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ENVIRONMENTAL
COMPLIANCE CONSULTANCY



ENVIRONMENTAL SCOPING REPORT PLUS IMPACT ASSESSMENT

FOR THE PROPOSED CONSTRUCTION COMPLETION AND OPERATION OF A TOURISM AND
HUNTING LODGE ON FARM WALDBURG NO.82, KHOMAS REGION, NAMIBIA.

PREPARED FOR:



FEBRUARY 2022

TITLE AND APPROVAL PAGE

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EXECUTIVE SUMMARY

This scoping study was undertaken for the proposed construction completion and operation of a tourism and hunting lodge on farm Waldburg No. 82, Khomas Region, Namibia. It was completed in accordance with the requirements of the Environmental Management Act (EMA), No.7 of 2007 and the Environmental Impact Assessment Regulation, No. 30 of 2012, gazetted under the Environmental Management Act, No. 7 of 2007.

The Project is located approximately 30 km northwest from Dordabis on Farm Waldburg No. 82 in the Khomas Region, Namibia. The Project consists of 12 accommodation units with a core area, a staff village, stables, airfield, solar plant, activities area, greenhouses, a new game fence around the farm, and renovations to the current hunter's house. All work and infrastructure will be confined within the boundaries of farm Waldburg No. 82. Most of the construction and renovations of the lodge have already been completed and referenced as Site A and B throughout the report.

Through the scoping process and impact assessment, it was found that the significant impacts that may occur during the construction completion and operational phases of the project are impacts relating to occupational and community health and safety, noise generation, habitat fragmentation, electrocution risk for wildlife from an electrified game fence proposed as a future addition and potential lead poisoning risk for scavengers, especially critically endangered white-backed vultures. Thus, these areas will need to be carefully monitored and managed according to the EMP and applicable legislation, to ensure that the significance of these impacts is reduced as far as reasonably possible.

Furthermore, potential impacts associated with the Project may include but is not limited to waste generation, increased traffic and visitors to the farm, fire risks, potential lowering of groundwater levels, mismanagement of wildlife, tourism and hunting activities and sewerage waste are expected to be of minor significance. It is recommended that these elements be managed according to the EMP with full adherence to statutory requirements, international standards and best practices where applicable.

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DEFINITIONS AND ABBREVIATIONS

ABBREVIATIONS	DESCRIPTION
CITES	Convention on International Trade in Endangered Species
dB	Decibel
DEA	Directorate of Environmental Affairs
ECC	Environmental Compliance Consultancy
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
ESIA	Environmental Social Impact Assessment
GIS	Geographic Information Systems
GDP	Gross Domestic Product
I&APs	Interested and Affected Parties
IFC	International Finance Cooperation
IUCN	International Union for Conservation of Nature
MEFT	Ministry of Environment, Forestry and Tourism
NIHL	Noise-induced Hearing Loss
Pb	Lead
PPE	Personal Protective Equipment
OSHA	Occupational Safety and Health Administration
OSH	Occupational safety and health
SANS	South African National Standards
SNR	Single Noise Rating
RH	Relative Humidity
WHO	World Health Organisation

1 INTRODUCTION

1.1 PURPOSE OF THIS REPORT

The purpose of the Project is to apply for an environmental clearance certificate for the proposed tourism development located on farm Waldburg No. 82 within the Khomas Region, Namibia (Figure 1).

Environmental Compliance Consultancy (ECC) has been engaged by the proponent, Gmundner Hotels (Pty) Ltd to undertake an environmental assessment process for the Project and develop a scoping report and an environmental management plan (EMP) in terms of the Environmental Management Act, No. of 7 of 2007 and its regulations. An environmental clearance application will be submitted to the relevant competent authority: The Ministry of Environment, Forestry, and Tourism (MEFT) for a Record of Decision (RoD).

1.2 PROJECT BACKGROUND

The Project consists of 12 accommodation units with a core area, a staff village, stables, airfield, solar plant, activities area, greenhouses, renovations to the current hunter's house and the construction of a new game fence around the farm. All work will fall within the boundaries of farm Waldburg No. 82. Most of the construction and renovations at the lodge have already been completed or nearing completion at Site A, which is the site where the main lodge is situated, and Site B is where the old hunters' house is situated.

1.3 ACCESS

The project site is located southeast of Windhoek next to the C23 road. It can be accessed from Windhoek by driving along the B6 road (en route to the Hosea Kutako International Airport) and turning right onto the C23 road, the farm is situated to the east of the road approximately 30 km before Dordabis (Figure 2). The entrance gate is visible from the road also currently under construction.

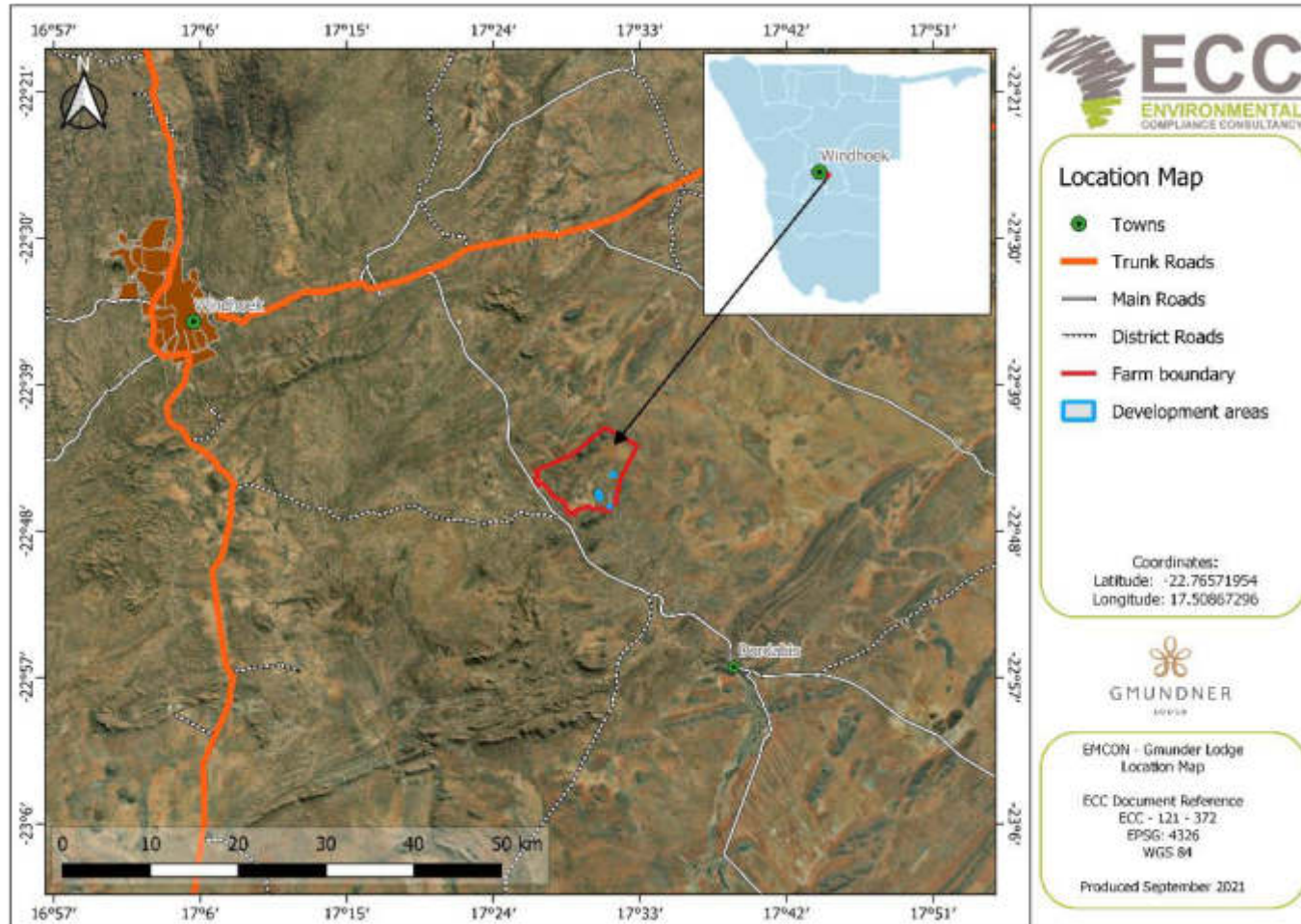


Figure 1: Locality of farm Waldburg No.82

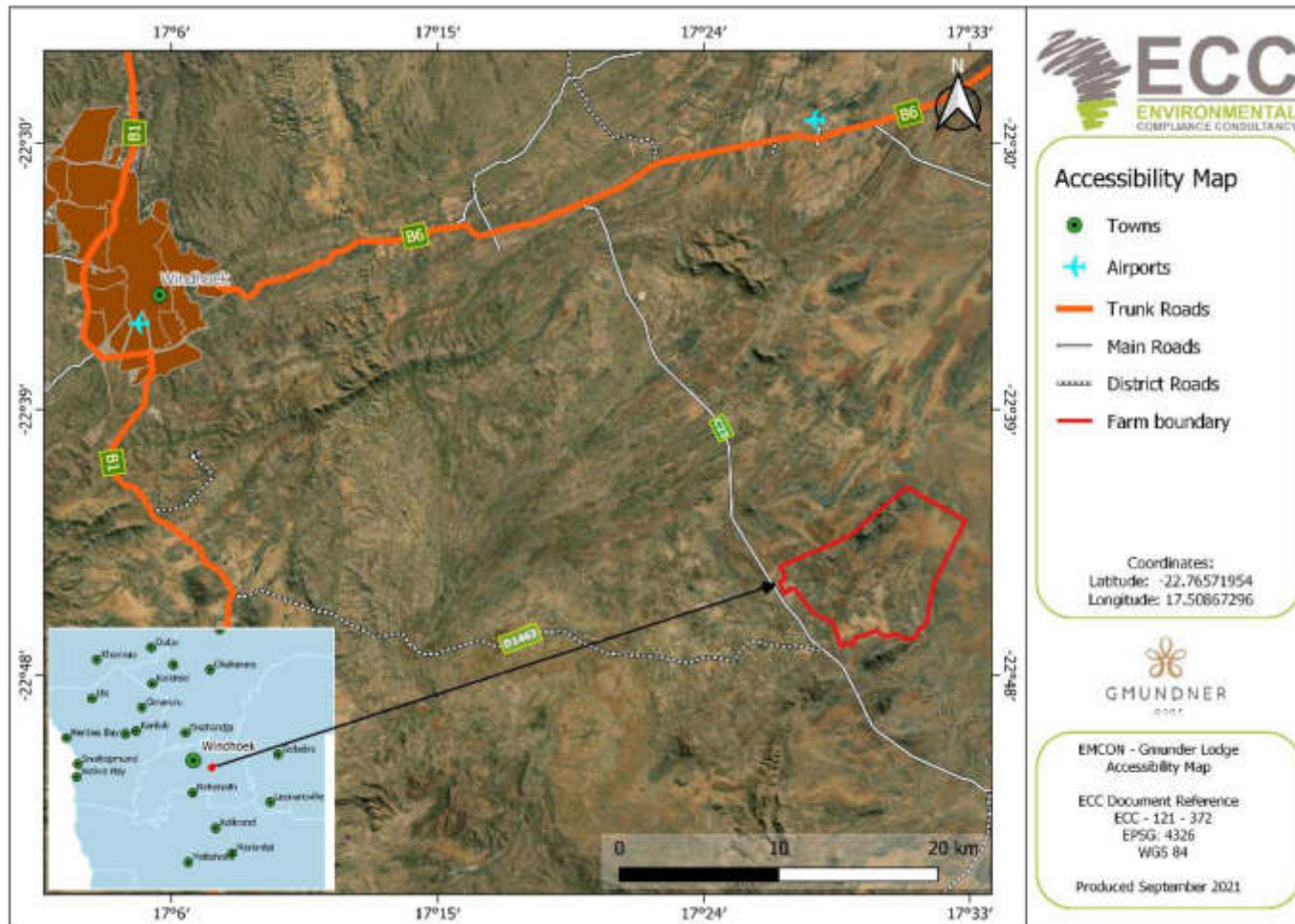


Figure 2: Accessibility map showing the possible roads that could be used to access farm Waldburg No. 82

1.4 SCOPE OF WORK

This scoping report has been prepared by Environmental Compliance Consultancy (ECC) to define and characterise the receiving baseline environment, to identify potential impacts and assess potential effects, whether positive or negative and their relative significance, explore alternatives for technical recommendations and identify appropriate mitigation measures.

The scoping report and impact assessment will provide information to the public and stakeholders to aid in the decision-making process for the proposed Project by the competent authority. The objectives are to:

- Describe the proposed activity and the site on which the activity is to be undertaken;
- Describe the baseline environment that may be affected by the proposed activity;
- Identify the laws and guidelines that have been considered in the assessment and preparation of this report;
- Provide details of the public consultation process;
- Describe the need and desirability of the proposed activity; and
- Provide a high-level analysis of feasible or unfeasible alternatives that were considered; and
- Provide an assessment of potential impacts identified.

The Ministry of Environment, Forestry and Tourism (MEFT) as the competent authority that deals with applications for environmental clearance has determined that an Environmental Management Plan (EMP) be developed to provide a management framework for the planning and implementation of the development. The EMP provides development standards and arrangements to ensure that the potential environmental and social impacts are mitigated, prevented, minimised and/or enhanced as far as reasonably practicable and that statutory requirements and other legal obligations are fulfilled.

1.5 THE PROPONENT OF THE PROPOSED PROJECT

Table 1: Proponents details

CONTACT	POSTAL ADDRESS	EMAIL ADDRESS	TELEPHONE
Gmundner Hotels (Pty) Ltd Mr Colin Steytler	P.O.Box 37, Windhoek	colin@emcogroup.com	081 1293640

1.6 ENVIRONMENTAL CONSULTANCY

ECC, a Namibian consultancy (registration number Close Corporation 2013/11401), has prepared this scoping report on behalf of the proponent. ECC operates exclusively in the environmental, social, health and safety fields for clients across Southern Africa, in both the public and private sectors.

ECC is independent of the proponent and has no vested or financial interest in the proposed project, except for fair remuneration for professional services rendered.

All compliance and regulatory requirements regarding this report should be forwarded by email or posted to the following address:

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2 APPROACH TO THE IMPACT ASSESSMENT

2.1 PURPOSE AND SCOPE

This scoping exercise aims to determine which impacts are likely to occur and which are unlikely, if any, to be significant or otherwise, scope the available data and identify any gaps which need to be filled; determine the spatial and temporal scope, and identify and evaluate the potential effects of the proposed project.

This scoping study was undertaken by the ESIA team at ECC by undertaking a preliminary assessment of the proposed project against the receiving environment obtained through a desk-top review and available site-specific literature.

2.1.1 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

The Environmental Management Act, No. 7 of 2007 stipulates that an environmental clearance certificate is required to undertake Listed Activities under the Act, and associated regulations. Listed activities triggered by the Project by following the Environmental Management Act, No. 7 of 2007 and its regulations are listed in Table 2.

The proposed Project potentially triggers the following Listed Activities in terms of the Environmental Management Act, No 7 of 2007:

Table 2: Listed activities and relevance to the Project

LISTED ACTIVITY	ESIA SCREENING FINDING
<p>ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES</p> <p>(1.a) The construction of facilities for the generation of electricity;</p> <p>(1.b) The construction of facilities for the transmission and supply of electricity;</p>	<ul style="list-style-type: none"> - A Solar plant and battery room has been installed at the Lodge site (site A) and will cater for a peak demand of 512kWh. - The manager's house (site B) will be supplied with Nampower's Single Wire Earth Return (SWER) line already extending onto the site. The line is to be upgraded from 32 KVA to 64 KVA by the proponent as approved by Nampower.
<p>WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES</p> <p>(2.1) The construction of facilities for waste sites, treatment of waste and disposal of waste.</p> <p>(2.3) The import, processing, use and</p>	<ul style="list-style-type: none"> - Septic tanks are installed at the staff village and will be emptied and removed after construction. - A full sewage treatment system has been installed on-site to service the lodge during the operational phase.

LISTED ACTIVITY	ESIA SCREENING FINDING
recycling, temporary storage, transit or export of waste.	<ul style="list-style-type: none"> - Plastic waste will be removed by OTS Waste Management, a company using skips - Waste generated on-site, including construction waste will be removed from the site and disposed of at the Kupferberg landfill site.
<p>FORESTRY ACTIVITIES</p> <p>4. The clearance of forest areas, deforestation, afforestation, timber harvesting or any other related activity that requires authorisation in term of the Forest Act, 2001 (Act No. 12 of 2001).</p>	<ul style="list-style-type: none"> - The proponent will ensure that all required permits will be in place before additional vegetation removal commences.
<p>LAND USE AND DEVELOPMENT ACTIVITIES</p> <p>5.3) Construction of veterinary protected area or game proof and international boundary fences.</p>	<ul style="list-style-type: none"> - A game fence is currently being constructed around the entire farm, Waldburg No 82.
<p>TOURISM DEVELOPMENT ACTIVITIES</p> <p>(6.) The construction of resorts, lodges, hotels or other tourism and hospitality facilities.</p>	<ul style="list-style-type: none"> - The construction of 12 accommodation units, with a core area, is more than 85% complete. - Staff villages have been constructed at site B. - An activities area will be constructed. - Stables are being constructed. - A Tennis court is under construction at site A. - Storage sheds have been constructed at site B. - Hangar and airfield have been constructed.
<p>WATER RESOURCE DEVELOPMENTS</p> <p>(8.1) The abstraction of ground or surface water for industrial or commercial purposes.</p> <p>(8.5) Construction of dams, reservoirs, levees and weirs.</p> <p>(8.6) Construction of industrial and domestic wastewater treatment plants and related pipeline systems.</p>	<ul style="list-style-type: none"> - Water will be sourced from three existing boreholes with a demand of 15m³ for site A and 9m³ for site B per day. - Two reservoirs have been constructed, one at site A and the other near the two supply boreholes. - Two 5000-litre tanks are to be installed near the proposed activities area. - The waste treatment system has been installed to treat water to an acceptable (useable) greywater standard.

LISTED ACTIVITY	ESIA SCREENING FINDING
<p>HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE</p> <p>(9.1) The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974.</p> <p>(9.2) Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.</p>	<ul style="list-style-type: none"> - An 8000-litre diesel tank is installed on-site, already certified by the previous owner.
<p>INFRASTRUCTURE</p> <p>(10.1 a) oil, water, gas and petrochemical and other bulk supply pipelines;</p> <p>(10.1 d) airports and airfields;</p>	<ul style="list-style-type: none"> - Five water supply pipelines have been constructed and run from the boreholes to the reservoirs and water tanks. - An airfield and helicopter hanger is currently being constructed on farm Waldburg and will be approximately 1.5 km in length and 18 meters wide.
<p>OTHER ACTIVITIES</p> <p>(11.2) Construction of cemeteries, camping, leisure and recreation sites.</p>	<ul style="list-style-type: none"> - An activities centre is proposed to be constructed on the farm and will include activities such as bow shooting, clay pigeon shooting, target shooting, hiking, horse riding, e-cross biking and e-cycling.

2.2 BASELINE STUDIES

The baseline environment is identified during the scoping phase and specific aspects of it that should be assessed are included in the list hereunder.

BIOPHYSICAL ENVIRONMENT

- Dust Air emissions;
- Soil and groundwater contamination;
- Vegetation Clearing;
- Soil disturbance and erosion;

- Potential Fires;
- Impacts on Biodiversity; and
- Groundwater.

SOCIAL ENVIRONMENT

- Employees Health and Safety;
- Community Health and Safety;
- Noise generation;
- Employment creation for locals;
- Limited goods and services procurement within the local economy; and
- Downstream spending by locals within the region.

All pertinent information collected and analysed during the scoping phase has determined the current status of the receiving environment and provides a baseline against which changes that occur as a result of the Project can be measured and assessed.

2.3 ESIA CONSULTATION WITH INTERESTED & AFFECTED PARTIES

Public participation and consultation are requirements in terms of Section 21 of the Environmental Management Act, No. 7 of 2007 and its regulations for a project that requires an environmental clearance certificate. Consultation is a compulsory and a critical component in the ESIA process, aimed at achieving transparent decision-making, and can provide many benefits.

The objectives of the stakeholder engagement process are to:

- Provide information on the project to I&APs: introduce the overall concept and plan;
- Clarify responsibility and regulating authorities;
- Listen to and understand community issues, concerns and questions;
- Explain the process of the ESIA and timeframes involved; and
- Establish a platform for ongoing consultation.

Consultation for this project requires engagement with the relevant national (line ministries), regional, local authorities, and local communities.

- These are identified as MEFT, the Khomas Regional Council; neighbouring farmers; and
- All other identified and registered (Interested and Affected Parties) I&APs.

No I&APs registered during the initial consultation phase through invitations sent via newspaper advertisements and site notices published.

2.3.1 SITE NOTICES

A site notice ensures neighbouring properties and stakeholders are made aware of the proposed project. The notice was set up at the boundary of the proposed site as illustrated in Appendix C – Public Participation.

2.3.2 NEWSPAPER ADVERTISEMENTS

Notices regarding the project and associated activities were circulated in three newspapers namely the 'Republikein', 'Allgemeine Zeitung' and the 'Sun' on the 9th of November and 16th of November 2021. The purpose of this was to commence the consultation process and enable I&APs to register an interest in the project. The adverts can be found in Appendix C.

2.3.3 PUBLIC MEETING

In terms of Section 22 of the Environmental Management Act, No. 7 of 2007 and its regulations, to register I&APs, a public meeting is not a mandatory requirement under the Act, but a voluntary step should there be significant demand for it from the I&APs.

2.3.4 CONSULTATION FEEDBACK

The I&APs are encouraged to provide constructive input during the consultation period. The public review period of the scoping report and the EMP will be set for a period not less than seven days as per the regulations of the Act, to provide the public with an opportunity to review and send any comments on the draft reports to be included and addressed, where applicable, in the final documentation.

The scoping report and EMP have been submitted for public review from the 8th of February 2022 to the 22nd of February 2022 (14 days) and no comments have been received during this period.

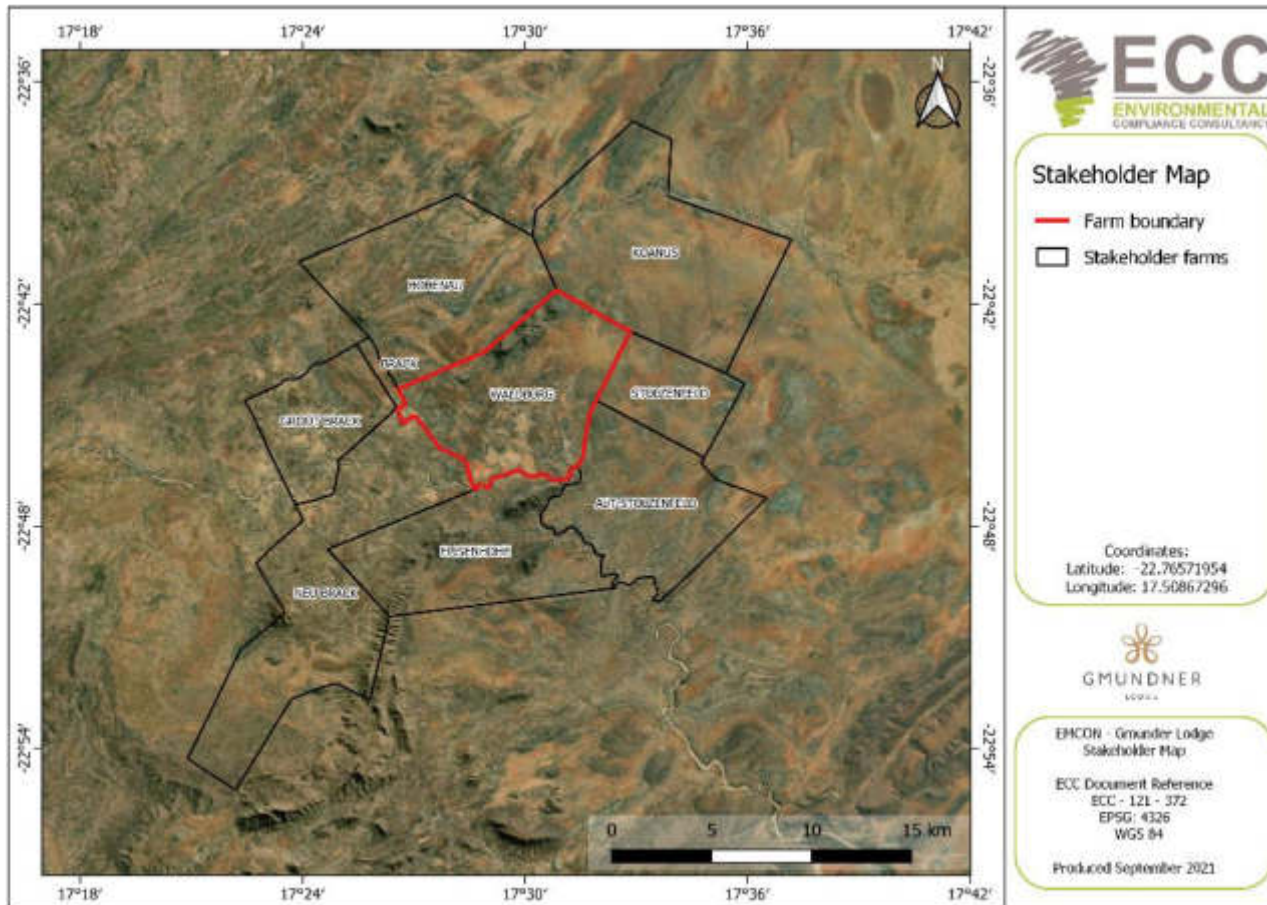


Figure 3: Map of stakeholders surrounding the Project site

2.4 FINAL SCOPING REPORT AND EMP

The final scoping report and associated appendices will be available to all stakeholders on the ECC website www.eccenvironmental.com and will be published on the MEFT website for public access.

The ESIA report and appendices will be formally submitted to the Office of the Environmental Commissioner, DEA as part of the application for an environmental clearance certificate for the project.

2.5 AUTHORITY ASSESSMENT AND DECISION MAKING

The Environmental Commissioner in consultation with other relevant competent authorities will assess the findings of the scoping study. Upon review, the Environmental Commissioner will revert to the proponent with a Record of Decision (RoD).

2.6 MONITORING AND AUDITING

In addition to the EMP being implemented by the proponent, a monitoring strategy and audit procedure will be determined by the proponent and competent authority. This will ensure key environmental receptors are monitored over time to establish any significant changes from the baseline environmental conditions caused by project activities.

3 REVIEW OF THE LEGAL ENVIRONMENT

3.1 NATIONAL LEGISLATION AND RELEVANT INTERNATIONAL PERFORMANCE STANDARD(S)

This chapter outlines the likely regulatory framework applicable to the proposed project. Table 4 provides an overview of the relevant legislation and Table 3 provides a list of permit and registration requirements.

Table 3: Project-related permit/registration requirements

PERMIT, LICENCES OR REGISTRATION	RELEVANT AUTHORITY	PROJECT BEARING
WATER ABSTRACTION PERMITS	Ministry of Agriculture, Water and Land Reform	An abstraction permit is required for the abstraction of water from a borehole for commercial purposes.
EFFLUENT DISCHARGE PERMIT	Ministry of Agriculture, Water and Land Reform	An effluent discharge permit is required if the proponent plans to discharge any effluent waste.
PERMITS FOR THE REMOVAL OF VEGETATION	Ministry of Environment, Forestry and Tourism	Permits will need to be obtained in the event where protected tree species need to be removed or large tracts of land above 15 ha need to be cleared.
HUNTING PERMITS	Ministry of Environment, Forestry and Tourism	Hunting permits will be needed for the hunting of protected game and for huntable game (i.e, if planned to hunt more animals than allocated under the yearly hunting regulations).
REGISTRATION OF GAME FENCE	Ministry of Environment, Forestry and Tourism	The game fence that is currently under construction around the farm will need to be registered.
APPLICATION TO UTILIZE GAME (WILD ANIMALS)	Ministry of Environment, Forestry and Tourism	A permit needs to be applied for any of the following reasons: Shoot and sell, Shoot for own use, Keep and sell, Transport, Night Culling, Trophy Meat, Catch, keep and sell and Trophy hunting.
RELEVANT PERMITS AND REGISTRATION WITH REGARDS TO AIRFIELDS AND HANGARS	Namibian Civil Aviation Authority	An airfield and helicopter hanger are currently being constructed. A letter from the Namibian Civil Aviation Authority can be seen in Appendix D – LETTER FROM THE NCAA, where it outlines the processes and requirements for aerodrome developments.

Table 4: Table with national legislation and relevant international performance standard(s)

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
<p>Constitution of the Republic of Namibia of 1990</p>	<p>The Constitution of the Republic of Namibia, 1990 clearly defines the country’s position concerning sustainable development and environmental management. The constitution refers that the state shall actively promote and maintain the welfare of the people by adopting policies aimed at the following:</p> <p><i>“Maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present, and future; in particular, the government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory.”</i></p>	<p>The proponent is committed to the sustainable use of the environment and has aligned its corporate mission, vision and objectives within the ambit of the Constitution of the Republic of Namibia (1990).</p> <p>The project is also committed to engaging with the local community to actively promote and maintain the welfare of the people affected by the project.</p>
<p>Environmental Management Act, (No. 7 of 2007) and its regulations, including the Environmental Impact Assessment Regulation, 2007 (No. 30 of 2012)</p>	<p>The Act aims to promote sustainable management of the environment and the use of natural resources.</p> <p>The Act requires certain activities to obtain an environmental clearance certificate prior to project development.</p>	<p>This Environmental scoping report (and EMP) documents the findings of the environmental assessment undertaken for the proposed project.</p> <p>The process has been undertaken in line with the requirements under the Act and its regulations.</p>

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	<p>The Act states an EIA should be undertaken and submitted as part of the environmental clearance certificate application process.</p> <p>The MEFT is responsible for the protection and management of Namibia’s natural environment. The Department of Environmental Affairs under the MEFT is responsible for the administration of the EIA process.</p>	
<p>Water Act, No. 54 of 1956</p>	<p>Although the Water Resources Management Act, No. 11 of 2013 has been promulgated, it cannot be enacted as the regulations have not been passed – therefore the Water Act 54 of 1956 remains in effect and is the current piece of legislation relating to Water Management in Namibia.</p> <p><i>This Act provides for “the control, conservation and use of water for domestic, agricultural, urban and industrial purposes; and to make provision for the control, of certain activities on or in water in certain areas”.</i></p> <p>The Department of Water Affairs within the Ministry of Agriculture Water and Land Reform (MAWLR) is responsible for the administration of the act.</p>	<p>The Act stipulates obligations to prevent pollution of water. Should wastewater be discharged, a permit is required. The EMP sets out measures to avoid polluting the water environment.</p> <p>The proposed project intends to treat all wastewater to acceptable greywater and to be reused for gardening, animal waterholes and agricultural activities therefore, measures to minimise potential groundwater and surface water pollution are contained in the EMP.</p> <p>Abstraction of water from boreholes requires an abstraction permit. Abstraction rates need to be measured and reported to the authorities by following the requirements of the permit.</p> <p>In addition, annual reporting on the environmental impacts of water abstraction is recommendable. Should the project require drilling and abstraction of water from underground sources, an application should be submitted to the authorities.</p>

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
<p>Soil Conservation Act, No. 76 of 1969) and the Soil Conservation Amendment Act, No. 38 of 1971)</p>	<p>Makes provision for the prevention and control of soil erosion and the protection, improvement and the conservation, improvement and manner of use of the soil and vegetation.</p>	<p>Measures will be included in the EMP to conserve soil and vegetation that will be used as part of the project.</p>
<p>The Forestry Act, No. 12 of 2001 as amended by the Forest Amendment Act, No. 13 of 2005</p>	<p>Section 22 deals with the protection of natural vegetation which is not part of a surveyed erven of a local authority area as defined.</p> <p>Section 21 states that no person shall cut, destroy, or remove vegetation which is growing within 100 metres of a river, stream, or watercourse.</p> <p>Section 23 requires a permit from the Director for the clearance of vegetation on more than 15 hectares on any piece of land or several pieces of land situated in the same locality which has predominantly woody vegetation; or cut or remove more than 500 cubic metres of forest produce from any piece of land in a period of one year.</p>	<p>The project may require vegetation clearing as part of the project infrastructure development.</p> <p>The necessary permits should be obtained from the MEFT, where the application should satisfy that the cutting and removal of vegetation will not interfere with the conservation of soil, water or forest resources.</p>

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
National Heritage Act, No. 27 of 2004.	<p>The Act provides provision for the protection and conservation of places and objects with heritage significance.</p> <p>Section 55 compels mining companies to report any archaeological findings to the National Heritage Council.</p> <p>Subsection 9 allows the NHC to issue a consent subject to any conditions that the Council deems necessary.</p>	<p>There might be potential for heritage objects to be found on-site, therefore the stipulations in the Act have been taken into consideration and are incorporated into the EMP.</p> <p>In cases where heritage sites are discovered a 'chance find procedure' will be used.</p>
The Aviation Act, No. 74 of 1962 and Namibian Civil Aviation Regulations	<p>This Act provides for the consolidation of laws enabling effect to be given to certain International Aviation Conventions and making provision for the control, regulation and encouragement of flying within Namibia and for other matters incidental thereto.”</p>	<p>An airfield and helicopter hanger are under construction on farm Waldburg and will be operated as part of the project.</p> <p>The regulations refer to permits and relevant registration processes that must be adhered to with regard to aviation developments.</p>
Animal Health Regulations: Animal Health Act, 2011 Under Section 32 Of The Animal Health Act, 2011 (Act No. 1 Of 2011)	<p>“The Act provides for the protection, prevention, detection and control of animal disease; Maintenance and improvement of animal health”.</p>	<p>The Act and its regulations are relevant to operating abattoirs and ensuring animal health.</p> <p>An abattoir has been constructed on Farm Waldburg for hunting purposes.</p>
Animals Protection Act 71 of 1962	<p>The Act provides for the consolidation and amendment of the laws relating to the prevention of cruelty to animals”.</p>	<p>Due to the nature of the project, it is essential that ethical treatment of animals and ethical hunting is promoted.</p>

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
Controlled Wildlife Products and Trade Act 9 of 2008	The Act makes provision for the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora; and to provide for incidental matters”.	Due to the nature of the project, it is essential that the relevant permits are in place for hunting and the importing and exporting of animal products.
Arms and Ammunition Act No. 7 of 1996.	The Act provides for the control over the possession of arms and ammunition; to regulate the dealing in, importation, exportation and manufacture of, arms and ammunition; and to provide for incidental matters”.	All firearms should have valid licences. People involved in recreational shooting activities and hunting should be competent with regards to handling firearms.
Nature Conservation Ordinance Act No. 4 of 1975 and its regulations.	The Act makes provision for the conservation and management of wildlife and regulates fishing in inland waters. The text consists of 91 sections divided into 7 Chapters and completed by 9 Schedules. The Chapters are the following: Preliminary (I); Game Parks and Nature Reserves (II); Wild animals (III); problem animals (IV); Fish in inland waters (V); Indigenous plants (VI); general (VII). The Nature Conservation Board shall be continued under section 3. The Cabinet may appoint Nature Conservator.	Relevant permits relating to hunting and biodiversity should be obtained from competent authorities. Most permit applications must go through MEFT, application forms can be downloaded from the following link: https://www.met.gov.na/services/permits-registrationscertificates-licences/173/ or alternatively: https://www.wrnam.org/permits Table 3 highlight some of the registration and permit applications that are relevant to farm Waldburg.
Labour Act, No. 11 of 2007: Regulations relating to the Health and Safety of Employees at Work (GN 156/1997).	The Act provides for the regulation of employees’ health and safety in the workplace.	The project involves activities that could potentially generate loud noises, potentially dangerous conditions and various other activities

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
		that could have a potential negative impact on employees if appropriate mitigation and safety measures are not followed.
Namibia Tourism Board Act (No. 21 of 2000) and Regulations relating to Levy Payable by Accommodation Establishments Government Notice 137 of 2004	The Act provides for the establishment of the Namibia Tourism Board and to provide for its functions; to provide for the registration and grading of accommodation establishments; to provide for the declaration of any sector of the tourism industry as a regulated sector and for the registration of businesses falling within a regulated sector, and to provide for matters incidental thereto.	The proponent is currently in the process of applying for a licence from the Namibian Tourism Board.
Hazardous Substances Ordinance Ordinance No. 14 of 1974	The Act provides for the control of substances that may cause injury or ill-health to or death of human beings because of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances.	A diesel tank exists, is installed and operated to regulation.

4 PROJECT DESCRIPTION

4.1 BACKGROUND OF THE PROJECT

The proponent aims to finalise the construction of 12 accommodation units (with a core area), a staff village, stables, airfield, solar plant, activities area, greenhouses, renovations to the current hunter's house and the game fence around the farm.

The remaining construction work will mainly be confined to and between the three areas in Figure 4, which comprise the main lodge (Site A), the old hunter's house and staff village (Site B) and the activities area. The boundary (red outline in Figure 4) of the farm is where the game fence is currently being constructed.

4.2 NEED FOR THE PROPOSED PROJECT

Namibia is a tourism destination for people around the world due to its various unique and popular geological features, wildlife attractions and popular sites across the country. The tourism and hunting industries are both big contributors to the Gross Domestic Product (GDP) of Namibia and plays an important part in socio-economic sustainability and wildlife conservation within the country.

With the current COVID-19 pandemic the tourism sector suffered greatly due to border closures around the globe. Since mid-2021 more and more countries gradually started to reopen their borders for international travel which helped to reduce a bit of pressure on this sector in Namibia. However, the complete recovery of this sector is dependent on the restoration of unrestricted global travel and renewed market capitalism.

Thus, new tourism projects such as this one will be beneficial in the sense that it may attract international tourists to the country and will also result in the creation of indirect and direct employment opportunities (this project created approximately 186 jobs during the construction phase of the project and will create approximately 54 jobs during the operational phase of the project).

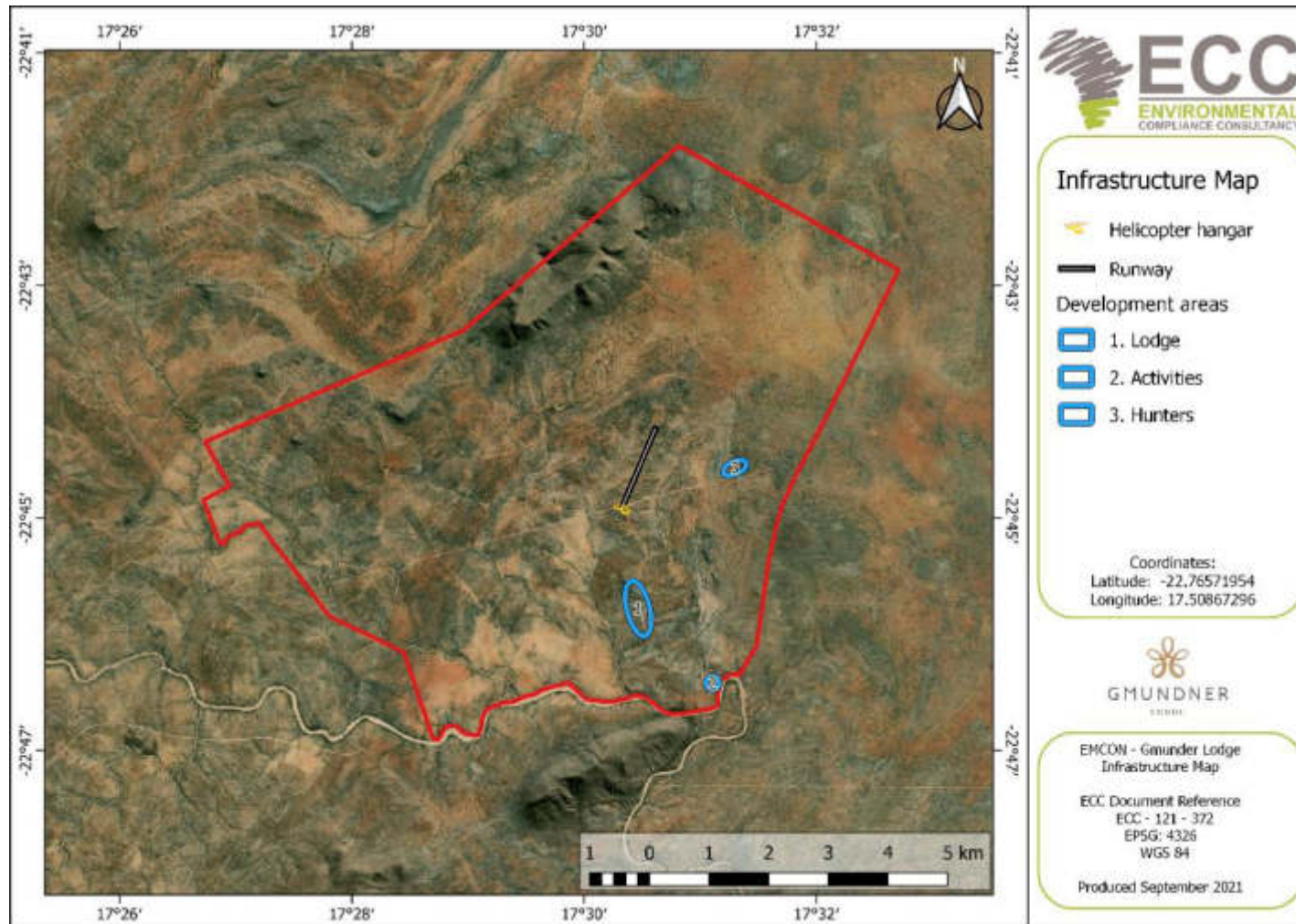


Figure 4: Development areas on farm Waldburg No. 82

4.3 ALTERNATIVES CONSIDERED

Best practice environmental assessment methodology calls for consideration and assessment of alternatives to the project. In terms of the Environmental Management Act, No. 7 of 2007 and its regulations, alternatives considered should be analysed. This requirement ensures that during the design evolution and decision-making process, potential environmental impacts, costs, and technical feasibility have been considered, which leads to the best option(s) being identified.

The proponent is the owner of farm Waldburg No. 82. Most construction and installations have already been completed or are in the final stages. Thus, no alternative localities have been considered for the proposed project.

During the assessment, alternatives will consider optimisation and using eco-friendly solutions to reduce potential impacts e.g., lead-free ammunition, natural trails for horseback riding, renewable energy, water recycling etc.

4.4 PROPOSED INFRASTRUCTURE LAYOUT ON SITE

At site A (lodge area) the following infrastructure is completed or nearing completion (Figure 5):

- 12 accommodation units with a core area (consisting of the following: restaurant, SPA, gym, pool, sauna, lounge, dining area, shop, public bathrooms, staff bathrooms, offices, laundry and storerooms);
- Tennis court;
- Wastewater collection and treatment system;
- Full sewage collection and treatment system;
- A solar system with a battery room (for peak demand of 512kWh); and
- Lodge water reservoir.

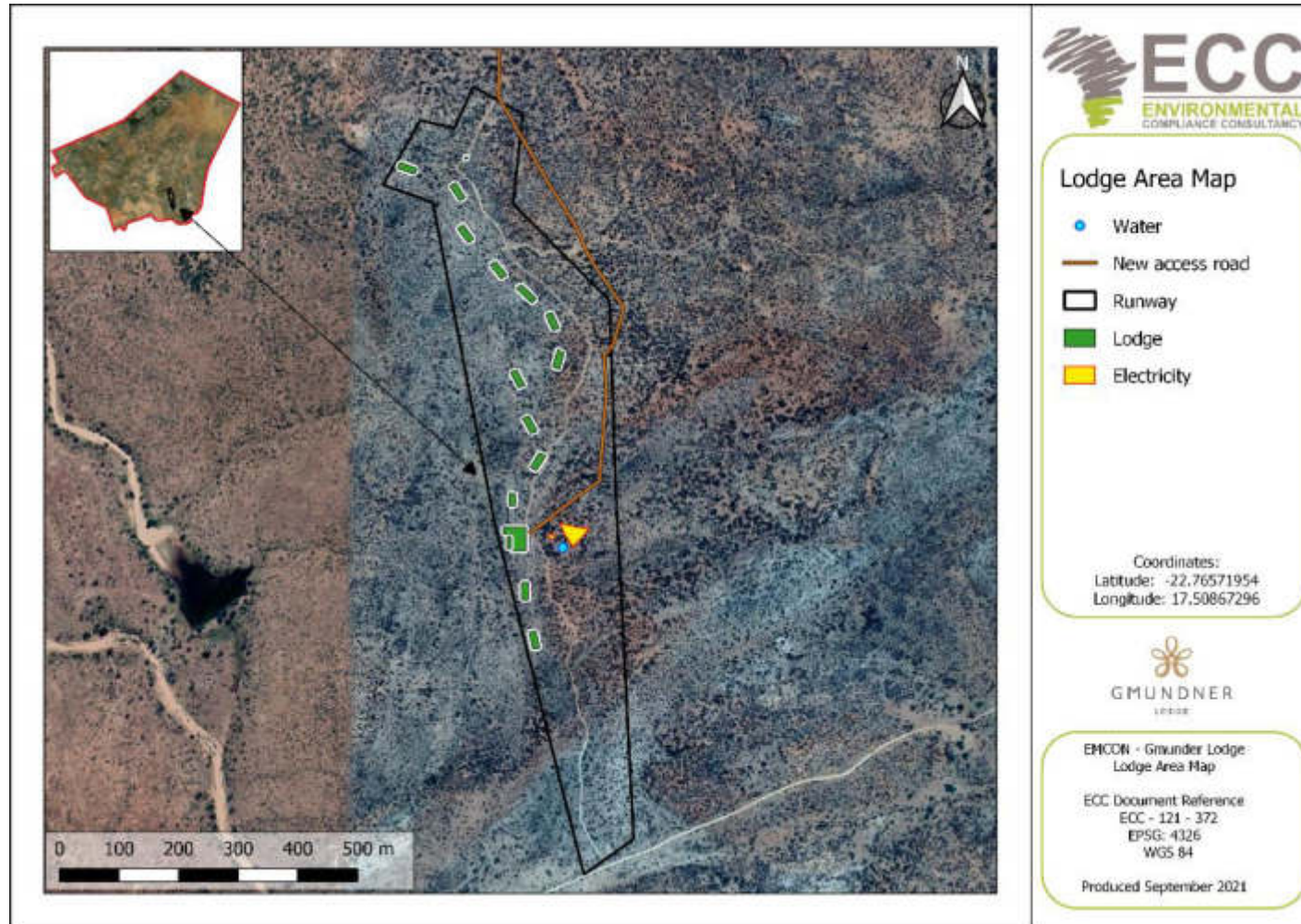


Figure 5: Site A, where the lodge has been constructed

At site B the renovations to the old hunters' house have been completed and the construction of the staff villages, two storage sheds, butchery and borehole reservoir have been completed as well (Figure 6).

Other elements that have been completed on farm Waldburg includes five pipelines (one from supply borehole 1 and 2 to the borehole reservoir, a pipeline from borehole 3 to the lodge reservoir, a pipeline from borehole 3 to the tanks at the activities area and another pipeline from the borehole reservoir to the site A reservoir).

Areas where construction is in progress or yet to begin includes:

- Airfield with a helicopter hanger;
- Activities area for bow shooting, clay pigeon shooting, target shooting, hiking, horse riding, e-cross biking, e-cycling;
- A game fence around the farm;
- Stables; and
- Greenhouses (with drip feed system).

4.5 WATER SUPPLY

Water will be sourced from three existing boreholes with a demand of 15m³ for site A and 9m³ for site B per day. Surface infrastructure for water supply has already been constructed and includes two reservoirs (one at site A and the other near the two supply boreholes), two 5000-litre tanks and five water supply pipelines.

A waste treatment system has also been installed to treat water to an acceptable (useable) greywater standard.

The Proponent will be responsible to apply for drilling permits (for any new boreholes), legalisation of existing boreholes (if not registered) and water abstraction permits at the MAWLR.

4.6 POWER SUPPLY

A Solar plant and battery room has been installed at the Lodge site (site A) and will cater for a peak demand of 512kWh. The manager's house (site B) will be supplied with Nampower's Single Wire Earth Return (SWER) line already extending onto the site. The line is to be upgraded from 32 kVA to 64 kVA by the Proponent as approved by Nampower.

4.7 SEWAGE AND SOLID WASTE MANAGEMENT

Septic tanks are installed at the staff village and will be emptied and removed after construction. A full sewage treatment system has been installed on-site to service the lodge during the operational phase. The sewage system is a Bubbler greywater system that treats the sewage to a greywater standard and is pumped from the system.

The effluent water will be tested yearly to ensure that the water conforms to the relevant regulations and standards. The proponent will also be responsible to ensure that effluent discharge permits are in order (apply at the MAWLR).

A fat trap is installed in the kitchen to prevent contamination into the bubbler, killing the bacteria and thus improving the efficiency of the system. The fat trap will be cleaned monthly by an external contracting company.

Plastic waste will be removed by OTS Waste Management, a company using skips; Furthermore, waste generated on-site, including construction waste will be removed from the site and disposed of at the Kupferberg landfill site.

4.8 PROPOSED STAGES OF THE PROJECT

4.8.1 CONSTRUCTION STAGE

Most of the planned construction, equipment installations and renovations have already commenced with most of the construction work being within the final stages of completion. The only construction that hasn't commenced is the activities area and greenhouses.

4.8.2 OPERATIONAL STAGE

The proposed Project is envisioned to be a fully functional tourism lodge, that will also cater for various other tourism-related activities within the farm's boundaries and aims to provide tourists with a luxury African experience.

Tourism activities will include bow shooting, clay pigeon shooting, target shooting, hiking, horse riding, e-cross biking, e-cycling, a tennis court as well as other tourism-related activities. The hunting on the farm will be strictly conducted by the owner and appointed professional hunter/farm manager as a source of meat for the lodge.



Figure 6: Site B, and the associated infrastructure

5 ENVIRONMENTAL AND SOCIAL BASELINE

5.1 INTRODUCTION

Desktop baseline studies relevant to the project formed part of the current environmental assessment conducted for the Project. Baseline studies aim to assess possible project impacts (positive, negative and cumulative), thus ensuring input into the project designs, which avoid, reduce or mitigate the potentially adverse environmental and social risks.

This section provides an overview of the existing biophysical environment through the analysis of the available baseline data regarding the receiving environment. Desktop studies, followed by site data verification on the national database are undertaken as part of the scoping process to get information about the current status of the receiving environment. This provides a baseline where changes that occur as a result of the proposed project can be measured.

5.2 BASELINE ENVIRONMENT

5.2.1 CLIMATE

Farm Waldburg is situated to the southeast of Windhoek in the Khomas Region, Namibia (Figure 1), which is between 1650 m and 2044 m above sea level. The climatic conditions characterising the Project are mild summers and cool winters with the mean temperatures between 19°C and 20°C, and mean maximum temperatures ranging between 21°C and 31°C and mean minimum temperatures ranging between 6°C to 19°C. The hottest months of the year is between November and January and the coolest months are in June and July (Bubenzer, 2002 & meteoblue, 2021).

The most humid month of the year is February at approximately 70% RH, and the driest month is June with approximately 10% RH. The average rainfall in this area during the year is between 350 to 400 mm and rainfall events are limited to the summer months, mainly between December and March. Potential evaporation is between 3000 and 3200 mm per year (Bubenzer, 2002).

Climate and Weather data for Brack (22.78°S 17.47°E) have been used to give the most accurate data for the proposed site. The site has wind speeds between 0 and 38 km/h, where the months of July to October are known to have the strongest winds. Wind can occur any time of the day and the most predominant wind directions for this area are North (Figure 8) (meteoblue, 2021).

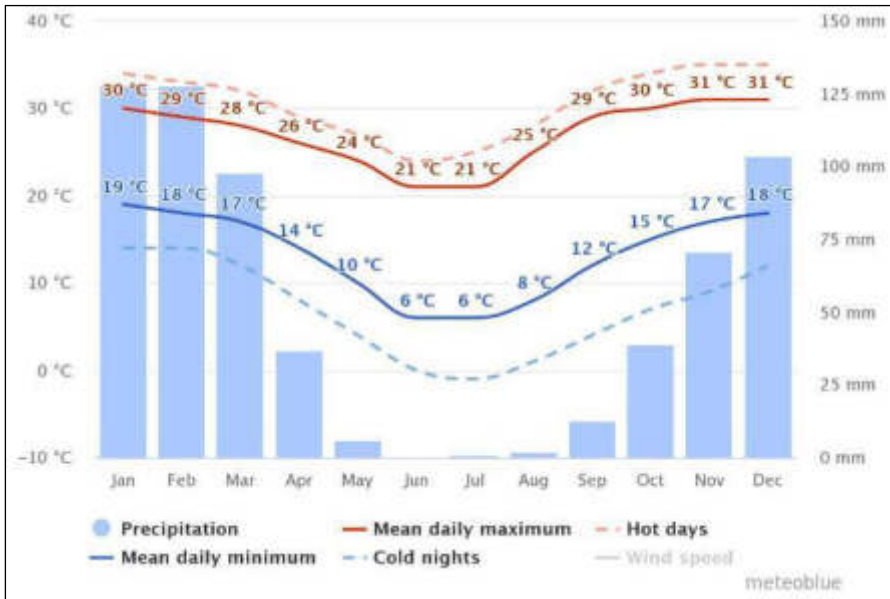


Figure 7: Yearly climate overview for farm Waldburg No. 82 (meteoblue, 2021)

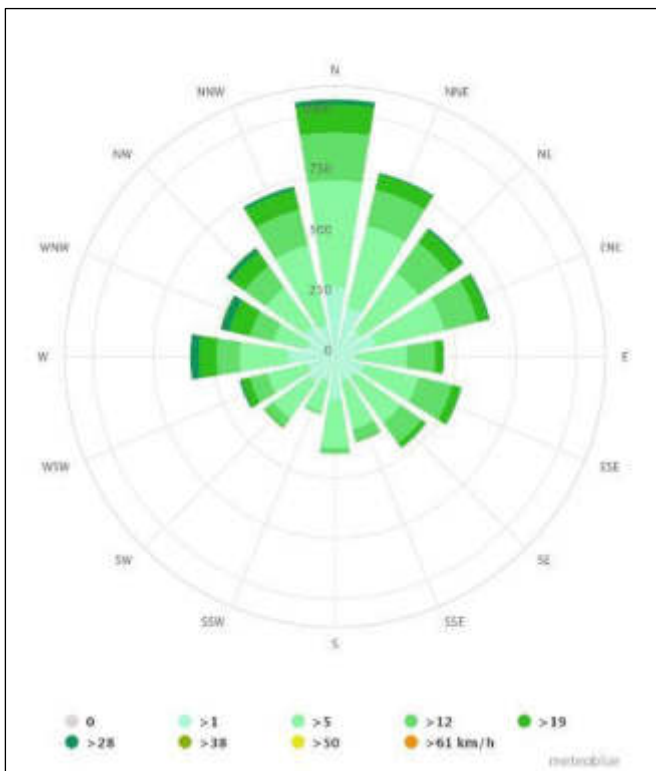


Figure 8: Average wind speed and wind direction for farm Waldburg No.82 (meteoblue, 2021)

5.2.2 VEGETATION

The farm is covered with shrubland vegetation. Vegetation in Namibia is strongly influenced by rainfall. The dominant vegetation structure on farm Waldburg is dense shrubland and falls within the Savanna biome (Figure 9) (Bubenzer, 2002 & Mendelsohn et al., 2002). The plant diversity (150 to more than 400 species) and endemism (between 5 and 15 endemic species or more according to lists provided by NBRI) for this area is moderate to high (Bubenzer, 2002 & Mendelsohn et al., 2002).

A list of plant species that have been found or sampled near the proposed Project was provided by the National Botanical Research Institute (NBRI) and can be seen in Appendix E. These plant species will not necessarily be found within the farm boundaries but have been recorded in this part (southeast of Windhoek) of Namibia.

As seen from these tables, there is a high plant diversity and endemism (35 endemic species and 9 near-endemic species) within this part of Namibia and of all the species found within these areas, eight species are protected and four species are Near Threatened according to the IUCN of the red list of endangered species. More information on the plant species, such as collection notes on where the species were seen/ sampled and species names, can be seen in Appendix E – NBRI LIST.

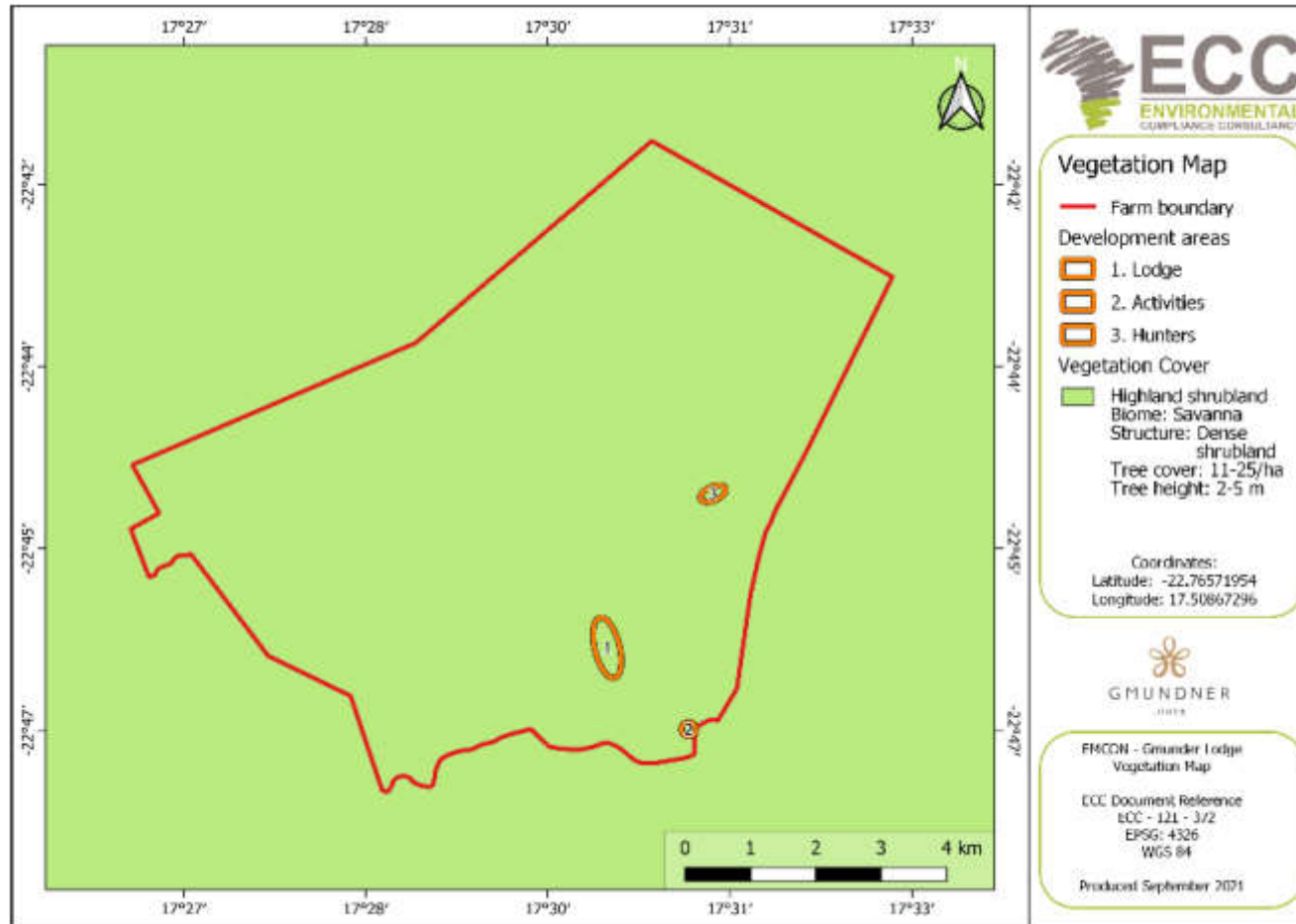


Figure 9: Vegetation cover map

5.2.3 FAUNA

The overall terrestrial diversity for the Project is moderate compared to other parts of the country. The area within and surrounding the farm has a high bird diversity status of approximately 255 species, with moderate bird endemism (between 4 and 5 species) and represents an area with moderate mammal diversity of approximately 58 species (3 to 4 of these species are endemic). Three carnivore species have been recorded in the project area (Bubenzer, 2002, IUCN, 2021, Mendelsohn et al., 2002, Oberprieler and Cillié, 2008 & Stuart and Stuart, 2015).

Furthermore, the reptile diversity within this area is high with between 71 and 80 species, 9-12 endemic species; the number of observed lizard species for this area is between 28 to 31 of which 3 to 5 species are endemic and the different snakes recorded are between 35 to 39 species (7 to 8 endemic species). This area also has a frog diversity of between 8 and 11 species, and also a moderate to high scorpion diversity (14 to 17 species). This site has an overall moderate terrestrial diversity (Bubenzer, 2002 & Mendelsohn et al., 2002).

Most bird species in Namibia fall under Schedule 4: Protected Game within the Namibian Conservation Ordinance No. 4 of 1975, except for the following excluded species: Weavers, Sparrows, Mousebirds, Redheaded Quela, Bulbul, and Pied crow as well as 19 huntable game bird species identified in Schedule 6 of the Nature Conservation Ordinance (Nature Conservation Ordinance No. 4 of 1975).

A large number of bird species are highly migratory and pass through Namibia sporadically, thus some of the species might be very rare to identify during the year, nonetheless could potentially be spotted within the farm boundaries periodically. It is believed that the man-made earth-filled water dams on farm Waldburg attract various water birds (either resident or migratory).

In this part of Namibia, approximately 93 bird species are either additionally protected under the regulations of the Exploitation of Marine Resources Act No. 241 of 2001, section 18 or listed within the CITES appendices. Some of these species might potentially be found or encountered near or within farm boundaries during a given year (depending on the season and migratory patterns).

Of these species six are Near-threatened, two are Vulnerable, seven are Endangered and one Critically Endangered (White-backed Vulture) according to the IUCN red list of threatened species (CITES 2019, IUCN 2021, Irish 2021 & Oberprieler and Cillié 2008 & Regulations relating to the Exploitation of Marine Resources Act No. 241).

Various protected or threatened mammal species may occur on the project site of which one is classified as near threatened (Brown Hyena) and four are classified as vulnerable (Cheetah, Leopard, Pangolin, Black-footed cat) according to the IUCN red list of threatened species.

Furthermore, all tortoise species, rock monitors and pythons (dwarf and rock pythons) might potentially be encountered within the project boundaries and are protected under the Nature Conservation Ordinance No. 4 of 1975.

5.2.4 HYDROLOGY

The Hochfeld-Dordabis-Gobabis groundwater area stretches from east of Windhoek toward the Botswana and Namibian border. Farm Waldburg is underlain by the Southeastern Kalahari groundwater basin and falls within the Auab catchment area, in general, this area has rock bodies with low to moderate groundwater potential (Christelis & Struckmeier 2011).

According to Christelis & Struckmeier (2011) there are generally low-yielding aquifers within the meta-sediments of the Rehoboth Sequence that could produce moderate yields locally within the fractured quartzites of the Rehoboth Sequence, (i.e., for near Dordabis). The boreholes are recharged by the Schaap River (Christelis & Struckmeier 2011).

The area receives between 350 to 400 mm of rainfall per year (Bubenzer, 2002). Most of the small streams on the farm drain to the Skaap river (except the streams to the northeast of the farm) as seen in Figure 10 and there are a few man-made ground filled dams on the farm. There are a total of 8 boreholes on the farm, of which five are registered and the proponent is in the process of registering the remaining three boreholes.

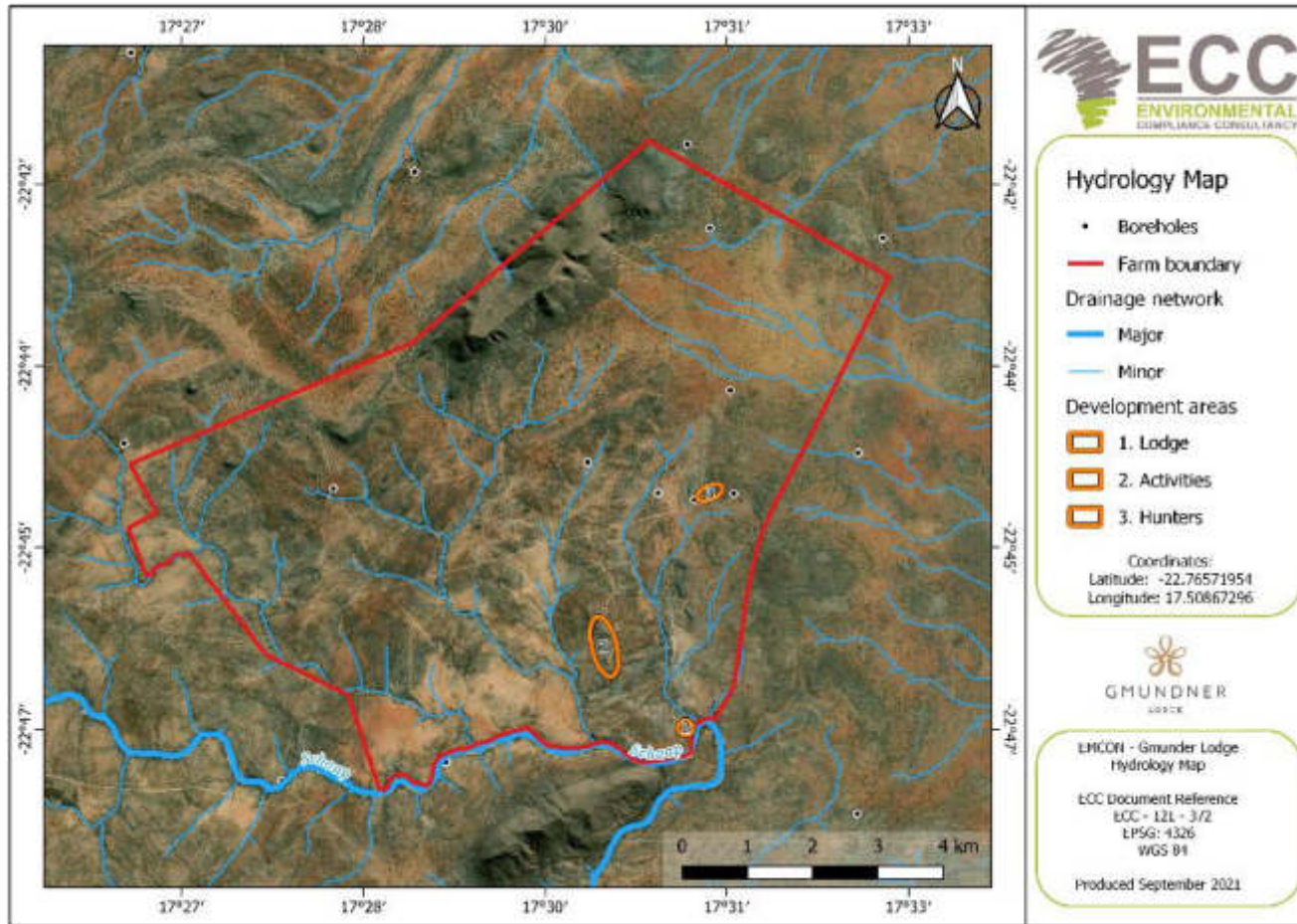


Figure 10: Hydrology map of farm Waldburg No. 82

5.2.5 SOIL, GEOLOGY AND TOPOGRAPHY

The geology present within the farm boundaries consists of a combination of the Rehoboth and Hakos sub-groups, which is a component of the Damara Supergroup and Gariep Complex and largely covered by leptosol and regosol soils (Buzenher, 2002). Sandstones and metamorphic sedimentary rock (schist, locally quartzite or marble) with granitic intrusions (Buzenher, 2002) are typical of the project area.

The topography of the farm is mountainous at its northern boundary and has smaller valleys, streams, and dry river beds towards the southern boundary of the farm. The elevation varies from approximately 2030 meters above sea level to less than 1700 meters above sea level in a north to south direction over the farm. The surface geology appears to be smooth to more rugged, and the entire landscape has a gentle gradient dipping from north to south (Figure 11).

The dominant soils found within the farm boundary include eutric leptosols and eutric regosols. Namibian soils vary a great deal on a broad scale with a great deal of variability at a local level.

The first part of the soil name denotes soil properties. Eutric soils are fertile with high base saturation. The second name reflects the conditions and processes which have led to the formation of the soils (Mendelsohn et al., 2002).

Leptosols are typically formed in areas that are actively eroding, especially in hilly or undulating areas which cover a large part of the southern and north-western parts of Namibia. This type of soil is coarse-textured and offers limited depth due to the presence of hard-rock, highly calcareous or cemented layer within 30cm of the surface. Leptosols are the shallowest soils in Namibia and often contain gravel. It has a low water-holding capacity and so water run-off and water erosion can be very high in these areas if heavy rainfall occurs (Mendelsohn et al., 2002).

Regosols are medium to fine-textured soils of actively eroding landscapes. These soils are not as shallow as Leptosols but never reach depths of more than 50 cm. This type of soil cannot provide vegetation with sufficient minerals or water (Mendelsohn et al., 2002).

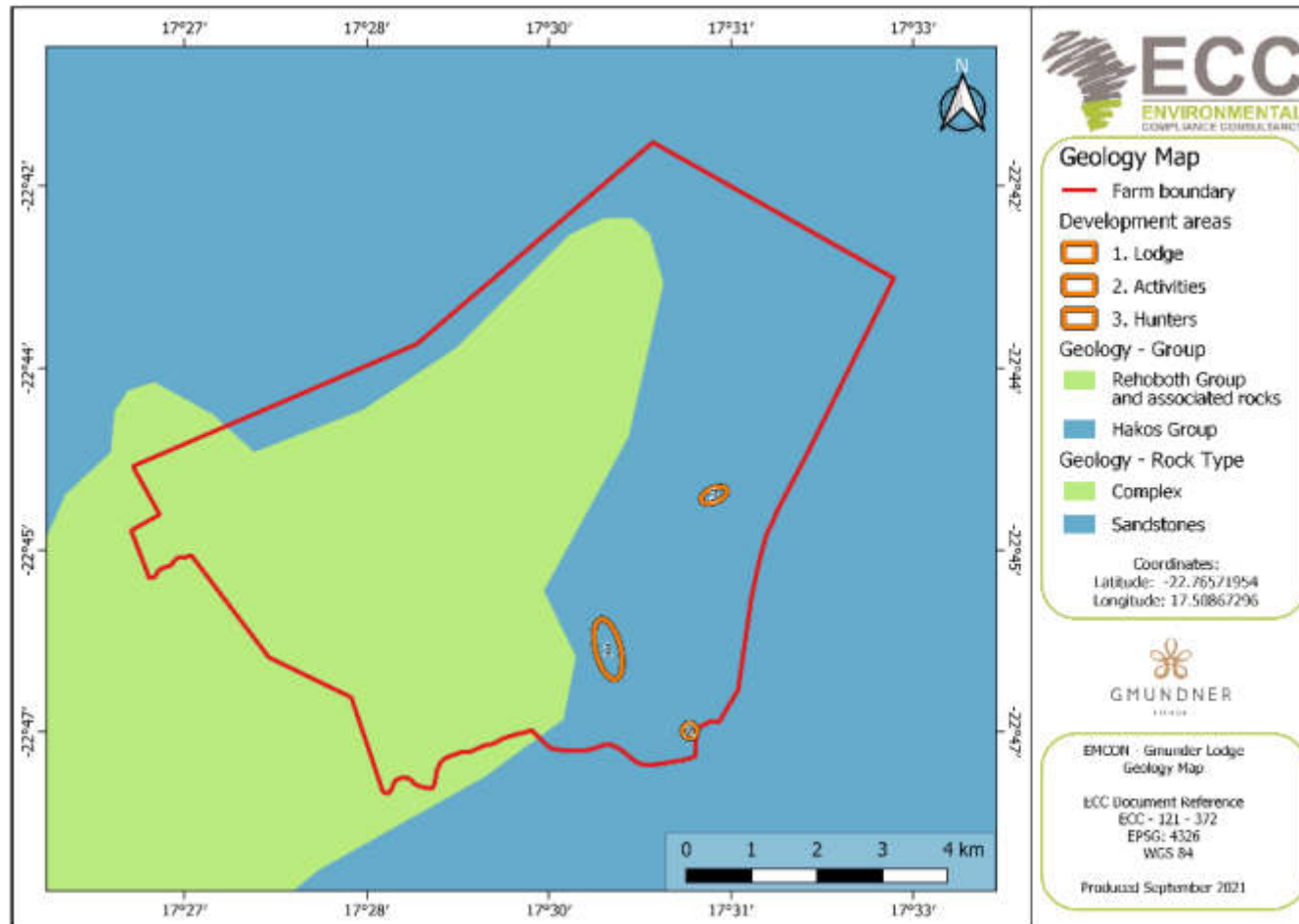


Figure 11: Elevation map of farm Waldburg No. 82

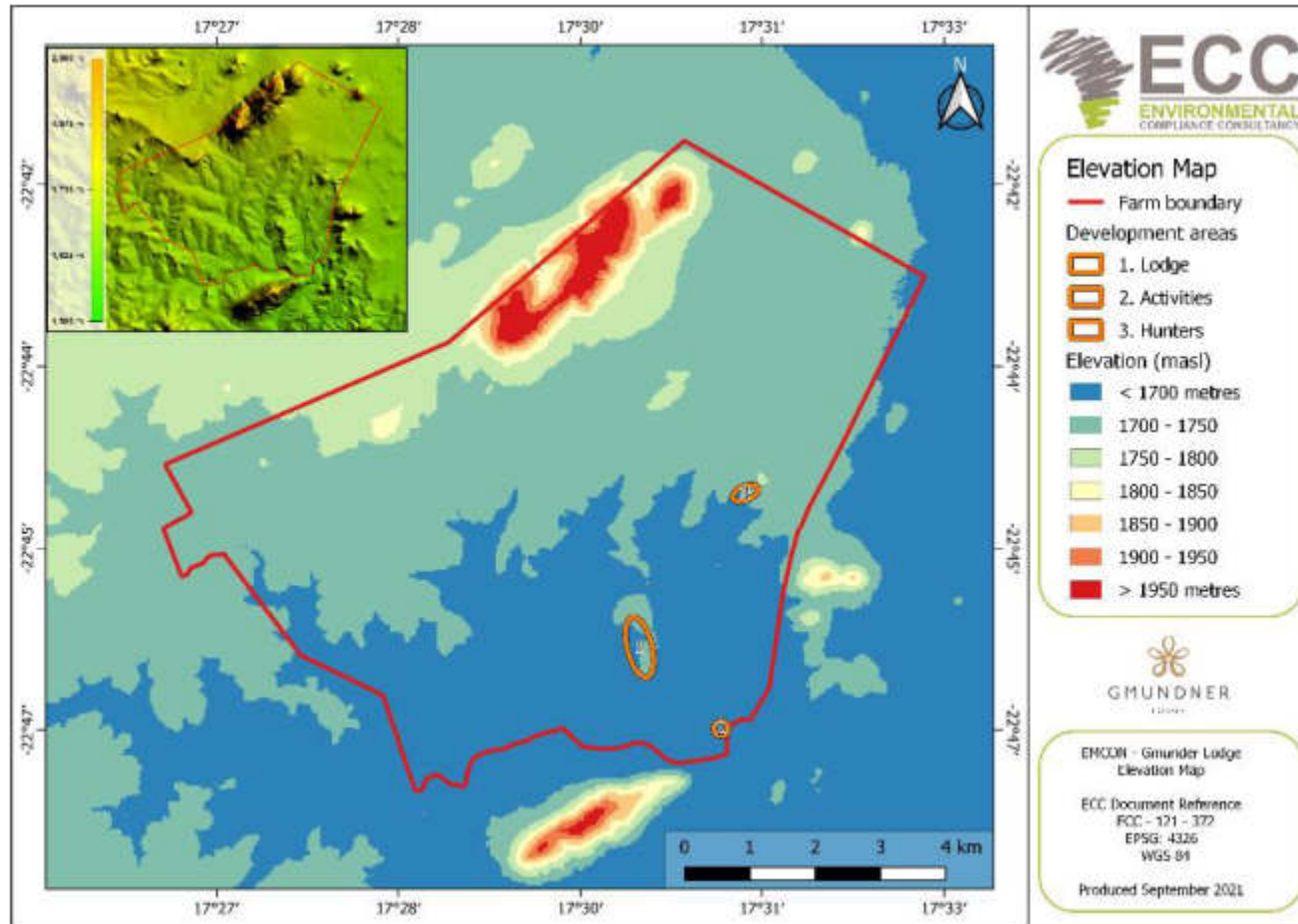


Figure 12: Geology map for farm Waldburg No. 82

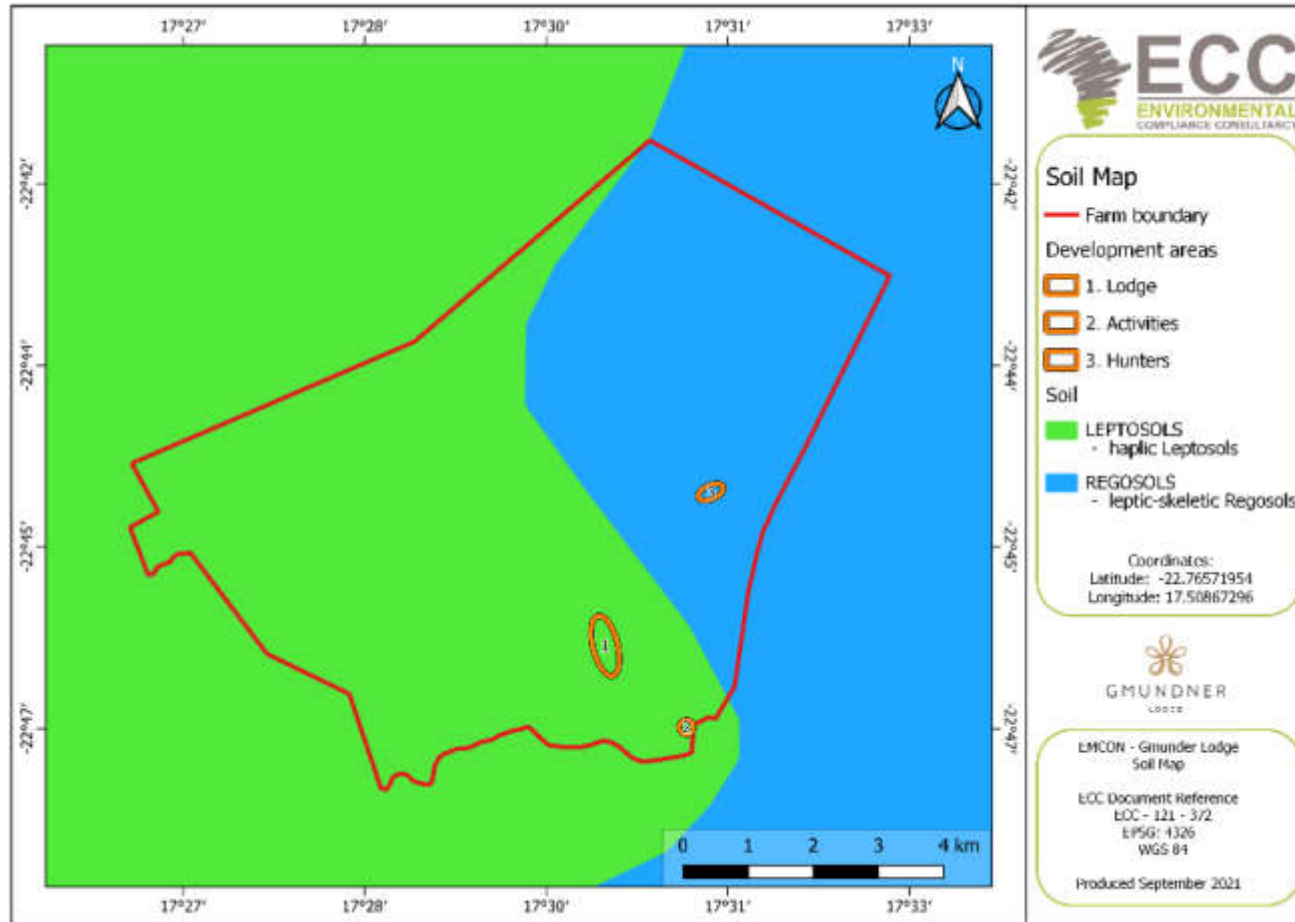


Figure 13: Soil map for farm Waldburg No. 82

5.3 NOISE GENERATION

Noise levels in the Project area are low. Typically, machinery and generators used on most farms cannot be heard by people at neighbouring farms, proximity-dependent from the source. Regardless, increased or elevated noise levels will be the predominant occupational health and safety concern.

On the contrary, noise generated by an aircraft, hunting or shooting activities on farms might generate noise that could potentially have an impact on biodiversity/environment and neighbouring farm owners during shorter periods of time.

5.4 SOCIO-ECONOMIC ENVIRONMENT

The Khomas Region occupies 4.5% of the surface land area of Namibia and accommodates the largest percentage (18%) of the national population total in 2016 (NSA, 2017).

Namibia is one of the least densely populated countries in the world (2.8 people per km²). Vast areas of Namibia are without people, in contrast to some dense concentrations, such as the central-north and along the Kavango River.

The population density in the Khomas Region is 4.2 times higher (12 persons per km²) than the national figure; the projected total population for the Khomas Region was 415,780 in 2016. In the Khomas Region 95% of all people live in an urban area in 2016, Oshiwambo is the most spoken language (41% of all households), the average household size is 3.5 people and the literacy rate is 97% for people older than 15. Living in an urban environment implies better living conditions – in the Khomas Region 100% of all households have access to safe water, only 25% have no toilet facility, 64% have electricity for lighting and only 7% of the population depend on open fires to prepare food (NSA, 2017).

The urban population pyramid for Namibia shows a very clear dominance of the age group 20 – 35 as well as for infants (0 – 4 years of age). As the majority of people in the Khomas Region are living in an urban area, the dominance of Windhoek is further apparent – the population of the Khomas Region is young, most of them within the child-bearing age range. The urban population pyramid for Namibia contrasts sharply with the one for the rural population. The base of the pyramid reflects people younger than 25 and forms the majority of the total population – meaning that most people are young Namibians (NSA, 2017)

Namibia is divided into 14 regions, subdivided into 121 constituencies. Khomas Region is divided into ten constituencies. Each region has a regional council, elected during regional elections per constituency. Towns are governed through local authorities, in the form of municipalities.

Windhoek is the national capital and also the capital of the Khomas Region. As the country's capital Windhoek hosts many of the national head offices as well as the head offices of the Khomas regional council. Windhoek is governed by a local authority in the form of a city council.

The dominance of Windhoek as a place of residence in the Khomas Region is apparent – all other urban places in the Khomas Region are classified as settlements – the lowest order of governed populated places in Namibia. Places such as Baumgartsbrunn, Groot Aub, Seis and Dordabis are managed directly by the central authority.

5.4.1 GOVERNANCE

Since independence in 1990, Namibia is led by a democratically elected and stable government. The country ranked top 5 out of 54 African countries in the Ibrahim Index of African Governance in 2015 for the indicators including the quality of governance and the government's ability to support human development; sustainable economic opportunity; rule of law and human rights; and development of smart information and communication technology to access information for socio-economic growth (National Planning Commission, 2017).

As a result of sound governance and stable macroeconomic management, Namibia has experienced rapid socio-economic development. Namibia has achieved the level of 'medium human development and ranks 125th on the Human Development Index out of 188 countries (National Planning Commission, 2017).

5.4.2 EMPLOYMENT

In 2018, 53.4% of all working Namibians were employed in the private sector and 21.5% by the state. State-owned enterprises employ 7.6% Namibians and private individuals 16.6%. Wages and salaries represented the main income source of 47.4% of households in Namibia. Agriculture (combined with forestry and fishing) is the economic sector with the most employees – 23% of all employed persons in Namibia work in this sector. Agriculture is also the sector that employs the most informal workers in Namibia, calculated at 87.6%. Wages of employees in the agriculture sector are lower than all other sectors except for workers in accommodation and food services and domestic work in private households (NSA, 2019).

Low education levels affect employability and prevent many households from earning a decent income. Of all people employed in Namibia, 63.5% are not higher qualified than junior secondary level (Grade 10 and lower). In total 11.8% of all people employed had no formal education. In total 29.1% of all people employed fall in the category "elementary occupation" and 15.2% in the category "skilled agriculture" (NSA, 2019).

Overall, the rate for unemployment is estimated at 33.4% for Namibia, using the broad definition of unemployment. More than 60% of the population is over 15 years of age and about one-third of the total population can be regarded as part of the labour force. The unemployment rate in rural and urban areas is almost the same – 33.4% in urban areas and 33.5% in rural areas. The highest unemployment rates are found amongst persons with education levels lower than junior secondary. The unemployment rate of persons with no formal education is 28.6%, with primary education 34.6% and with junior secondary education 32.7% (NSA, 2019).

According to the Socio-Economic impact Assessment of COVID-19 in Namibia by the United Nations Namibia (2020), there has been an estimated increase in unemployment from 33.4% to 34.5% and through a best-case scenario, it is also estimated that poverty will increase from 17.2% to 19.5% due to a drop in the domestic GDP (United Nations Namibia 2020).

5.4.3 ECONOMY

In the Khomas Region, 74.5% of all households depend on salaries and wages as their main income source, only 0.2% of households depend on subsistence farming as their main source of income and 9.7% of all households get their main income from non-farming business activities (NSA, 2019).

In contrast to most of Namibia's other regions, agriculture is less prominent in the Khomas Region where the majority of people are urbanized. The figure for informal-employed people is also lower (55.6%) as people are employed in a wider range of secondary and tertiary economic sectors such as administration, services and manufacturing (NSA, 2019).

Guest farms and other tourism-related economic activities are also common in the Khomas Region, mainly as a result of its strategic location close to Windhoek and the Hosea Kutako International Airport.

Since 2016, Namibia has recorded slow economic growth, registering an estimated growth of only 1.1% in 2016. The primary and secondary industries contracted by 2.0 and 7.8% respectively. During 2017 the economy contracted by 1.7, 0.7 and 1.9% in the first, second and third quarters respectively (NSA, 2019). Despite the more positive expectations, the economy retracted to an average growth of not more than 1% annually since 2017.

During the second quarter of 2020, the domestic economy contracted by 11.1%, which is the largest contraction since 2013; However, the Bank of Namibia (BoN) predicts that the Gross Domestic Product (GDP) could grow by 1.9% in 2021 and by 2.8% in 2022. The impact

assessment also showed that 96.5% of tourism businesses have been affected by COVID-19 in 2020, the manufacturing and construction sectors contracted by 9.2% and 5.7% respectively and there was also a 2% to 3% decline in net exports (United Nations Namibia 2020).

5.4.4 HEALTH

Since independence in 1990, the health status of Namibia has increased steadily with a remarkable improvement in access to primary health facilities and medical infrastructure. Despite the progress, the World Health Organization (WHO) in 2015 recommended strategic priorities of the health system in Namibia which include improved governance, an improved health information system, emergency preparedness, risk reduction and response, preventative health care and the combating of HIV/AIDS and TB (WHO, 2016).

HIV/AIDS remains a major reason for low life expectancy and is one of the leading causes of death in Namibia. There is a high HIV prevalence among the whole population, but since the peak in 2002 (15,000 new cases of HIV per year, and 10,000 yearly deaths due to AIDS) the epidemic started to stabilise (UNICEF, 2011). Although new infections, as well as fatalities, halved during the next decade, life expectancy for females returned to pre-independence levels but for males, it did not reach pre-independence levels yet. HIV/AIDS remains the leading cause of death and premature mortality for all ages, killing up to half of all males and females aged 40 - 44 years in 2013 (IHME, 2016).

Tuberculosis (TB) is a leading killer of people infected by HIV/AIDS, and Namibia has a high burden – in 2018, 35% of people notified with TB were infected with HIV. The country is included among the top 30 high-burden TB countries in the world, with an estimated incidence rate of 423 per 100,000 people and 60 fatalities per 100,000 people in 2018 (retrieved from www.mhss.gov.na).

Over the period 2000 – 2013 significant rises were observed for strokes, ischemic heart diseases, diabetes, and depressive disorders, but HIV/AIDS remained the top cause of premature mortality. Over the same period, significant decreases were observed for diarrheal diseases, neonatal conditions, and malaria. Risk factors are key drivers of premature mortality, and social ills were identified as the leading factor for death – particularly unsafe sex and alcohol and drug abuse. TB and malaria are compounded by the AIDS epidemic, and the risk of contracting malaria and TB is 15% greater if a person is also infected with HIV, with a risk of 50% higher to die as a result (IHME, 2016).

As of the beginning of 2020 the coronavirus disease (COVID-19), a communicable respiratory disease, causes illness in humans at a pandemic scale and has resulted in an increasing number of deaths worldwide. The viral outbreak is adversely affecting various socio-economic activities globally, and with reports of the increasing number of people testing positive, it is anticipated that this may have significant impacts on the operations of various economic sectors in Namibia too. The disease caused many countries to enter a state of emergency and lockdown mode, with dire economic consequences.

Furthermore, COVID-19 has also resulted in a loss of learning and socialising opportunities for children in Namibia and there was a lack of access to school feeding programs and parents had to provide or find alternative care for children. There has also been a 6% increase in health workers across Namibia as a result of the pandemic (United Nations Namibia 2020). The Namibian economy remains confined, following the aftermath of COVID-19. Hence, development partners, public and private sectors need the commitment to explore new approaches in order to revive the fragile economy (NSA,2019).

5.4.5 CULTURAL HERITAGE

A desktop search of the Namibian GIS data and information extracted from the Atlas of Namibia revealed no heritage sites of significance within the project from the following periods: records from 1.8 million to 10000 years ago, 10000 to 2000 years ago or within the last 2000 years (Bubenzer, 2002 & Mendelsohn et al., 2002). However, the possibility does exist for archaeological finds to be discovered on farm Waldburg similar to known archaeological finds within a 12 to 16 km diameter around the farm to the northeast, northwest, southwest and southeast (Bubenzer, 2002 & Mendelsohn et al., 2002).

6 IMPACT IDENTIFICATION AND EVALUATION METHODOLOGY

6.1 INTRODUCTION

Chapter 2 provides an overview of the approach used in this ESIA process, and details each of the steps undertaken to date. Predication and evaluation of impacts is a key step in the ESIA process. This chapter outlines the methods that will be followed to identify and evaluate the impacts arising from the proposed project. The findings of the assessment will be presented in the full assessment report.

This chapter provides comprehensive details of the following:

- The assessment guidance that will be used to assess impacts;
- The limitations, uncertainties, and assumptions with regards to the assessment methodology;
- How impacts will be identified and evaluated, and how the level of significance will be derived; and
- How mitigation will be applied in the assessment, and how additional mitigation will be identified.

This assessment will aim to determine which impacts are likely to be significant; to scope the available data and identify any gaps that need to be filled; to determine the spatial and temporal scope; and to identify the assessment methodology.

The scope of the assessment was determined through undertaking a preliminary assessment of the proposed project against the receiving environment and was obtained through a desktop review, available site-specific literature, monitoring data, and site reports, as set out in this scoping report.

6.2 ASSESSMENT GUIDANCE

The following principal documents will be used to inform the assessment method:

- International Finance Corporation standards and models, in particular, performance standard 1: ‘Assessment and management of environmental and social risks and impacts’ (International Finance Corporation, 2017) (International Finance Corporation, 2012).

- Namibian Draft Procedures and Guidance for EIA and EMP (Republic of Namibia, 2008).

6.3 LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS

The following limitations and uncertainties associated with the assessment methodology will be considered in the assessment phase:

- Topic-specific assessment guidance has not been developed in Namibia. A generic assessment methodology will be applied to all topics using IFC guidance and professional judgement.

6.4 ASSESSMENT METHODOLOGY

The ESIA methodology applied to this assessment has been developed by ECC using the International Finance Corporation (IFC) standards and models, in particular, performance standard 1: ‘Assessment and management of environmental and social risks and impacts’ (International Finance Corporation, 2017) (International Finance Corporation, 2012); Namibian Draft Procedures and Guidance for EIA and EMP (Republic of Namibia, 2008); international and national best practice; and over 25 years of combined ESIA experience. The methodology is set out in Figure 14 and Figure 15.

The evaluation and identification of the environmental and social impacts require the assessment of the project characteristics against the baseline characteristics ensuring that all potentially significant impacts are identified and assessed. The significance of an impact is determined by taking into consideration the combination of the sensitivity and importance/value of environmental and social receptors that may be affected by the proposed project, the nature and characteristics of the impact, and the magnitude of any potential change. The magnitude of change (the impact) is the identifiable changes to the existing environment that may be negligible, low, minor, moderate, high, or very high; temporary/short-term, long-term or permanent; and either beneficial or adverse.

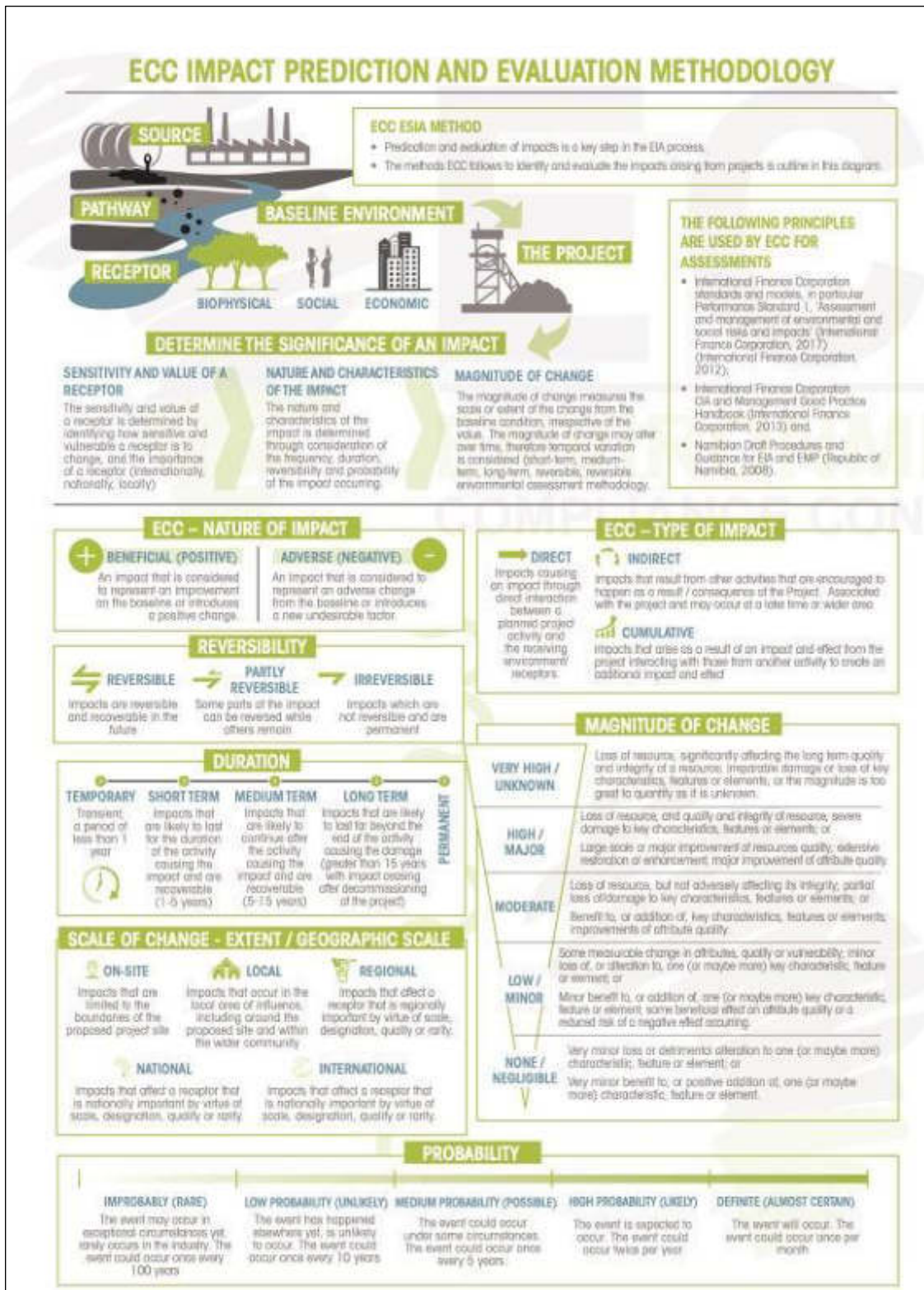


Figure 14: ECC EIA methodology based on IFC standards

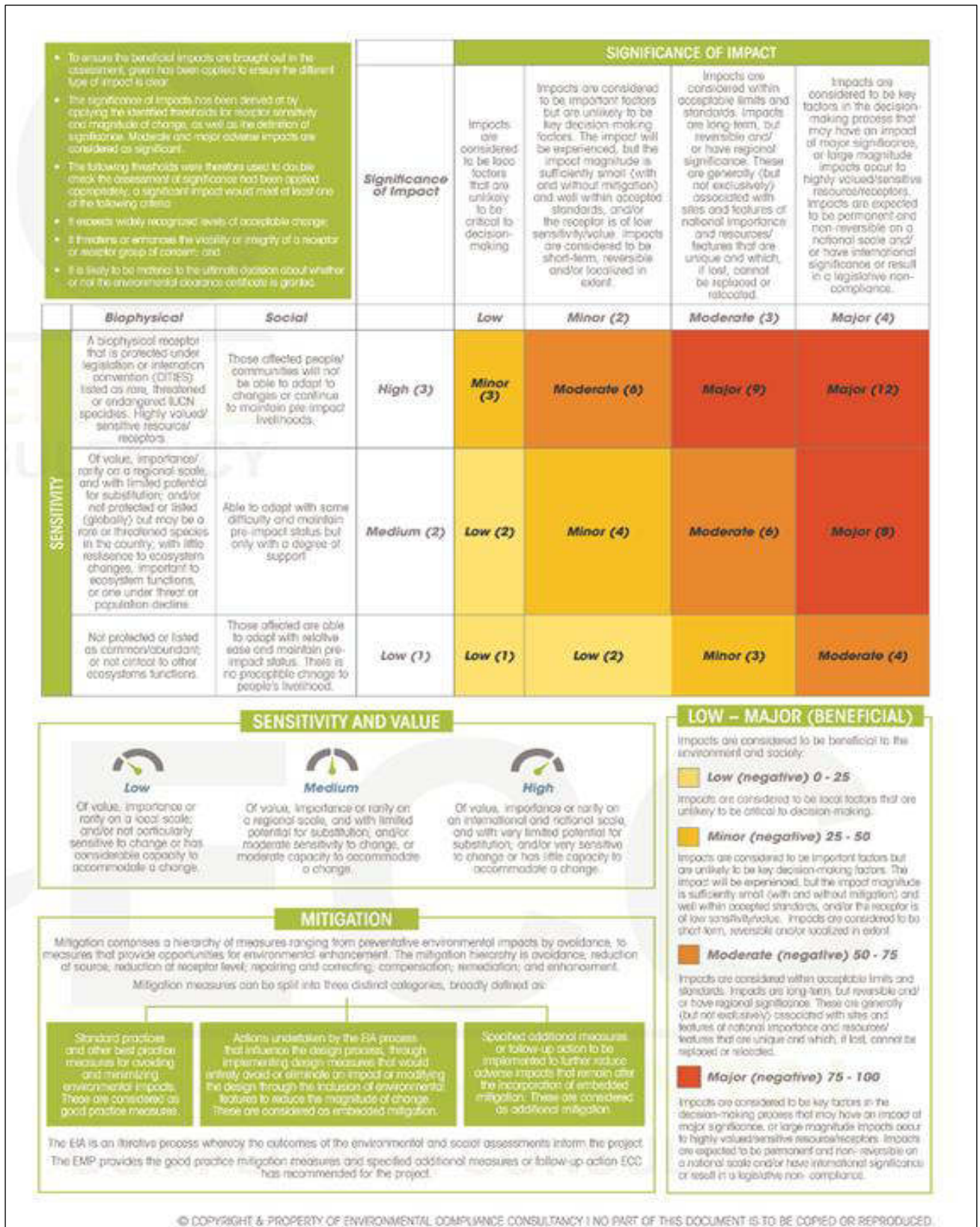


Figure 15: ECC's impact assessment methodology based on IFC methodology

6.5 MITIGATION

Mitigation comprises a hierarchy of measures ranging from preventative environmental impacts by avoidance, to measures that provide opportunities for environmental enhancement. The mitigation hierarchy is: avoidance; reduction at source; reduction at receptor level; repairing and correcting; compensation; remediation; and enhancement.

Mitigation measures can be split into three distinct categories, broadly defined as:

1. Actions undertaken by the ESIA process that influence the design process, through implementing design measures that would entirely avoid or eliminate an impact, or modifying the design through the inclusion of environmental features to reduce the magnitude of change. These are considered as embedded mitigation.
2. Standard practices and other best practice measures for avoiding and minimising environmental impacts. These are considered as good practice measures.
3. Specified additional measures or follow-up action to be implemented, to further reduce adverse impacts that remain after the incorporation of embedded mitigation. These are considered as additional mitigation.

The ESIA is an iterative process whereby the outcomes of the environmental assessments inform the project. Considerable mitigation has been built into the proposed project, as potentially significant adverse environmental impacts have been identified and design changes have been identified to overcome or reduce them.

The EMP (Appendix A) provides the good practice measures and specified additional measures or follow-up action.

Embedded mitigation and good practice mitigation will be taken into account in the assessment. Additional mitigation measures will be identified when the significance of impact requires it and causes the impact to be further reduced. Where additional mitigation is identified, a final assessment of the significance of impacts (residual impacts) will be carried out, taking into consideration the additional mitigation.

7 IMPACT ASSESSMENT FINDINGS AND PROPOSED MITIGATION MANAGEMENT MEASURES

This chapter presents the findings of the EIA for the proposed project as per the EIA process, scope and methodology set out in Chapters 2 and 6. A range of potential impacts has been identified that may arise because of the proposed project. This EIA report aims to focus on the significant impacts that may arise because of the project. This chapter mentions both the non-significant and significant impacts and or those that may have specific interest to the community and stakeholders.

When undertaking the assessment exercise, the design of the proposed project elements and best practice measures were considered to ensure the likely significant effects and any required additional mitigation measures were identified. A summary of the potential impacts and mitigation or control measures are discussed below.

The following topics were considered during the scoping phase:

- Air quality (dust);
- Noise;
- Fire risks;
- Waste management;
- Groundwater;
- Potential hydrocarbon spills;
- Sewage waste;
- Soil and topography;
- Impacts on biodiversity and;
- Socioeconomics (employment & education).

For each potential significant or sensitive impact, a summary is provided which includes the activity that would cause an impact; the potential impacts; embedded or best practice mitigation (stated where required or available); the sensitivity of receptor that would be impacted; the severity, duration, and probability of impacts; the significance of impacts before mitigation and after mitigation measures are applied.

7.1 IMPACTS DEEMED NOT SIGNIFICANT

Impacts that have been assessed as not being significant are summarised in Table 5 and are not discussed further. As a result of an iterative development process, mitigation has been incorporated and embedded into the project, thereby designing out potential environmental and social impacts or reducing the potential impact so that it is not significant. Best practice has also played a role in avoiding or reducing potential impacts. The EMP provides best practice measures, management, and monitoring for all impacts.

The listed impacts below are non-significant and do not render any threat to the environment in a way that adversely challenges its resilience to continue in its modified form.

Table 5: Table of non-significant impacts

ENVIRONMENT OR SOCIAL TOPIC	POTENTIAL IMPACT	SUMMARY OF PRELIMINARY ASSESSMENT FINDINGS
Air Quality	Potential dust generation during the rundown of construction activities and from vehicles driving less than 40km/hr on gravel roads.	The construction phase of the project is almost completed, thus it is unlikely that current activities will generate dust that might disturb neighbouring farm owners. No complaints to date. It is also unlikely that game drives or driving on the farm will generate a large amount of dust.
Vegetation Clearing	Potential removal of protected plant species	No additional large scale clearing of vegetation for project infrastructure is anticipated to occur. However, should it become necessary in future the proponent must ensure it complies with national forestry laws.
Waste management (General solid and construction waste)	Waste generation during the current construction and the proposed operational phase. Potential littering, pollution and visual nuisance.	Waste generated on-site, including construction waste will be removed from the site and disposed of at the Kupferberg landfill site. The proponent will develop a waste management plan to counter the impact of waste dispersal on and surrounding the site. Plastic waste will be removed by OTS Waste Management using skips.
Fire Risks	Potential fires on the farm due to operational, tourism and hunting activities.	The proponent will need to carefully manage activities that have the potential to create field fires as specified in the EMP.

ENVIRONMENT OR SOCIAL TOPIC	POTENTIAL IMPACT	SUMMARY OF PRELIMINARY ASSESSMENT FINDINGS
Diesel Tank, vehicles and equipment.	Potential hydrocarbon or chemical spills that could impact soil, ground and surface water quality.	The diesel tank on-site as well as vehicles and equipment should be well maintained and monitored to prevent any spills. Further management measures are presented in the EMP.
Increased people/foot traffic in the immediate vicinity (Current construction phase)	Increased people/foot traffic within the project area and immediate vicinity.	The potential risk of negative social interactions to occur between the workforce and the public. An internal Health and Safety Management Plan will be developed by the client to address this topic in part and the mitigation measures provided.
Sewage Waste	Potential nutrient enrichments of groundwater	On-site sewage disposal systems/septic tanks need to be effectively cleaned and maintained. Specifications in EMP should be closely followed.

7.2 SIGNIFICANT ISSUES TO BE ADDRESSED

Table 6: List of potentially significant impacts scoped into the assessment

ENVIRONMENT OR SOCIAL TOPIC	POTENTIAL IMPACT	SUMMARY OF PRELIMINARY ASSESSMENT FINDINGS
Job creation	Job creation during the construction and operational phases of the project.	Beneficial impact: The construction phase created about 186 job opportunities and is nearing completion currently. The operational phase will create approximately 54 job opportunities.
Education	Education provision for the local community.	Beneficial impact: The proponent plans to provide education for the children on the farm as well as neighbouring farm children.
Noise	Occupational and community disturbances and potential hearing loss as well as Environmental disturbances, due to noise generation as a result of hunting and recreational shooting activities, aeroplanes/helicopters.	Labour Act, No. 11 of 2007: Regulations relating to the Health and Safety of Employees at Work (GN 156/1997) should be adhered to. The proponent will be responsible to develop an occupational health and safety management plan for the project.

ENVIRONMENT OR SOCIAL TOPIC	POTENTIAL IMPACT	SUMMARY OF PRELIMINARY ASSESSMENT FINDINGS
Groundwater	Potential lowering of groundwater levels due to water abstraction.	Due to hunting, tourism activities and greenhouses, there is the potential risk of lowering local groundwater levels which require the proponent to adhere to all conditions stipulated within the groundwater abstraction permit and wastewater discharge permits.
Biodiversity	Potential habitat fragmentation and habitat loss, due to the game fence currently under construction.	The movement of wildlife will be severely impacted by the erection of the game fence (construction is almost done), especially with the proposed electric wires to be added at a later stage.
	Potential overhunting of animals with a good genetic make-up and wildlife mismanagement within farm boundaries.	The proponent should sustainably manage the game numbers on the farm and ensure to not only target the animals with good genetic make-up (largest horns and bodies). Due to the farm being fenced off by a proposed electric game fence the proponent will need to ensure that inbreeding of game is prevented. Only “biltong” hunting will occur within the farm boundaries and will only be conducted by the owner and farm manager/appointed PH.
	Impacts to biodiversity with regards to aircraft landing and vehicles driving in the field. Tourism and hunting activities may have impacts on birds during breeding/nesting periods.	Potential collisions with or driving over (hurting, damaging or killing) fauna (especially, mammals, birds, reptiles, amphibians and plants) or disturbing microhabitats.
	Potential Lead poisoning (i.e. scavengers/predators could be impacted by lead used in ammunition).	The bio-accumulation of lead from ammunition within carcasses may pose a poison risk to scavenging wildlife (especially vultures).

7.3 SCOPING ASSESSMENT FINDINGS

When undertaking the scoping exercise, the design of the project and best practice measures were considered to ensure the likely significant effects and any required additional mitigation measures were identified. A summary of the potential impacts and mitigation or control measures were discussed.

Activities that could be the source of an impact have been listed, followed by receptors that could be affected. The pathway between the source and the receptor has been identified where both are present. Where an activity or receptor has not been identified, an impact is unlikely, thus no further assessment or justification is provided. Where the activity, receptor and pathway have been identified, a justification has been provided documenting if further assessment is required or not required.

Due to the nature and localised scale of the current construction activities and proposed operational activities, and the environmental context of the site, the potential environmental and social effects are expected to be moderate to minor. The only areas where uncertainty remained during the scoping phase was the potential effects on wildlife concerning the fence (proposed to be electrified) and currently being erected, the noise generation impact on the environment and neighbouring farms, potential lead poisoning of scavengers (especially vultures), potentially lowering of the groundwater level and the potential negative impact on biodiversity from excessive hunting and tourism activities. Further consideration of the potential impacts on humans and the environment was therefore undertaken and results are presented in section 7.5.

7.4 MITIGATIONS

Mitigation measures will focus on reducing the effects of the potential impacts and ensure an acceptable measure of operation can be maintained when an impact cannot be avoided completely. An EMP has been drafted to accompany this Scoping with impact assessment, which sets out the management and mitigation measures for the project.

7.5 SOCIOECONOMIC IMPACTS

The term socio-economic impact assessment embraces both social impacts and economic impacts. Economic impacts include issues such as employment, changes in economic activity, and increased expenditure. The significant economic impact or impact that holds specific interest to the community and stakeholders is employment creation and is summarised in this section.

7.5.1 EMPLOYMENT

Whilst Namibia has a high unemployment rate, the Khomas Region has the second-highest employment rate after the Erongo region in Namibia. In Windhoek, the majority of employment is through the services sector, which to a large degree is already developed, and socially diverse. The tourism sector is showing signs of recovery, The national value and sensitivity of employment are considered to be high as it is of importance to the country and the local economy.

DIRECT EMPLOYMENT: CONSTRUCTION

Approximately 186 jobs were created during the construction phase which is nearing its completion. The proponent has employed local people mostly where it was deemed feasible to do so. The beneficial impact of creating 186 temporary jobs was expected to result in a temporary impact with a low magnitude of change. A minor beneficial impact on the community and economy was therefore expected.

DIRECT EMPLOYMENT: OPERATION

Approximately 54 permanent jobs (skilled and semi-skilled) will be created in the operational stage as a direct result of the project, with the anticipated creation of downstream jobs such as goods services, and contractor works expected throughout the lifespan of the project. The magnitude of change during operation is considered as low but has long term effects thereby resulting in a minor beneficial impact on the community and economy.

7.5.2 EDUCATION

Low education levels affect employability and prevent many households from earning a decent income; Of all people employed in Namibia, 63.5% are not higher qualified than junior secondary level (Grade 10 and lower)(NSA, 2019). Thus, this is a beneficial impact, as the proponent plans to provide education for the children on the farm as well as other children in the local community.

Table 7: Impacts related to socioeconomics

Activity	Receptor	Impact	Nature of impact	Value & Sensitivity	Magnitude of change	Significance of impact
Construction works - general	<ul style="list-style-type: none"> - Community - Job seekers - Local economy 	Creation of 186 jobs over 18 months	Beneficial Direct Partially Reversible Regional Short Term Reversible	Medium	Minor	Beneficial Minor (9)
Operations of the proposed project	<ul style="list-style-type: none"> - Community - Job seekers - Local economy 	Creation of 54 jobs	Beneficial Direct Irreversible Regional Long Term Reversible	Medium	Minor	Beneficial Minor (9)
Downstream economic injection (multiplier effect)	<ul style="list-style-type: none"> - Local economy (goods and services trade businesses) 	Financial injection into goods and services trading businesses in the local economy	Beneficial Indirect Partially Reversible Local Long Term Reversible	Medium	Minor	Beneficial Minor (9)
Education	<ul style="list-style-type: none"> - Local Community 	Creation of educational opportunities for the children within the local community.	Beneficial Direct Partly Reversible Local Long Term Reversible	Medium	Minor	Beneficial Minor (9)

7.5.3 NOISE GENERATION

The proposed operational activities that could generate noise include, hunting (limited and will strictly be conducted by the farm owner and manager) and shooting activities, aircraft/helicopters flying over the farm and landing on the farm and equipment during construction and maintenance. The noise generated will not only potentially impact the hearing of people or disturb neighbouring farm owners but will also potentially have an impact on biodiversity. Recreational shooting is a popular sport around the world and noise generated by firearms can pose a hearing loss risk to the shooters. A study by Meinke et al. (2017) showed that the majority of firearms (not including smaller calibres like a .22) can generate peak sound pressure levels (SPLs) between 150 to 165 dB and these “high-intensity impulse sounds” could permanently damage the cochlear structure. People that are regularly exposed to these noise levels are thus at higher risk of noise-induced hearing loss (NIHL) (Meinke et al. 2017). At the 2018 American industrial hygiene conference Elliott Berger (hearing protection expert), emphasised that noise generated by a single shot from some rifles can measure up to 163 dBA, “which is equivalent to eight hours of exposure at 85 dBA” (OHS 2018).

The impacts of biodiversity with regards to noise generated by gunshots is understudied, but some studies suggest anthropogenic disturbances including activities like transport, wildlife tourism as well as outdoor recreation is becoming an increasing issue (Burton 1998, Buckley 2004, Green et al. 2005, Davenport & Davenport 2006, Labansen, Merkel, & Mosbech 2021 and Stankowich 2008). Although the effects of gunshots have been rarely studied in rural areas, hunting (both for subsistence and recreational) is a notable activity (Dahl 1989, Labansen, Merkel, & Mosbech 2021, Milner-Gulland & Bennett 2003 and Sharp & Wollscheid 2009). Various studies now indicate potential impacts of noise on biodiversity, which can include man-made sounds impacting (hindering or masking) “animal sounds/animal audition, which in turn could affect reproduction, communication and use of space; This could impact terrestrial and aquatic ecosystems (Sordello et al. 2019).

An effective way to reduce noise from hunting rifles could be to equip them with silencers which could reduce noise from about 167 dB to 133 dB (tested on Remington 700 .308), this could prevent potential noise complaints from neighbouring farms (Silencer Central 2019). Shotguns on the other hand will probably be the most significant source of environmental noise within farm boundaries for recreational activities (Pääkkönen 2008).

The magnitude of change is considered to be moderate, due to the potential cumulative effects of noise generation on people and the environment and the loud noise generated by gunshots (Impulse noise), and although it is over a short duration, long-term exposure or regular exposure could result in NIHL. Due to the proposed activities of the project (more regular source of noise generation) the impacts are expected to be of moderate significance, but if the mitigation measures, laws and best practice methods are adhered to the impacts

on occupational and community aspects are expected to be minor. The environmental/biodiversity aspect is understudied, thus it is unsure what the total extent of the impact might be on the local ecosystem.

The sensitivity of the receptor is rated as medium because the health, safety and well being of employees and the community are essential (higher sensitivity) and biodiversity receptors could also be sensitive to noise; especially mammals and birds. For example, they might get frightened and get hurt (i.e, tangled/stuck/electrocuted against the fence) when trying to flee from the noise source. Noise generation might also have an impact on ecosystem functioning within farm boundaries if exposure is of long duration.

Table 8: Impacts related to noise generation

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/ DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	RESIDUAL IMPACT AFTER MITIGATION
Operational activities, involving hunting and shooting activities, aircraft, driving and other noise-generating activities	Community, Employees and the environment.	Occupational and community disturbances and potential hearing loss as well as Environmental disturbances (i.e, disturb biodiversity).	Adverse Direct Partly reversible Moderate Permanent Local Likely	Medium	Moderate	Moderate (6)	Minor (4)

Impact management/control measures may include but are not limited to the following:

- The proponent should develop a health and safety management plan that takes into account noise generation;
- Appropriate PPE should be worn during hunting and recreational shooting activities (i.e, ear protection, a Single Number Rating (SNR) of 30 or more should be used for > 100dB);
- Silencers could be used on hunting rifles;
- People not shooting should stand further away from the noise source;
- Sensitive environmental areas (i.e, vultures breeding area) should be identified and less or no noise generated near these areas;
- Bakkies should preferably not chase after animals through the field as this might increase noise and frighten animals; and
- Employees and tourists should be made aware of the possible health effects of being exposed to impulse noise.

7.6 IMPACTS ON BIODIVERSITY

7.6.1 HABITAT FRAGMENTATION, HABITAT LOSS AND ELECTROCUTION

A game fence (approximately 33.7 km of fencing) is currently under construction on farm Waldburg No. 82 and will also be electrified, with 12 wires and 2 wires on the bottom of each side of the fence. This will potentially impact the movement of wildlife as well as pose an electrocution risk, especially for pangolins, snakes, tortoises, monitors, other reptiles and amphibians.

Fences are erected mainly to define land/farm boundaries, to control access to a farm or keep wildlife or livestock within farm boundaries. Fences can severely impact the movement of wildlife especially larger mammals, because of this, fences create a fragmented landscape (Boone & Thompson Hobbs 2004). The potential negative wildlife impacts associated with fences include wildlife entanglement, shortened/disrupted migratory routes, restricted or eliminated access to important resources, certain species might increase in numbers and damage vegetation or have a negative impact on the ecosystem as a whole (inbalance), habitat loss and potentially reducing the carrying capacity of the land (Boone & Thompson Hobbs 2004).

Wired fences first appeared about 140 years ago and in evolutionary terms is thus a recent development and is resulting in a rapid transition from vast open landscapes to relatively fragmented ones (Cumming et al. 2015). There is still a limited understanding of how fences influence the ecosystem as a whole as well as populations and individual animals (Jakes et al. 2018). Fences are present in large parts of Namibia and farms not only have fences around their boundaries but can also have various smaller camps within a farm. As a result of not being well documented it is thus difficult to know the full spatial extent of fences.

Electric fences are typically fitted with low running (3 to 15 cm aboveground) live tripwire, which is usually to prevent animals from burrowing or predators from moving through fences or preventing animals from leaving or escaping a protected area or farm boundary. These tripwires carry an alternating current, which will deliver an electric shock and will thus cause an animal to jump/move away from the fence (Molteno & Arnot 2017). But unfortunately, not all animals react similarly to electric shocks, for example, it is well known that pangolins (*Smutsia (Manis) temminckii*) curl up when frightened or in pain; which means that when pangolins are exposed to the electrical shock they often “curl up around the live wire” and die as a result of continuous shock. *Smutsia (Manis) temminckii* is classified as Vulnerable according to the IUCN red list of endangered species (Molteno & Arnot 2017). The main threats faced by this species involves electrocution by electric fences (mortality estimated at 1 individual per 11km of electrified fence per year), illegal trade for medicinal use, road mortalities, habitat loss, possible poisoning and gin traps (Pietersen, McKechnie & Jansen 2011).

Other species that are commonly killed due to electrocution include pythons, rock monitors, porcupines, aardvarks, chameleons and other small animals, but the animals that are mostly killed by these live tripwires are tortoises (due to their defence mechanism by contracting in their shells). Animals in due course die from tissue damage, organ failure or even sun exposure (Molteno & Arnot 2017).

Molteno & Arnot (2017) mentioned that it is estimated that up to 31 500 reptiles die from electrocution each year in South Africa and a study by Burger and Branch (1994) also noted the death of 52 tortoises along an 8.4 km electrified fence in the Thomas Baines Nature reserve in the Eastern Cape province, where 93% of the tortoises were young adults (which is quite concerning). The perimeter of the fence surrounding farm Waldburg No. 82 is approximately 33.7 km.

The magnitude of change on biodiversity with regards to habitat fragmentation is considered to be moderate because the fence is proposed to be an electrified game fence which will severely influence the movement of wildlife in this area, especially impacting local populations during mating season or on their migratory routes. The sensitivity of the receptor is rated as medium because open landscapes are becoming more fragmented due to fences (especially the proposed 3 meter high electrified fence).

The magnitude of change on biodiversity with regards to the proposed electrified fence is considered to be moderate because of the electrocution risk associated with the fence as well as the impact on wildlife movement. The sensitivity of the receptor is rated as high because *Smutsia (Manis) temminckii* is found within these areas and is a conservation concern due to the illicit wildlife trade for their scales, this species is listed as Vulnerable by the IUCN and listed in Appendix I of CITES as well as under the Schedule 4 - protected game in the Nature Conservation Ordinance Act No. 4 of 1975 of Namibia. Tortoises, rock monitors and pythons are also listed as protected species in Schedule 4 of the Nature Conservation Ordinance and listed in the CITES appendices.

With the implementation of the recommended mitigation measures and by following the EMP, the significance of the impact could be reduced to a minor significant impact. This is especially important concerning the proposed electric fencing (Table 10).

Table 9: Impacts related to fragmentation and habitat loss

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/ DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	RESIDUAL IMPACT AFTER MITIGATION
Construction of game fence and infrastructure on farm Waldburg.	Biodiversity	The potential loss/fragmentation/ alteration of natural habitat and disturbance of local ecosystem, by influencing movement and migration patterns of biodiversity.	Adverse Cumulative Partly reversible Moderate Long term Local Likely	Medium	Moderate	Moderate (6)	Minor (4)

Impact management/control measures may include but are not limited to the following:

- Swing gates could be added to ensure that borrowing animals can get through (Rust et al. 2015 & Schumann et al. 2006);
- Droppers should be added at regular intervals to ensure that the fence will be visible to wildlife;
- Fences should be monitored and checked regularly for wildlife that might be stuck/entangled;
- Fences should be checked for snares and removed immediately; and
- Poaching incidents should be reported to MEFT/police.

Table 10: Impacts related to electrocution or collision at fences

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/ DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	RESIDUAL IMPACT AFTER MITIGATION
Construction of the game fence	Biodiversity	Biodiversity might potentially collide or be hurt or killed by electric fencing with the proposed electrified fence around the farm.	Adverse Cumulative Partly reversible Moderate Long term Local Likely	High	Moderate	Major (9)	Minor (3)

Impact management/control measures may include but are not limited to the following (Molteno & Arnot 2017):

- Height of the live tripwire (or lowest wire) could be moved highest possible position, preferably to a height of at least 25 cm above ground level;
- Tripwire could be set up about 40 to 50 cm away from the main fence (this will only effectively work if combined with mitigation in the bullet point above);
- A rocky barricade (larger rocks) could be added to at the bottom of the fence, which will need to be high enough to ensure animals like tortoises and pangolins are diverted;
- Do not add bottom live wires to the fence (**optimal mitigation**);
- Wait for the “Ground-Breaking Pangolin-Friendly Fencing Project” product/concept to become freely available (currently in development) and use as an alternative once available (Lindeque 2021);
- Switch off the live wire during the day (Jackals and some predators are nocturnal where tortoises are diurnal); and
- Ensure that the diamond mesh at the bottom is well maintained.

7.6.2 WILDLIFE MANAGEMENT

Only “biltong hunting” (hunting for meat and not necessarily game with good genetic makeup, such as large horns) will take place within farm boundaries. Hunting will also strictly be conducted by the farm owner and farm manager/appointed PH and the meat will mainly be used for the lodge. This is not a hunting farm that will attract hunters from overseas but will rather provide tourists with the opportunity to eat local game.

It is generally assumed that between game farming, crop farming and livestock farming, game farming is the more sustainable form of land use, especially under scenarios involving climate change (Brink et al. 2011). Sustainable game farm management is necessary to ensure that the local ecosystem is healthy.

The responsible management of wildlife densities, vegetation cover to trap moisture and soil fertility can contribute to biodiversity conservation at various levels, including population, community, landscape and regional levels (Brink et al. 2011). This will then also increase the capacity in which the ecosystem contributes and continues to provide services as well as prevent the costs of degradation, repair and restoration (Brink et al. 2011). Responsible management of the farm will not only benefit various provisioning services but, will also underpin supporting services including the processes that are important at a landscape level (i.e, seed dispersal) as well as the maintenance of keystone species. Responsible management improves the genetic health of wildlife populations through the prevention of inbreeding by fenced-off populations (Brink et al. 2011).

The magnitude of change on wildlife (especially larger game) and the local ecosystem with regards to the proposed hunting activities are considered to be minor because it is mainly “biltong hunting” that will take place within a fenced area, which suggests the impact will mainly be relevant to wildlife on-site. The sensitivity of the receptor is rated as medium because mismanagement could result in an imbalance (i.e., too many large herbivores or too many predators) within the local ecosystem and could be disadvantageous (might disrupt niches, microhabitats or resource access).

With the implementation of the recommended mitigation measures and by following the EMP, the significance of the impact could be reduced to a low significant impact.

Table 11: Impacts related to potential mismanagement of wildlife

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/ DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	RESIDUAL IMPACT AFTER MITIGATION
Wildlife management	Biodiversity	Potential overhunting of animals with a good genetic make-up and wildlife mismanagement within farm boundaries.	Adverse Cumulative Partly reversible Minor Long term On-site Possible	Medium	Minor	Minor (4)	Low (2)

Impact management/control measures may include but are not limited to the following:

- Produce an effective management plan (Wildlife/biodiversity);
- Create awareness on biodiversity, conservation and ecosystems to employees and tourists;
- Prevent targeting only larger-bodied game or game with the largest horns.
- Keep a record of hunts and game numbers;
- Game could be added to the farm (new genetics) to prevent inbreeding of fenced off populations; and
- Sustainable game farm management and ethical practices should be promoted and incorporated.

7.6.3 LEAD POISONING

Hunting and shooting activities form part of the proposed project and lead-based ammunition is a popular form of ammunition used in the hunting/shooting sectors. This ammunition might have potential negative impacts on wildlife within farm boundaries, especially scavengers (i.e., White Backed Vulture).

A study by van den Heever et al. (2019) mentioned that “poisoning, including secondary lead poisoning, is cited as the single most important cause of vulture mortalities” and the study looked at the prevalence of lead poisoning among vultures found in Southern Africa and compared this with non-scavenging birds. They obtained bone and blood samples from *Gyps coprotheres* (Cape Vulture) and *Gyps africanus* (White-backed vulture), the results showed that 66% of White-backed Vultures and 80% of Cape vultures evaluated in the study had a “blood lead concentration excess of 10 µg/dL, the upper limit of background exposure”. The average Pb level in the blood was 29.7 µg/dL for Cape vultures and 15.4 µg/dL for White-backed vultures. The bone sample collected during the study also exposed that 9% of Cape Vultures and 12% of White-backed vultures suffered from “subclinical to severe clinical lead poisoning upon their deaths” (van den Heever et al. 2019).

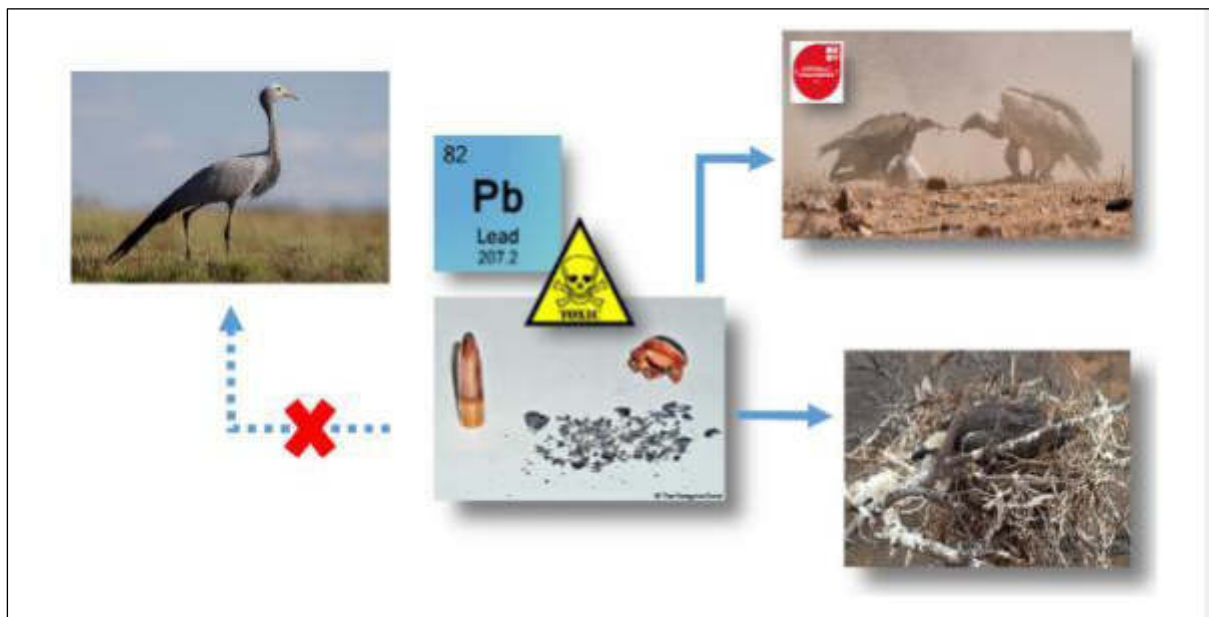


Figure 16: Graphical illustration of lead poisoning (van den Heever et al. 2019)

A study by Naidoo, Wolter & Botha (2017) also suggested that lead poisoning is a result of lead ammunition from hunting, as they evaluated vultures (Cape and White Backed) in “rural/urban location, vicinity to mines and surrounding soil lead concentrations” and no relationship was found with other lead sources. This is further verified by a study by Garbett et al. (2018), which captured and tested 566 White Backed Vultures, where “30.2% of birds

showed elevated Pb levels (10 to 45 µg/dl) and 2.3% showed subclinical exposure (≥ 45 µg/dl)". The study also showed that blood lead levels of White-backed Vultures were higher for samples taken during the hunting season and also noted that lead levels dropped more significantly between hunting seasons and non-hunting seasons within hunting areas compared to the outside of hunting areas; which suggests that these high lead levels found in White-backed vultures are associated with hunting activities (Garbett et al. 2018).

In California, a ban was issued (1991) on lead ammunition, and a study by Kelly et al. (2011) found evidence that as a result of "hunter compliance" these lead regulations resulted in a significant reduction of lead exposure (blood Pb levels) for golden eagles and turkey vultures post-ban. This suggests that a reduction in lead-based ammunition used in a country like Namibia could result in the reduction of lead poisoning cases/deaths among Africa's endangered vulture populations.

The magnitude of change on vultures/scavenger mortality due to lead poisoning is considered minor for this project because although lead poisoning is positively correlated with lead ammunition use, a single hunting farm won't have a significant detrimental impact on species survival. Hunting on farm Waldburg will also only be conducted by the owner and farm manager/appointed PH. A national ban/diverting away/anti-lead use mindsets should be adopted by the majority of hunters and farmers in Namibia to ensure a reduction with regards to this impact. But, this impact might pose a threat to the population viability and conservation efforts to protect endangered vulture species in Namibia, specifically the Critically Endangered White-Backed Vulture.

The sensitivity of the receptor is rated as High because of the critically endangered White-Backed Vulture, Endangered Cape Vulture and the Endangered Lappet-faced Vulture found within these areas as well as various other scavengers and predators that might be impacted by this threat. These vultures are also protected under the Schedule 4 - protected game in the Nature Conservation Ordinance No. 4 of 1975 and fall under Appendix II of CITES.

With the implementation of the recommended mitigation measures and by following the EMP, the significance of the impact could be reduced to a minor significant impact within farm boundaries.

Table 12: Impacts related to the potential lead poisoning of scavengers (especially vultures) and predators

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/ DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	RESIDUAL IMPACT AFTER MITIGATION
Hunting activities	Biodiversity	Potential Lead poisoning (i.e. scavengers/predators could be impacted by lead used in ammunition);	Adverse Indirect Irreversible Minor Long term Regional Possible	High	Minor	Moderate (6)	Minor (3)

Impact management/control measures may include but are not limited to the following:

- Eliminate the use of lead ammunition within farm boundaries (**optimal mitigation**);
- Create awareness on conservation of endangered raptors and vultures;
- Substitute lead-based ammunition for alternatives (i.e., copper or copper alloys);
- Ensure that parts of animals (where the bullet made an impact and fragmented) hunted with lead-based ammunition are not disposed of in a manner that vultures will be able to feed on it, after a hunt and slaughter; and
- Game that dies in the field after being wounded by lead-based ammunition (i.e., if meat is unusable) should be disposed of to ensure that vultures do not feed on contaminated parts of the animal.

7.6.4 TOURISM AND HUNTING ACTIVITIES

Various of the proposed tourism and hunting activities might have an impact on biodiversity or the environment. Off-road driving is one of the potential impacts that might damage soil, vegetation, hurt or kill slower-moving animals or even drive over nests of ground breeding birds. Waste generated on-site by tourism activities (i.e., picnics) could also potentially pose a risk to wildlife within farm boundaries (choking or entanglement risks.)

The other potential impact involves aircraft that will be landing, taking off and flying low over the farm and neighbouring farms, this could be noise disturbance for neighbouring farm owners and potentially colliding with wildlife either in the air (birds, known as bird strike) and on the ground when landing or taking off (birds and other animals) (SKYbrary Aviation Safety 2021).

The magnitude of change on biodiversity and the local ecosystem with regards to the proposed tourism and hunting activities are considered to be minor because impacts will mainly be associated with be on-site activities and potentially over neighbouring farms (aircraft), but the impact is not expected to be significant. The sensitivity of the receptor is rated as medium because these activities could potentially harm, kill or disturb wildlife as well as potentially damage soil and vegetation.

With the implementation of the recommended mitigation measures and by following the EMP, the significance of the impact could be reduced to a low significant impact.

Table 13: Impacts related to potential disturbances from tourism and hunting activities

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/ DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	RESIDUAL IMPACT AFTER MITIGATION
Driving on-site and aircraft flying and landing on the farm.	Biodiversity	Birds and animals could potentially get hurt or killed when colliding with aircraft that are landing or taking off and vehicles driving off-road; and Tourism and hunting activities may have impacts on birds during breeding/nesting periods.	Adverse Direct Partly reversible Minor Medium-term Local Possible	Medium	Minor	Minor (4)	Low (2)

Impact management/control measures may include but are not limited to the following:

- Good waste management practices should be followed on-site;
- Tourists and all staff should be encouraged to ensure that no waste is thrown into the field;
- Employees could ensure that the on or surrounding the airfield is clear of animals before an aircraft lands or takes off;
- Off-road driving (where there is no road) should be avoided as far as possible;
- Vehicles should drive slower within farm boundaries to prevent running over slow-moving animals; and
- Sensitive habitats or areas (i.e., where birds are breeding or where a protected plant species is found etc) could be identified and driving off-road in these areas should be avoided.

7.7 IMPACTS ON THE ENVIRONMENT

7.7.1 GROUNDWATER

According to the Namibian Monitoring Information System & Hydrological Map of Namibia (<https://na-mis.com/>) the site falls over rock bodies that generally have a low groundwater potential, but this can vary locally. The groundwater vulnerability in this area is considered to be low, and groundwater recharge within this area is also very low (<0.5% of the total average rainfall). Groundwater in this area is generally good and the abstraction rate falls between low and moderate (Figure 17).

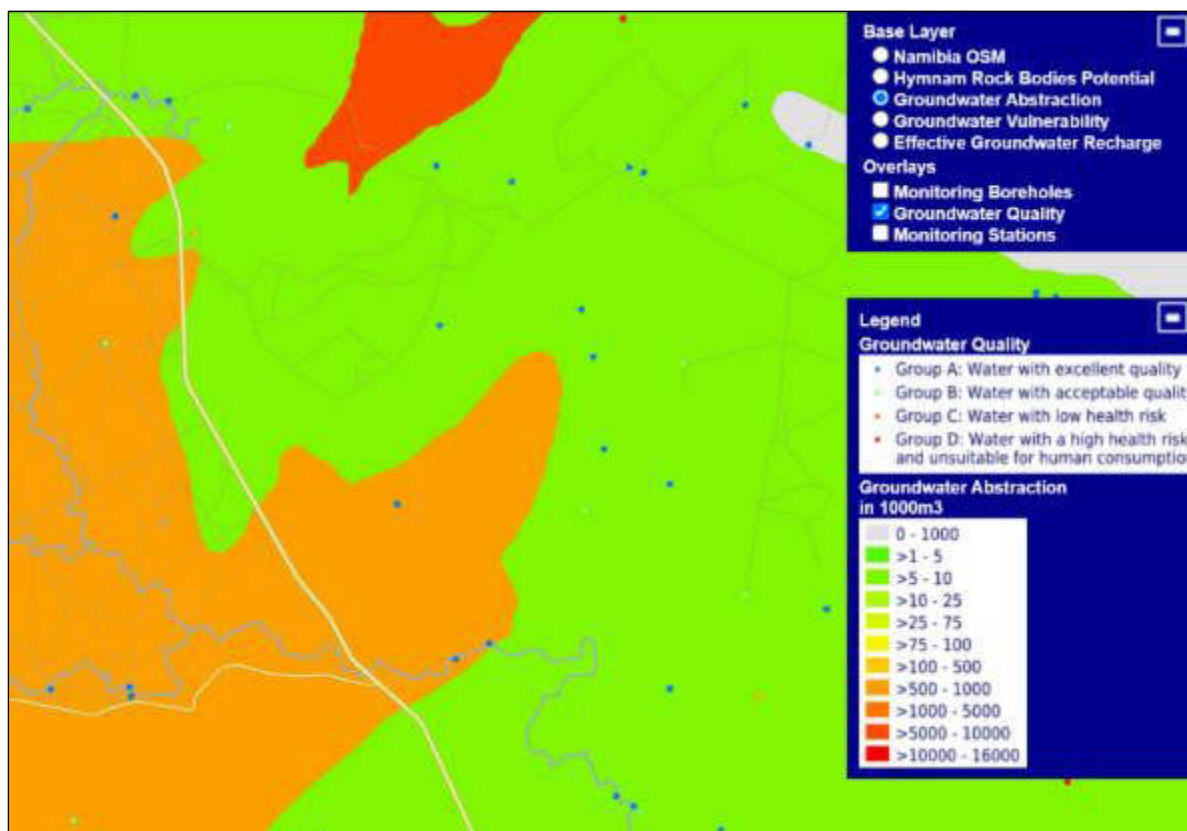


Figure 17: Groundwater abstraction and quality in the area of the farm (<https://na-mis.com/>)

The magnitude of change on groundwater levels over a wider area is expected to be low and considered to be minor because the groundwater vulnerability is low which suggests that pollution potential will be low. The recharge rate of this area is also very low which suggests that over-abstraction of boreholes are possible if effective monitoring and management measures are not implemented. The proponent also constructed a wastewater treatment system that will reduce water wastage and lower the impact. The sensitivity of the receptor is rated as medium because as seen in Figure 17 there is already a relatively high abstraction taking place within these areas and the recharge rate is very low.

Table 14: Impacts related to the potential lowering of groundwater

DESCRIPTION OF ACTIVITY	RECEPTOR	DESCRIPTION OF IMPACT	EFFECT/ DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	RESIDUAL IMPACT AFTER MITIGATION
Water Abstraction	Groundwater	Potential lowering of groundwater due to water abstraction.	Adverse Direct Reversible Moderate Short term Local Possible	Medium	Minor	Minor (4)	Low (2)

Impact management/control measures may include but are not limited to the following:

- Abstraction permits should be in place and abstraction monitored;
- A water-wise mindset should be adopted on-site;
- Water leakages or pipe bursts should be fixed as soon as possible;
- Eco-friendly and low water use equipment should be used;
- Showerheads and taps should also preferably be eco-friendly; and
- Activities that require a lot of water (filling the swimming pool, butchery etc.) should be monitored to ensure that water is not wasted.

8 CONCLUSION

Through the scoping process and impact assessment, it was found that the significant impacts that may occur during the construction completion and operational phases of the project are impacts relating to occupational and community health and safety, noise generation, habitat fragmentation, electrocution risk for wildlife and potential lead poisoning risk for scavengers, especially critically endangered white-backed vultures. Thus, these areas will need to be carefully monitored and managed according to the EMP, to ensure that the significance of these impacts is reduced as far as reasonably possible.

Furthermore, the potential impacts with regards to waste generation, increased traffic or people in the vicinity, fire risk, potential lowering of groundwater levels, mismanagement of wildlife, driving off-road and sewerage waste are expected to be of minor significance. But, these areas should still be managed according to the environmental management plan to ensure that the proponent complies with the relevant legislation, international standards and best practices.

9 REFERENCES

- Boone, R. B., & Thompson Hobbs, N. (2004). Lines around fragments: effects of fencing on large herbivores. *African Journal of Range and Forage Science*, 21(3), 147–158.
- Brink, M., Cameron, M., Coetzee, K., Currie, B., Fabricius, C., Hattingh, S., Schmidt, A., & Watson, L. (2011). Sustainable management through improved governance in the game industry. *South African Journal of Wildlife Research*, 41(1), 110–119. <https://doi.org/10.3957/056.041.0104>.
- Branch, W. R., & Burger, M. (1994). Tortoises mortality caused by electrified fences in the thomas baines nature reserve. *South African Journal of Wildlife Research - 24-Month Delayed Open Access*, 24(1), 32–37.
- Buckley, R. 2004. Environmental impacts of ecotourism. – CABI Publishing.
- Burton, R. 1998. Maintaining the quality of ecotourism: ecotour operators' responses to tourism growth. – J. Sustain. Tour. 6: 117–142.
- Bubbenzer, O. (2002). *Project E1 - Atlas of Namibia*. [online] Available at: http://www.uni-koeln.de/sfb389/e/e1/download/atlas_namibia/e1_download_physical_geography_e.htm.
- Christelis, G. & Struckmeier, W. (2011). Groundwater in Namibia – an explanation to the hydrogeological map. Windhoek: Ministry of Agriculture, Water and Rural Development (Department of Water Affairs).
- Cumming D.H.M., Osofsky S.A., Atkinson S.J., Atkinson M.W. (2015). Beyond Fences: Wildlife, Livestock and Land Use in Southern Africa. pp.243-257. Chapter: 21 *CABI International*.
- Davenport, J. and Davenport, J. L. 2006. The impact of tourism and personal leisure transport on coastal environments: a review. – *Estuar. Coast. Shelf Sci.* 67: 280–292
- Dahl, J. 1989. The integrative and cultural role of hunting and subsistence in Greenland. – *Études/Inuit/Studies* 13: 23–42.
- Garbett, R., Maude, G., Hancock, P., Kenny, D., Reading, R., & Amar, A. (2018). Association between hunting and elevated blood lead levels in the critically endangered african white-backed vulture *gyps africanus*. *The Science of the Total Environment*, 630, 1654–1665. <https://doi.org/10.1016/j.scitotenv.2018.02.220>
- Green, R. E., Jörn P. W. Scharlemann, Cornell, S. J., & Balmford, A. (2005). Farming and the fate of wild nature. *Science*, 307(5709), 550–555.
- Irish, J. (2021). Namibia Biodiversity Database. [online] Namibia Biodiversity Database. Available at: <http://biodiversity.org.na/index.php> [Accessed 20 May 2021].

IUCN 2021. The IUCN Red List of Threatened Species. Version 2021-1. <https://www.iucnredlist.org>. Downloaded on [10 2021].

International Finance Corporation. (2012). *IFC Performance Standards on Environmental and Social Sustainability*. The World Bank.

Jakes, A. F., Jones, P. F., Paige, L. C., Seidler, R. G., & Huijser, M. P. (2018). A fence runs through it: a call for greater attention to the influence of fences on wildlife and ecosystems. *Biological Conservation*, 227, 310–318. <https://doi.org/10.1016/j.biocon.2018.09.026>

Kelly, T. R., Bloom, P. H., Torres, S. G., Hernandez, Y. Z., Poppenga, R. H., Boyce, W. M., & Johnson, C. K. (2011). Impact of the california lead ammunition ban on reducing lead exposure in golden eagles and turkey vultures. *Plos One*, 6(4), 17656. <https://doi.org/10.1371/journal.pone.0017656>

Lindeque, B. (2021). *Ground-Breaking Pangolin-Friendly Fencing Project A Game Changer!* [online] Good Things Guy. Available at: https://www.goodthingsguy.com/environment/ground-breaking-pangolin-friendly-fencing-project-a-game-changer/?fbclid=IwAR2L7iMiKnrk2oqKiLS2_tbWLiDJ7AJdrX4DUm_yToP_4a9Z_dY9GJ0oxtU [Accessed 1 Dec. 2021].

Labansen, A. L., Merkel, F., & Mosbech, A. (2021). Reactions of a colonial seabird species to controlled gunshot disturbance experiments. *Wildlife Biology*, 2021(1), 00752. <https://doi.org/10.2981/wlb.00752>

Mendelshon, J., Jarvis, A., Roberts, C., & Robertson, T. (2002). *Atlas of Namibia. A portrait of the land and its people*. Cape Town: David Philip Publishers.

Milner-Gulland, E. J. and Bennett, E. L. 2003. Wild meat: the bigger picture. – *Trends Ecol. Evol.* 18: 351–357.

Molteno, S., & Arnot, L. (2017). How to reduce tortoise electrocution mortalities. *Farmer's Weekly*, 2017(17004), 36–38.

Meinke, D. K., Finan, D. S., Flamme, G. A., Murphy, W. J., Stewart, M., Lankford, J. E., & Tasko, S. (2017). Prevention of noise-induced hearing loss from recreational firearms. *Seminars in Hearing*, 38(04), 267–281. <https://doi.org/10.1055/s-0037-1606323>

National Planning Commission. (2017). *STATUS OF THE NAMIBIAN ECONOMY*. Windhoek: National Planning Commission.

Namibia Statistics Agency. (2017). *Namibia Labour Force Survey 2016 Report*. Windhoek: Namibia Statistics Agency.

Namibia Statistics Agency. (2018). *Namibia Labour Force Survey 2018*. Windhoek: Namibia Statistics Agency.

- Namibia Statistics Agency (NSA). (2019). The Namibia labour force survey 2018 report. Windhoek: NSA
- Naidoo, V., Wolter, K., & Botha, C. J. (2017). Lead ingestion as a potential contributing factor to the decline in vulture populations in southern africa. *Environmental Research*, 152, 150–156. <https://doi.org/10.1016/j.envres.2016.10.013>
- OHS (2018). *Measuring and Protecting Against Impulse Noise* -. [online] Occupational Health & Safety. Available at: <https://ohsonline.com/articles/2018/05/21/measuring-and-protecting-against-impulse-noise.aspx> [Accessed 23 Nov. 2021].
- Pääkkönen Rauno. (2008). Environmental noise reduction means of weapons. *The Journal of the Acoustical Society of America*, 123(5), 3822–3822. <https://doi.org/10.1121/1.2935577>
- Pietersen, D. W., McKechnie, A. E., & Jansen, R. (2011). A review of the anthropogenic threats faced by temminck's ground pangolin, *smutsia temminckii*, in southern africa. *South African Journal of Wildlife Research*, 44(2), 167–178. <https://doi.org/10.3957/056.044.0209>
- Rust, N. A., Nghikembua, M. T., Kasser, J. J. W., & Marker, L. L. (2015). Environmental factors affect swing gates as a barrier to large carnivores entering game farms. *African Journal of Ecology*, 53(3), 339–345. <https://doi.org/10.1111/aje.12188>
- Republic of Namibia. (2008). *The Government Gazette of the Republic of Namibia, Draft Procedures and Guidelines for Environmental Impact Assessment and Environmental Management*. Windhoek: Republic of Namibia.
- Stankowich, T. 2008. Ungulate flight responses to human disturbance: a review and meta-analysis. – *Biol. Conserv.* 141: 2159–2173.
- Schumann, M., Schumann, B., Dickman, A., & et, al. (2006). Assessing the use of swing gates in game fences as a potential non-lethal predator exclusion technique. *South African Journal of Wildlife Research*, 36(2), 173–181.
- Sharp, R. and Wollscheid, K. U. 2009. An overview of recreational hunting in North America, Europe and Australia. – In: Dickson, B. (ed.), *Recreational hunting, conservation and rural livelihoods: science and practice*. Blackwell Publishing, pp. 25–38.
- Sordello, R., Flamerie De Lachapelle Frédérique, Livoreil, B., & Vanpeene, S. (2019). Evidence of the environmental impact of noise pollution on biodiversity: a systematic map protocol. *Environmental Evidence*, 8(1), 1–7. <https://doi.org/10.1186/s13750-019-0146-6>
- Stuart, C. and Stuart, M. (2015). *Stuarts' field guide to mammals of southern Africa, including Angola, Zambia & Malawi*. Cape Town: Struik Nature.
- Silencer Central. (2019). *We Tested 27 Rifle Suppressors: Here's What We Found*. [online] Available at: <https://www.silencercentral.com/blog/we-tested-27-rifle-suppressors-heres-what-we-found/> [Accessed 18 Nov. 2021].

van den Heever, L., Smit-Robinson, H., Naidoo, V., & McKechnie, A. E. (2019). Blood and bone lead levels in south africa's gyps vultures: risk to nest-bound chicks and comparison with other avian taxa. *Science of the Total Environment*, 669, 471–480. <https://doi.org/10.1016/j.scitotenv.2019.03.123>

SKYbrary Aviation Safety. (2021). *Bird Strike*. [online] Available at: <https://skybrary.aero/articles/bird-strike> [Accessed 19 Nov. 2021].

Ulrich Oberprieler and Burger Cillié (2008). *The bird guide of Southern Africa*. Pretoria: Game Parks Publishing.


United Nations Namibia (2020). *Socio-Economic Impact Assessment of Covid-19 in Namibia Summary*. Windhoek: UN

World Health Organization (WHO) (2016). *WHO country cooperation strategy 2010 – 2015 Namibia*. Windhoek: WHO

APPENDIX A – ENVIRONMENTAL MANAGEMENT PLAN

APPENDIX B – BACKGROUND INFORMATION DOCUMENT

APPENDIX C – PUBLIC PARTICIPATION

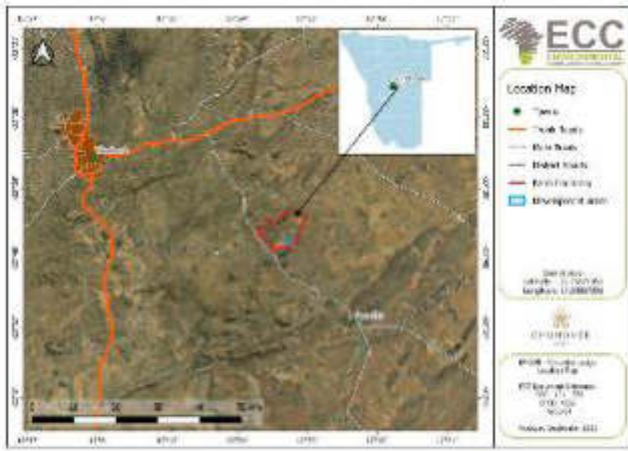


GMUNDNER
LODGE

PROPOSED DEVELOPMENT AND CONSTRUCTION OF A TOURISM AND HUNTING LODGE ON FARM WALDBURG NO. 82, KHOMAS REGION, NAMIBIA.

Environmental Compliance Consultancy CC (ECC) hereby gives notice to the public that an application for an environmental clearance certificate in terms of the Environmental Management Act, No. 7 of 2007 will be made as per the following:

Applicant: Gmundner Hotels (Pty) Ltd
Environmental Assessment Practitioner (EAP): Environmental Compliance Consultancy
Location: Khomas Region, Namibia



Project: Proposed development and construction of a tourism and hunting lodge on farm Waldburg No. 82, Khomas Region, Namibia.


Proposed Activities: The proponent, Gmundner Hotels (Pty) Ltd proposes to develop farm Waldburg No. 82 within the Khomas Region, Namibia into a tourism and hunting lodge. This will include necessary renovations to existing infrastructure and the construction of new buildings and associated infrastructure.

Purpose of the review and registration period: The purpose of the review and registration period is to introduce the proposed project and to afford registered Interested and Affected Parties (I&APs) an opportunity to comment on the Background Information Document (BID) to ensure that all issues and concerns are brought forward, captured and considered further in the assessment.

The registration period is effective from the **9th of November 2021 to the 23rd of November 2021**. I&APs and stakeholders are required to register for the project at: www.eccenvironmental.com/projects/

The team at ECC will then maintain contact with all registered I&APs to keep them informed and engaged as the ESIA process develops, ECC will also provide registered I&APs relevant documents to review during the assessment process.

Environmental Compliance Consultancy
 Registration Number: CC/2013/11404
 Members: Mr JS Bezuidenhout or Mrs J Mooney
 PO Box 91193, Klein Windhoek
 Tel: +264 81 669 7608
 E-mail: info@eccenvironmental.com
 Website: www.eccenvironmental.com/projects
 Project ID: ECC-121-372-ADT-05-D



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PROPOSED DEVELOPMENT AND CONSTRUCTION OF A TOURISM AND WENTING LODGE ON HAMB WALDMAN NO. 02, SHENSA BENTSI, NAMIBIA.

Environmental Compliance Consultancy (ECC) hereby gives notice to the public that an application for an environmental clearance certificate in terms of the Environmental Management Act, No. 1 of 2007 will be made as per the following:

Applicant: **GMUNDNER HOTELS (PTY) LTD**
Environmental Compliance Consultancy: **Shensa Bentley, Namibia**

Location: **Shensa Bentley, Namibia**

Project: Proposed development and construction of a tourism and hunting lodge on farm Waldman No. 02, Shensa Bentley, Namibia.

Proposed Activities: The proposed, GMUNDNER HOTELS (PTY) LTD proposes to develop farm Waldman No. 02 within the Shensa Bentley, Namibia into a tourism and hunting lodge. This will include necessary excavation to laying infrastructure and the construction of two buildings and extensive infrastructure.

Process of the review and registration period: The purpose of the review and registration period is to disclose the proposed project and to afford registered concerned and affected parties (RCAPs) an opportunity to comment on the proposed project and to afford registered concerned and affected parties (RCAPs) an opportunity to comment on the proposed project and to afford registered concerned and affected parties (RCAPs) an opportunity to comment on the proposed project.

The registration period is effective from the 16th of November 2021 to the 28th of November 2021. (All interested parties are required to register for the project on www.environmentalclearance.com).

The team at ECC will also maintain contact with all registered RCAPs to ensure they are informed and engaged at the end of the process. ECC will also provide registered RCAPs with documents to review during the assessment process.

Environmental Compliance Consultancy
Registration Number: 01/2004/1188
Waldman No. 02, Windhoek or Mt. Morija
PO Box 01110, Windhoek
Tel: +264 61 508 1830
Email: info@environmentalclearance.com
Website: www.environmentalclearance.com
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DE PUBLIKATIE	GRADE 2 ENG
17 NOV: WEEK 31 & 32	GRADE 1 ENG/AFR
DE PUBLIKATIE	GRADE 1 ENG/AFR
18 NOV: WEEK 33 & 34	PRE-PRIMARY ENG/AFR
DE PUBLIKATIE	PRE-PRIMARY ENG/AFR

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info@eccenvironmental.com

www.eccenvironmental.com



ECC Ref: ECC-121-372-LET-03-D
2 November 2021

Identified Stakeholder and Potentially Interested Party for:
Gmundner Hotels (Pty) Ltd proposed development and construction of a tourism and hunting lodge on farm
Waldburg No. 82, Khomas Region, Namibia.

Dear Sir or Madam:

RE: NOTIFICATION OF ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED DEVELOPMENT AND CONSTRUCTION OF A TOURISM AND HUNTING LODGE ON FARM WALDBURG NO. 82, KHOMAS REGION, NAMIBIA.

Environmental Compliance Consultancy (ECC) has been engaged by Gmundner Hotels (Pty) Ltd (the Proponent) to act on their behalf for the environmental clearance certificate application in terms of the Environmental Management Act, No. 7 of 2007 for the proposed development and construction of the tourism and hunting lodge.

This letter is intended to engage potentially interested and Affected Parties (I&APs) for the project and provides a communication channel to ECC whilst the ESIA is ongoing. You have been identified as an interested or affected party and therefore ECC wishes to inform you of how you can interact with the ESIA.

The proponent, proposes to develop farm Waldburg No. 82 within the Khomas Region, Namibia into a tourism and hunting lodge. This will include necessary renovations to existing infrastructure and the construction of new buildings and associated infrastructure.

Public participation is an important part of the ESIA process, as it allows the I&APs to obtain information about the proposed project and provide feedback. Communication with the I&APs occurs at various stages throughout a project lifecycle including:

- Advertising in newspapers; public notice boards (already done);
- Distributing a Background Information Document (BID) to identified I&APs; available online at (<https://eccenvironmental.com/projects/>)
- Registered I&APs will also be informed of the available draft scoping report for a review period, during this period I&APs will have the opportunity to review the draft document and raise any issues or concerns, and
- I&APs who wish to register as such must do so on the ECC website as per the link provided below: <https://eccenvironmental.com/projects/>

If you are unable to complete the registration form online, please contact us via email for assistance: info@eccenvironmental.com

ECC values community input and participation in our projects and we look forward to working with you as the project develops.

ENVIRONMENTAL COMPLIANCE CONSULTANCY CC
PO BOX 91193 WINDHOEK, NAMIBIA
MEMBERS: J L MOONEY & JS BEZUIDENHOUT
REGISTRATION NUMBER: CC/2013/11404



Should you have any questions or require additional information please do not hesitate to contact either of us.

Yours sincerely,



Stephan Bezuidenhout
Environmental Compliance Consultancy
Office: +264 81 669 7608
Email: stephan@eccenvironmental.com



Jessica Bezuidenhout Mooney
Environmental Compliance Consultancy
Office: +264 81 669 7608
Email: jessica@eccenvironmental.com

APPENDIX D – LETTER FROM THE NCAA



REF: NCAA:AGA:160/2021
Enquiries: Marx Shikongo
shikongom@ncaa.na
+264 83 235 2368

08 December 2021

Environmental Compliance Consultancy
PO Box 91193
Windhoek

Dear Mr. Bezuidenhout,

SUBJECT: THE NAMIBIA CIVIL AVIATION REGULATIONS REQUIREMENTS FOR THE CONSTRUCTION OF AN AIRFIELD AND A HELICOPTER HANGAR ON FARM WALDBURG NO. 82, KHOMAS REGION, NAMIBIA

I refer to your letter dated 2 November 2021, on the above captioned matter.

1. Part 139, Subparts 02.2 and 05.2 of the Namibia Civil Aviation Regulations (NAMCARs) of 2001, as amended in 2018, stipulate the requirements for aerodrome construction as follows.
2. The following are the requirements for the construction of aerodromes in accordance with the NAMCARs of 2001, as amended in 2018:

Subpart 2: Construction of aerodrome

139.02.2 (1) A person may not construct an aerodrome unless that person has obtained the necessary authorisation issued by the Executive Director.

(2) An application to construct an aerodrome must be submitted to the Executive Director in the form and manner determined by the Executive Director and must be accompanied by -

- a) full particulars of the particular area demarcated for the development of the aerodrome, and the location thereof;
- b) a detailed design of the proposed construction including related architectural requirements approved, where possible, by the relevant local authority council;
- c) written approval from the following institutions for the intended aerodrome development:
 - i) for private aerodromes, approval from the relevant local authority council;

Board Members: Mr. Bethuel T. Mujetenga (Chairperson), Mrs. Kadiva D. Hamutumwa (Deputy Chairperson), Ms. Josephine N. Amukwa, Ms. Martha N. Hitenanye, Mr. Fernando Smaeb, Mr. Melkisedek Uupindi, Mr. Ericsson M. Nengola (Interim Executive Director)



Construction of category E aerodromes

139.05.2 (1) A person may not construct a category E aerodrome unless the construction has been approved by the Executive Director.

(2) The Executive Director may consider for approval an application for construction of a category E aerodrome if the applicant -

- (a) holds a valid authorisation from the relevant government authorities for use of the place as an aerodrome;
- (b) has complied with the requirements of the Environmental Management Act.

(3) The Executive Director must, prior to issuance of approval for construction of category E aerodrome, assess the suitability of the place proposed for construction taking into consideration -

- (a) the proximity of the place to other aerodromes and landing areas, including military aerodromes;
- (b) obstacles, terrain and existing airspace restrictions; and
- (c) that it is not against public interest that the place where the aerodrome is to be constructed may be used as such.


(4) An applicant for construction of a category E aerodrome must submit an application in the approved form, accompanied by -

- (a) the design of the proposed construction;
- (b) aerodrome data in accordance with the characteristics of the aircraft for which the aerodrome is intended;
- (c) a topographical map of the proposed aerodrome site;
- (d) written permission from the owner of the land or evidence of ownership of the proprietary interest in the land on which the aerodrome is to be constructed; and
- (e) fees as prescribed in Part 187.

Hence, an entity with the intent of constructing an aerodrome must meet all the necessary requirements of the regulatory and technical standards outlined above, as may be applicable.

Thanking you in anticipation.

Yours sincerely,



08/12/2021

Mr. Ericsson M. Nengola

Interim Executive Director of Civil Aviation



THE NAMIBIA CIVIL AVIATION REGULATIONS REQUIREMENTS FOR THE CONSTRUCTION OF AN
AIRFIELD AND A HELICOPTER HANGAR ON FARM WALDBURG NO. 82, KHOMAS REGION,
NAMIBIA

APPENDIX E – NBRI LIST

APPENDIX F – ECC CV



CURRICULUM VITAE STEPHAN BEZUIDENHOUT



Name of Consultant: Stephan Bezuidenhout
 Position / Profession: Managing Member & Senior Environmental Practitioner
 Date of Birth: 11 April 1989
 Nationality: Namibian
 Professional Memberships: EAPAN, FSC Environmental Chamber, NCE, NCA, N-BIG
 Email: stephan@eccenvironmental.com
 Website: www.eccenvironmental.com
 Contact: +264 81 262 7872

QUALIFICATIONS:

University of Pretoria: 2011 – 2012 Postgraduate Degree in Environmental Management and Analysis
 University of Stellenbosch: 2007 – 2010 Bachelor of Applied Science

PROFILE:

ECC's proudly Namibian Principal leads the ECC team as the lead Environmental Practitioner with a strong and dedicated environmental background. Mr Bezuidenhout has leading practical experience in identifying and applying legislative requirements to proposed projects. Identifying impacts and mitigations for projects within different sectors, including mining, energy, agriculture and construction.

KEY AREAS OF EXPERTISE:

Agriculture and Ecology	-	Aftercare, rehabilitation & restoration methodology & implementation Forest Stewardship Council (FSC) implementation and compliance
Environmental (and social) Impact Assessments (EIAs) (ESIAs) & Environmental Management	-	Compiling EIA Reports and EMPs Coordinate and review specialist studies Review EIA reports Environmental Management Systems (EMS) Public Participation & Stakeholder Management
Project Management	-	Management of teams through Southern Africa for various projects

LANGUAGES:

	Read	Write	Speak
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

Stephan Bezuidenhout
Curriculum Vitae 1 Environmental Compliance Consultancy
ECC 

SUMMARY OF EXPERIENCE AND CAPABILITY:

Since 2010, Stephan has been working as an environmental assessment practitioner. Stephan has a strong ecological background and has gained more than ten years' experience in the environmental industry. As a lead practitioner, Stephan has successfully driven environmental impact assessments and compliance assessments within Southern Africa. His hands on and practical experience and knowledge of international standards, such as FSC, IFC and World Bank standards allows Stephan to advise his clients and teams constructively and effectively.

PROJECT EXPERIENCE

PROJECT	DATE	ROLE
Best Practice Guide: Environmental Principles for Mining in Namibia	2017 - 2019	Team member
The FSC National Forest Stewardship Standard of Namibia	(2018-2020)	Part of the working group who compiled the National Standard for Forest Stewardship Council (FSC) in Namibia allowing for a higher rate of certification and improved compliance.
Jumbo Charcoal FSC Group Scheme Management	2015 - 2020	Jumbo Charcoal FSC Group Scheme Management
Biophysical Rehabilitation Plan for ML 42, 43, 44 and 45 as well as an overarching 5-year Biophysical Rehabilitation Plan for Namdeb	2018 - 2019	Part of the ECC team who completed the reporting and aided in the implementation of the Biophysical Rehabilitation Plans for Namdeb.
ESIA amendment for B2Gold Namibia Mining Licence (ML 169) to developed underground working for the Otjikoto (gold mine)	2018 - 2019	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
Kunene Regional Counsel sustainable water supply Pipeline and Ancillary works	2017 - 2018	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
ESIA application for B2Gold Namibia 10.8 megawatt PV solar upgrade to the B2Gold Power Plant	2017 - 2018	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
ESIA application for Otjiwarongo Wastewater Treatment and Bulk Water Supply	2019	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
ESIA for the Wastewater Treatment facilities for Gondwanan Collection	2019	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
MAWF permit application for Water Abstraction and Discharge for Gondwanan Collection	2019	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
EIA application for various exploration activities for Votorantim Metals Namibia Pty Ltd	2018 - Present	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).

Stephan Bezuidenhout
Curriculum Vitae

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Environmental Compliance Consultancy
ECC



Abengoa Solar SA, Kaxu Solar One 100MW Concentrating Solar Plants (CSP) Trough	2015 - 2017	Environmental Control Officer during commissioning and rehabilitation phases
Konkoonsies II PV Solar Energy Facility, On-site substation and a 132kV power line Northern Cape, South Africa	2015 - 2017	Environmental Assessment Practitioner during EIA process
Abengoa Solar SA Paulputs CSP (Pty) Ltd. 150 MW CSP Trough Northern Cape, South Africa	2015 - 2017	Environmental Assessment Practitioner during EIA Process
Abengoa Solar SA, Xina Solar One 200 MW CSP Trough Northern Cape, South Africa	2015 - 2017	Environmental Control Officer during construction phase
Soil Remediation and Commissioning report of NGALA Camp for Isondlo Project Support (IPS) (Pty) Ltd Gauteng, South Africa	2015	Lead consultant and project manager.
375 km 26-inch natural gas installation for SASOL & ROMPCO Mozambique representing Worley Parsons (Pty) LTD. South Africa	2013 - 2015	Environmental Coordinator and Manager
Department of Water Engineering (working on a catchment management project for the Municipality of Stellenbosch)	2011 - 2012	Intern at Aurecon South Africa
Other projects	2011-2020	Stephan has successfully completed various other projects in the sectors of Agriculture, Mining, Energy and Tourism where he acted as the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP, and report review).

PUBLICATIONS

N.S., et al., Some ecological side-effects of chemical and physical bush clearing in a southern African rangeland ecosystem, Southern African Journal of Botany (2015), <http://dx.doi.org/10.1016/j.sajb.2015.07.012>

The FSC National Forest Stewardship Standard of Namibia (Draft V 4). Co-authored by S Bezuidenhout, P Cunningham, A Ashby, F Detering, W Enslin & D Honsbein

CERTIFICATION:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and experience.

DATE: **21 / 10 / 2020**



FULL NAME OF CONSULTANT

Jacobus Stephanus Bezuidenhout

Stephan Bezuidenhout
Curriculum Vitae

3

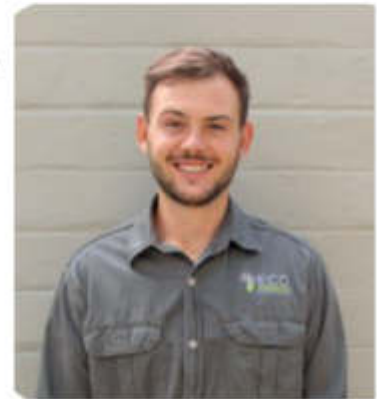
Environmental Compliance Consultancy
ECC



CURRICULUM VITAE

Diaan Hoffman

Name of Consultant: Diaan Hoffman
 Position / Profession: Junior Ecologist and emerging Environmental Practitioner
 Date of Birth: 19 May 1996
 Nationality: Namibian
 Professional Memberships: EAPAN No. 213
 Email: diaan@eccenvironmental.com
 Website: www.eccenvironmental.com
 Contact: +264 81 467 4294



QUALIFICATIONS:

University of Stellenbosch: 2015 – 2018 BSc Conservation Ecology

PROFILE:

Highly accomplished professional with experience as an environmental consultant. An out-the-box thinker, passionate about high-quality service in fast-paced environments. Excellent planning and execution ability, able to lead and collaborate with teams to deliver beyond expectations.

KEY AREAS OF EXPERTISE:

Environmental (and social) Impact Assessments (EIAs) (ESIAs)	-	Compiling EIA Reports and EMPs Public Participation & Stakeholder Management
Conservation		Small mammal sampling and parasite analysis. In-depth knowledge of biodiversity and Ecology.

LANGUAGES:

	Read	Write	Speak
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

SUMMARY OF EXPERIENCE AND CAPABILITY:

Since 2019, Diaan has been working as an environmental assessment practitioner. In 2021 he started working as a junior ecologist assisting with the rangeland management and the FSC standard in Namibia. Diaan has a good biodiversity and ecology background.

PROJECT EXPERIENCE

PROJECT	DATE	ROLE
ENAEX EIA: Assisting with application for Environmental Clearance Certificate (ECC)	2019 - 2020	Team member
Bulk Mining Explosives: Updating EMP and application for renewal of ECC.	2019-2020	Team member
Sand Miners Association: Assisting with the writing of the EIA, EMP and creating of Maps	2019 - 2020	Team member
Okapana (TOTAL) Service Station CC: Conducting and assisting with the whole EIA process.	2019 - 2020	Team member
Walvis Bay Salt Refiners: Measuring Environmental Noise and assisting with the report writing.	2019-2020	Team member
Jumbo Charcoal FSC Group Scheme management.	2021	Team member
Jumbo Charcoal: writing of EMP	2021	Team member
EMCON: Creating Maps and Baseline sections for ESIA	2021	Team member
Nexus Charcoal: Conducting and assisting with the whole ESIA process.	2021	Team member
Etosha Charcoal: writing of EMP	2021	Team member
FSC Mapping and rangeland management	2021	Team member
GIS Mapping: Using QGIS to produce maps for various projects.	2021	Team member
Uis Afrititn EPLs: Conducting and assisting with the whole ESIA process.	2021	Team member
Paratus ESIA: Conducting and assisting with the whole ESIA process.	2021	Team member
Gmundner ESIA: Conducting and assisting with the whole ESIA process.	2021 -Present	Team member
Iuris Amendment: Conducting and assisting with the Amendment	2021 -Present	Team member

CERTIFICATION:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and experience:

DATE: 19/08/2021



Diaan Philip Hoffman



CURRICULUM VITAE
LESTER HARKER

Name of Consultant: Lester Harker
 Position / Profession: Environmental Assessment Practitioner
 Date of Birth: 26 February 1988
 Nationality: Namibian
 Email: lester@eccenvironmental.com
 Website: www.eccenvironmental.com
 Contact: +264 81 602 2082

 **TERTIARY EDUCATION:**

University of Stellenbosch: **2006 – 2010** Bachelor of Arts (Environment and Development - attended)

PROFILE:

Lester works as an Environmental Assessment Practitioner with a diverse environmental background. Mr Harker has leading practice experience in fields of construction, exploration, monitoring and audit compliance and consultancy obtained from leading professionals.

KEY AREAS OF EXPERTISE:

Environmental Management	-	Project Management
Environmental (and social) Impact Assessments (EIAs)	-	Conducting and managing various small to large scale EIAs Compiling EIA Reports and EMPs Coordinate and review specialist studies
Environmental & Social Compliance reporting	-	Environmental and Social compliance audits in the construction industry

 **LANGUAGES:**

	Read	Write	Speak
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent



SUMMARY OF EXPERIENCE AND CAPABILITY:

Has over 9 years of work experience. His first three years were as a junior environmental assessment practitioner, but already became involved with the holistic management of EIA

projects. The following 5 years he has worked in the environmental management field with experience in Environmental Impact Assessments (EIAs), compliance monitoring and auditing in Namibia, the DRC and Equatorial Guinea. Has above average experience in successful client relations.

PROJECT EXPERIENCE

PROJECT	DATE	ROLE
Collaborated with the British CRIDF donor organisation to conduct a high level environmental investigation to determine the feasibility of treating and reusing the Rehoboth Wastewater facility for agricultural purposes	2015	Environmental Assessment Practitioner
Environmental scoping and impact assessment for exploration activities for Westrine Mining & Exploration Company (Pty) Ltd	2016	Environmental Assessment Practitioner.
Conducted an Environmental Scoping and Impact Assessment for the construction of a cement mining and processing facility in Equatorial Guinea, North Africa, for N.B.L.E Sa.	2016	Environmental Assessment Practitioner.
Conducted an environmental impact assessment for the Dauremas Mineral Development Company for exploration and proposed mining activities, Kunene Region.	2015-2017	Environmental Assessment Practitioner.
Conducted an Environmental Impact Assessment for a terrestrial diamond exploration project south of Aus, Karas Region for Hallie Investment Number 14.	2017	Environmental Assessment Practitioner.
Conducted an environmental performance audit in collaboration with a British firm for a copper and cobalt processing facility for the Somika Sarl Group of Companies operating in the DRC to fund the expansion of their processing facility.	2018	Environmental Assessment Practitioner
Projects Completed while at ECC		
Environmental impact assessment for a pilot sustainable water supply project by means of desalination, powered by solar to supplement water supply for Walvis Bay Erongo Region, Namibia	2020	Environmental Assessment Practitioner
Amendment application for the Palmwag Lodge, Gondwana Namibia.	2020	Environmental Assessment Practitioner
Environmental Assessment for the proposed development of residential, retail including tourism activities on Erf 4747, Swakopmund Namibia.	2020	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement and PPP.
Environmental scoping and Impact assessment for the proposed exploration activities on 19 EPLs in the Omaheke and Khomas regions for Kuiseb Copper Company (Pty)Ld	2020	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement and PPP.
Environmental assessment for proposed exploration activities on EPL 7769 for Jin Peng	2020	Lead Environmental Assessment Practitioner managing the EIA process
Lester Harker Curriculum Vitae	2	Environmental Compliance Consultancy ECC

Investments (Pty) Ltd		(including stakeholder engagement and PPP.
Environmental assessment for the proposed exploration activities on EPL 7688	2020	Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement and PPP.
Environmental and social compliance audit for 21 sites across Namibia under the Education, Training and Quality Improvement Project funded by the African Development Bank	2020	Site audits and development of an audit report and corrective action plan
Environmental Management Plan for an existing charcoal production and storage plant in Outjo, Namibia	2020	Environmental Assessment Practitioner
Environmental and social impact assessment for the proposed biomass processing (Retort System), storage and packaging plant on farm Gai//Khaisa no. 159, Otjozondjupa Region, Namibia.	2020	Environmental Assessment Practitioner
Environmental Management Plan for the proposed mechanised bush thinning operations on farm Gai//Khaisa no. 159, Otjozondjupa Region, Namibia	2020	Environmental Assessment Practitioner
Environmental and social impact assessment for the proposed quarrying activities for dimension stones on mining claims 72236, 72237, 72238, 72239 and 72240, Hardap Region, Namibia	2021	Environmental Assessment Practitioner
Environmental and social impact assessment for the proposed exploration activities on EPLs 7212, 7789, 7964, 7970, 7971, 7972 and 7994 in the Kunene, Otjozondjupa and Khomas regions	2021	Environmental Assessment Practitioner
Environmental and social impact assessment for the airborne electromagnetic surveys across portions within several EPLs in the Omaheke and Khomas regions for Kuiseb Copper Company (Pty) Ltd	2021	Environmental Assessment Practitioner

Lester Harker Curriculum Vitae	3	Environmental Compliance Consultancy ECC
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