed by Divundu village council as a neutral Environmental Consultant to undertake the Environmental Assessment (EA) for the proposed redevelopment of the ERF 492 Divundu Ext 1, Kavango East Region. Divundu village council intends to make use of the public open space for business purposes, tourism and hospitality-related activities, private educational Centre and remainder of Erf will remain public open space. These will smoothen the way forward for Divundu Village in reaching a town status.

This EMP will be instrumental during the planning, construction, and operational phases of the whole proposed project. The solid waste generated because of a new settlement will find its way to the existing dumpsite.

During the project life cycle, Divundu Village Council remains accountable for violation of any misconduct against the contents of this EMP. The purpose of this EMP is to deliver guidance to the project team in respect to, the construction of a new township on approximately 37.07 Ha and all the project life cycle activities. This encompasses all phases of the project except decommissioning phase at this point is a far-fetched dream. In case of decommissioning of the proposed development, an application to the Ministry of Environment should be done following all the legal requirements.

All in all, the objective of this EMP is to formulate mitigating measures that should be made enforced to all contractors during all phases of the project to prevent negative impacts where possible. This EMP is an obligatory measure to protect the natural and socio-economic environment on the proposed project site, its immediate environs, and the planet at large. It is a specific aim of this EMP to prevent long-term environmental degradation. All the

Environmental specifications and the procedures discussed in this deed were also developed per the relevant legislation applicable to the proposed development.

6.2 Phases of the Project

This EMP was compiled in progression to the fulfilment of the EM Act of Namibia of 2007 and its regulations. The objective of this EMP is to formulate mitigating measures that should be made enforced on all contractors during all phases of the project. If all the contents of this EMP are not desecrated in any way, this will enhance a sustainable project implementation.

6.2.1 The Planning Phase

This EMP bids a superlative prospect to integrate pre-emptive environmental management measures to achieve sustainable development. While there is still the chance of unforeseeable impacts taking place; however, through the incorporation of contingency plans like this EMP during the planning phase, all necessary remedial activities can be operationalized to reduce potential impacts. Impacts that are likely to be encountered during this phase will be being linked to reallocation and reimbursements of illegal settlers.

6.2.2 The Construction Phase

During the construction phase localized, immediate positive, and negative impacts are most likely to be encountered. Impacts like dust pollution, noise pollution, land pollution/degradation, deforestation, employment creation, culture dilution, occupational health, and safety-related issues. All likely impacts during this phase can be mitigated or stabilized to environmentally acceptable standards if the contractors and the project proponent operationalize this EMP. Divundu Village council as the project proponent should therefore exercise a sound Environmental Management approach. This can be archived through hiring or employing a qualified and experienced Environmental Officer to interpret the contents of this EMP about the construction activities.

6.2 The Operation Phase

The proposed redevelopment will give birth to both positive and negative impacts on the receiving environment and the nation at large. During the operational phase, positively the project will improve social welfare through the creation of job opportunities and enhance business opportunities. The project operational phase is likely to bring some undesirable

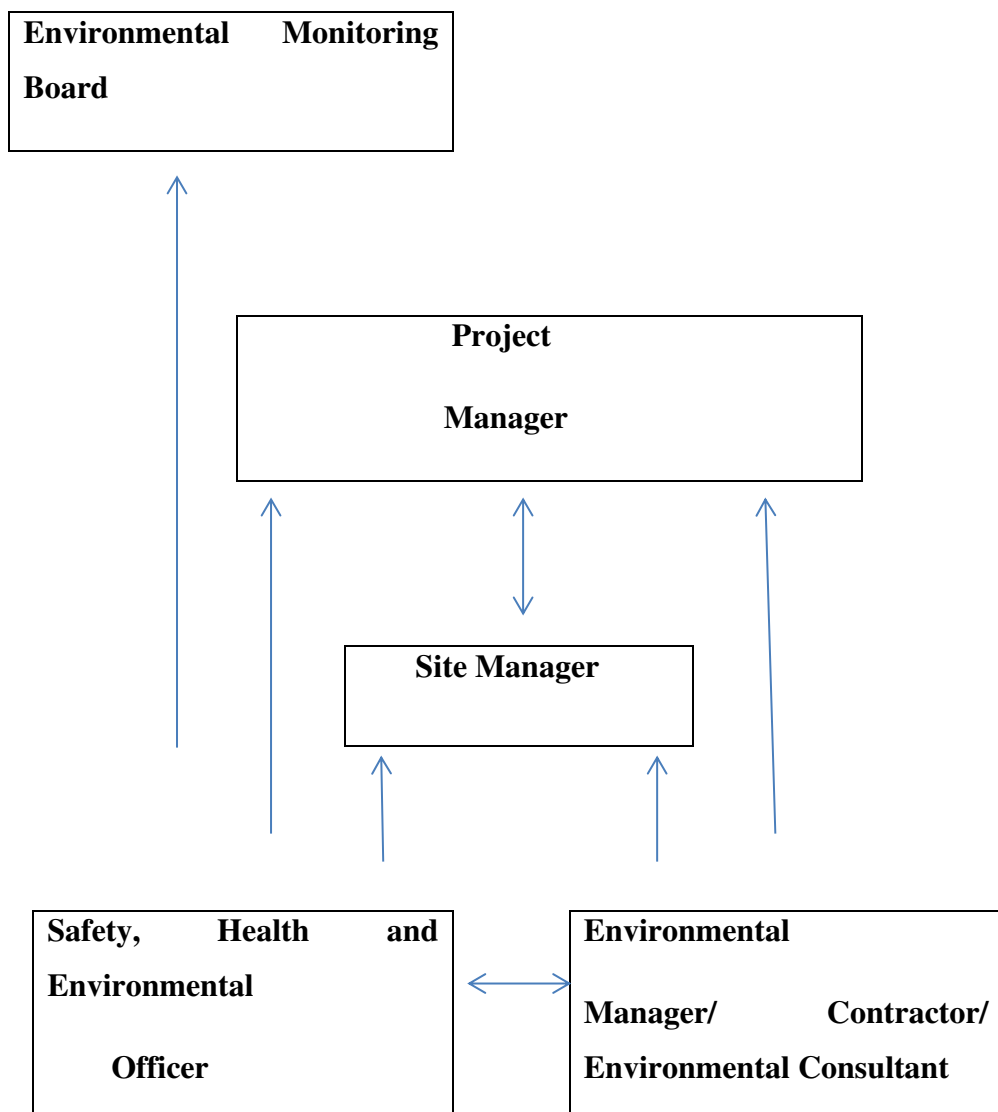
impacts like invasive alien species, culture dilution, population increase, solid waste accumulation, and increased resource utilization.

7.0 EMP AND PROJECT MANAGEMENT

7.1 Responsibilities during the Construction Phase

The official authorities will be entitled to ensure that all necessary fundamental techniques towards EMP implementation are executed. Specific responsibilities of Divundu Village Council, Project manager, Site Manager, Environmental Manager, and Safety Health and Environmental officer for the construction phase are shown on the flow chart diagram overleaf.

Table 6: Specific responsibilities



Responsibilities of the Site Manager

- a) Familiarize with the Environmental Management Plan
- b) Be familiar with all applicable environmental legislation and the Divundu Council Safety, Health, and Environmental policies
- c) Ensure that audits are conducted to ensure compliance with the EMP
- d) Liaise with the Project Manager, the Safety, Health, and Environmental Officer, and the Contactor on matters concerning the environment.
- e) Avoid actions that are likely to have detrimental results on the environment
- f) Prevent land, air, surface, and groundwater pollution on the site.
- g) Have overall responsibility for the implementation of the EMP on site

Responsibilities of the Project Manager

- a) Ensure that Divundu Village Council and the Contractor are aware of all specifications, legal requirements procedures about the project specifically with regards to the environment
- b) Familiarize him or herself with the Environmental Assessment perspective
- c) Ensure that all requirements within this EMP are communicated and adhered to by the Divundu Village council and its Contractor(s)
- d) Monitor the implementation of the EMP throughout the project using the site.

The responsibilities Safety, Health and Environmental Officer

- a) Familiarization with Environmental Impact Assessment Report
- b) Be familiar with all applicable environmental legislation and the Divundu Council Safety, Health, and Environmental policies
- c) Be fully familiar with the Environmental Management Plan.
- d) Implement Occupational Safety, Health, and the Environment standards
- e) Ensure that intermittent environmental routine audits are undertaken on the project execution
- f) Maintain a daily site register, a public complaint register, a register of audits
- g) Be fully acquainted with the conditions of the Record of Decision
- h) Available on daily basis during the construction phase
- i) Reporting to project manager

- j) Undertake regular and comprehensive inspections on-site and surrounding areas to monitor compliance with the EMP
- k) Take applicable action following non-compliance with the EMP
- l) Convey the contents of this document to the site staff and discuss the contents in detail with the Project Manager and Contractor
- m) Monitor and authenticate those environmental impacts are moderated
- n) Compile progress reports regularly, with input from the Site Manager, for
- o) Submission of a final post-construction audit carried out by an independent auditor/consultant to the Project Manager
- p) Submit an environmental compliance report quarterly, in writing, to the

Ministry of Environment and Tourism (MET)

The responsibilities of Environmental Manager/ Contractor/ Consultant

- a) Ensure daily inspections to determine compliance, using checklists
- b) Simplify reporting system, recording, investigation, and follow-up of environmental-related Incidents as per Risk Management process
- c) Proactively interpret and objectively analyses environmental data and initiate programs to mitigate against the environmental and related risks
- d) Undertake principal responsibilities on performing environmental audits and employee guidance on issues related to safeguarding this EMP
- e) Compile and submit a monthly report to Divundu Council, External Auditor & Project Management
- f) Facilitate and integrate relevant environmental training programs for employees
- g) Ensure compliance with this EMP
- h) Review construction methods, techniques, and procedures identify environmental risk, draw conclusions, and recommend possible solutions
- i) Cultivate, implement, and manage the necessary Environmental Management Systems

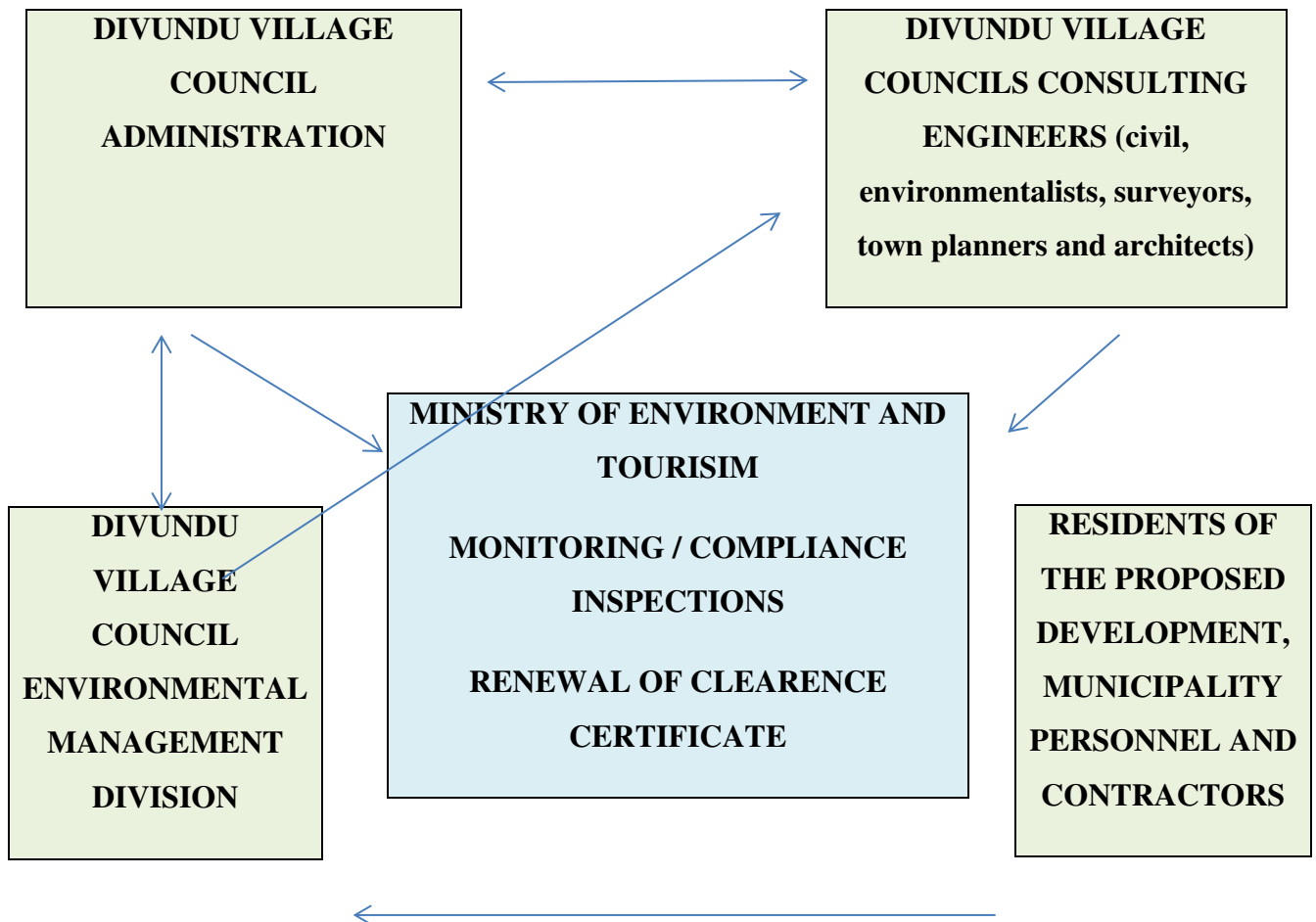
7.2 Responsibilities during the Operation Phase

The operation phase is a lifetime frame of the project. A sustainable approach will ensure smooth day-by-day running of the ecosystem within the project environs and the planet at large. Divundu Village Council remains the chiefly responsible authority for the

sustainability of the project life cycle. During the operation phase possible impacts like job creation, urban expansion or urban growth, effects on groundwater or the water table, localized traffic increase, safety, health, and environmental hazards emanating from daily operations, land pollution, impacts associated with illicit dealings, cultural dilution, the introduction of invasive alien species, surface, and groundwater pollution among others.

Below is a flow chart showing responsible authorities to be involved in the project life cycle ensuring EMP implementation on the proposed project site. MET will be the supervising or monitoring board.

Table 7: Specific responsibilities during operation phase

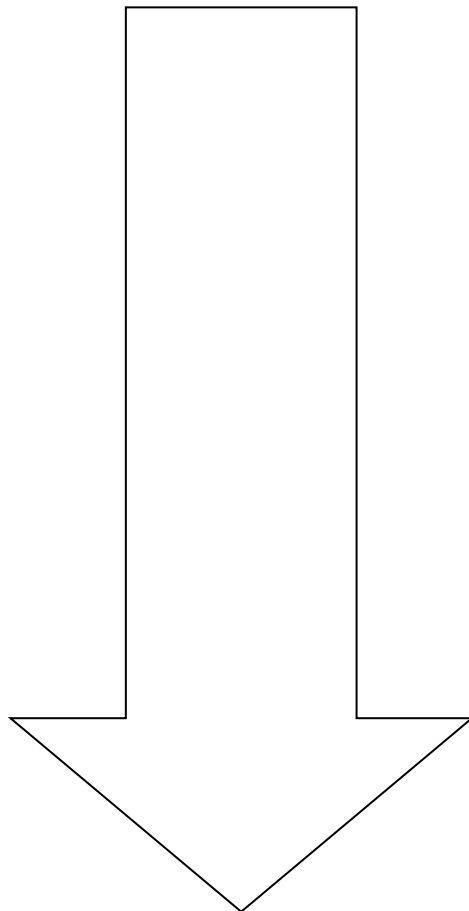


7.3 Environmental Mitigation Plan

Mitigating measures for negative impacts during all phases of the project will be outlined in this section. These are based on evidence testified in the existing literature on similar case studies and specific features on the proposed project site. The mitigation plan is based on a source and sensitivities approach, allowing the identification and proposition of protective measures for undertaking all the challenges faced during project development and life cycle.

Table 8 below contains the possible impacts and proposed mitigating measures to be done to ensure a sustainable project implementation.

Table 8: Likely impacts and proposed mitigating measures



| PHASE | IMPACT DEPICTION | MITIGATION | RESPONSIBILITY |
|---------------------|---|---|--|
| CONSTRUCTION | -Noise Pollution and vibration is most likely to generate from earth moving machinery and blasting construction works. This will be a public nuisance as well as personnel on shift | <ul style="list-style-type: none"> ▪ Observing working hours. ▪ use of well serviced equipment ▪ use of adequate personal protective equipment (PPE) e.g., earmuffs and earplugs | CONTRACTOR/ SAFETY AND HEALTH OFFICER/ SITE MANAGER |
| | -Safety and Health risks are most likely to be encountered during construction. Injuries, agronomics, falling from heights, use of Hazardous substances, pins, and needles | <ul style="list-style-type: none"> ▪ Use of adequate PPE ▪ shift work on hazard prone areas ▪ safety and health awareness and education and training to construction personnel | CONTRACTOR/ SAFETY AND HEALTH OFFICER/ SITE MANAGER |
| | -Biodiversity to be lost through site clearance, use of earth moving machinery disturbs soil organisms | <ul style="list-style-type: none"> ▪ avoiding disturbance of nearby environs ▪ refilling trenches using original soil | CONTRACTOR/ SAFETY OFFICER/ SITE MANAGER |
| | -Population increase resulting in immoral behaviours/ illicit dealings/ HIV and AIDS | <ul style="list-style-type: none"> ▪ education/ awareness ▪ employing locals ▪ engage law enforcing agents, (neighbourhood watch program/ Nampol | CONTRACTOR/ SAFETY AND HEALTH OFFICER/ SITE MANAGER |
| | IMPACT DEPICTION | MITIGATION | RESPONSIBILITY |
| | <ul style="list-style-type: none"> ▪ Solid waste generation/ littering | <ul style="list-style-type: none"> ▪ Use of movable toilets on site | CONTRACTOR/ SITE |

| | | | |
|------------------------|---|---|--|
| | <ul style="list-style-type: none"> human waste from construction personnel, unpacked construction materials and food packaging are most likely to be the source of solid waste | <ul style="list-style-type: none"> use of by-liners on site education and awareness ensure all waste generated is disposed at the dumpsite | MANAGER/ SAFETY AND HEALTH OFFICER |
| | Dust pollution on the project site is most likely to emanate from dump trucks and earth moving machinery that's affecting the nearby environs and construction personnel | <ul style="list-style-type: none"> dust suppression always | CONTRACTOR/ SITE MANAGER/ SAFETY AND HEALTH OFFICER |
| | Land degradation / Excavation of deep trenches most likely to be dangerous to animals and human beings during the night | <ul style="list-style-type: none"> Use of warning signs/ reflectors at night closing of finished trenches as quickly as possible | CONTRACTOR/ SITE MANAGER/ SAFETY AND HEALTH OFFICER |
| CONSTRUCTION | Paving or Surface modification likely to increase surface runoff and reduce infiltration. Thus, posing the risks of flooding. | Designing storm water drainage system and buffered roads to allow water movement. Use of gutters should be considered on municipal building plans | CONTRACTOR OR SITE MANAGER |
| OPERATION PHASE | | | |
| | IMPACT DEPICTION | MITIGATION | RESPONSIBILITY |
| | Solid waste generation will cause littering, illegal dumping, suffocation of babies and pets with plastics, eyesore to | <ul style="list-style-type: none"> -Use of skip bins - Structuring a solid waste management division or team | DIVUNDU VILLAGE COUNCIL |

| | | | |
|--|---|--|--------------------------------|
| | the public. | <ul style="list-style-type: none"> -education and awareness - garbage collection schedule -regulations on illegal dumping and littering | |
| | <p>-Effluent or wastewater generated from households and public places must reach the treatment plant, but unfortunately events like leakages, blockages will discharge untreated effluent into the environment posing risks of diseases, ground and surface water pollution, non-point water pollution</p> <p>-Failure of the treatment plant to cause health risks to the community where treated effluent is recycled back</p> | <ul style="list-style-type: none"> -setting up an emergency sewerage service team who can also maintain leakages and neutralize lost effluent -keeping the treatment plant well serviced by installing agent - education and awareness on the use of tissues to reduce the chances of blockages | DIVUNDU VILLAGE COUNCIL |
| | - Water use will decrease the water table yields thus causing fluctuations. | An integrated water use approach will help to reduce underground water extraction thus by applying reduce, recycle and reuse as well as the user pays principle. | DIVUNDU VILLAGE COUNCIL |
| | -Safety and Health risks for municipality | <ul style="list-style-type: none"> ▪ appointment of a safety, health, and environmental | DIVUNDU VILLAGE |

| | | | |
|------------------|--|--|--------------------------------|
| | workers on duty. Waste pickers, electricians, plumbers among others might be victims of occupational related hazards | officer <ul style="list-style-type: none"> ▪ Provision of adequate PPE. ▪ education, awareness, and training courses | COUNCIL |
| | Introduction of invasive alien species is likely to emanate from decorating flowers, lawns and beautifying recreational or public open spaces as well as boundaries | <ul style="list-style-type: none"> ▪ use of locally acceptable flowers ▪ maintenance of alien species ▪ education and awareness on invasive species | DIVUNDU VILLAGE COUNCIL |
| PHASE | IMPACT DEPICTION | MITIGATION | RESPONSIBILITY |
| OPERATION | Population increase resulting in immoral behaviours/ illicit dealings, burglary <ul style="list-style-type: none"> - spread off sexually transmitted diseases - social unrest -culture dilution | <ul style="list-style-type: none"> -Engaging Law enforcement agents e.g neighbourhood watch dogs, NAMPOL, security services -education, training, and awareness programs -women empowerment | DIVUNDU VILLAGE COUNCIL |
| | -traffic increase causing congestion, noise, and vehicle theft | <ul style="list-style-type: none"> - use of restriction traffic signs or regulations - use of traffic lights, traffic circles and recommended widths of streets -traffic controlling | DIVUNDU VILLAGE COUNCIL |

7.4 Occupational Health and Safety Monitoring Program

The occupational health and safety monitoring program should include:

- a) Surveillance of the working environment:

Divundu Village Council should document compliance using a suitable combination of portable and stationary sampling and monitoring instruments. Monitoring and analyses should be conducted according to internationally recognized methods and standards. Monitoring methodology, locations, frequencies, and parameters should be established individually for each task following a review of the hazards.

7.5 Conclusion

Arising from the analysis by the consultants, the proposed project is unlikely to generate any irreversible or permanent negative impacts. The report has provided adequate mitigation measures for the identified temporary impacts. It is therefore recommended that the proposed project be approved provided that the proposed recommendations given are strictly adhered to.

7.6 Recommendations

To sack negative impacts that may emanate from the construction and operation phases of the land development and its affiliations, relevant and cost-effective management, and mitigation measures should be put into practice. Divundu Village council as the project proponent should therefore be able to lead on issues related to social wellbeing as well as women empowerment initiatives.

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APPENDIX I: CONSULTANT RESUME

APPENDIX II: MAPS, SITE PLANS AND STRUCTURAL LAYOUTS

APPENDIX III: TERMS OF REFERENCE

APPENDIX IV: BACKGROUND INFORMATION DOCUMENT

APPENDIX V: PUBLIC CONSULTATION TEMPLATES