

APP-002844
OPERATIONS OF MIDGARD COUNTRY ESTATE
UPDATED ENVIRONMENTAL MANAGEMENT PLAN



Prepared by:



Prepared for:



February 2024


Project:	OPERATIONS OF MIDGARD COUNTRY ESTATE: UPDATED ENVIRONMENTAL MANAGEMENT PLAN	
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ABBREVIATIONS

AIDS	Acquired immunodeficiency syndrome
CLO	Community Liaison Officer
ECC	Environmental Clearance Certificate
EMP	Environmental Management Plan
HIV	Human Immunodeficiency Virus
MEFT	Ministry of Environment, Forestry and Tourism
MSDS	Material Safety Data Sheet
PPE	Personal Protective Equipment
RETOSA	Charter of the Regional Tourism Organisation of Southern Africa
SADC	Southern African Development Community
SANS	South African National Standards
SHE	Safety, Health and Environment
STIs	Sexually Transmitted Infections
UNFCCC	United Nations Framework Convention on Climate Change
WHO	World Health Organization

1 INTRODUCTION

O&L Leisure (Pty) Ltd (the Proponent) requested Geo Pollution Technologies (Pty) Ltd to update Midgard Country Estate's environmental management plan (EMP) in preparation for the ECC renewal process. The updated EMP is required to renew the establishment's existing environmental clearance certificate (ECC-01225) with the Ministry of Environment, Forestry and Tourism (MEFT). The ECC is a legal requirement for the continued operations of the Midgard Country Estate as per the Environmental Management Act of 2007 (refer to Table 3-1). Midgard Country Estate is an accommodation and events establishment that has been operational within the Namibian tourism and hospitality industry since 1993. Midgard Country Estate is located approximately 60 km northeast of Windhoek, next to the Swakop River, in the Otjozondjupa Region (Figure 1-1).

The existing EMP is based on an environmental assessment conducted for Midgard Country Estate in 2019/2020 (Faul et al. 2020). The objectives of the updated EMP are, in consideration of the definite and potential impacts identified during the environmental assessment and a subsequent site visit in January 2024, to:

- ◆ Provide an updated summarised legal framework within which Midgard Country Estate operates.
- ◆ To list the necessary environmental related permits, licences and certificates required for the various components and activities.
- ◆ To establish management structures pertaining to health, safety and environment, community liaison and environmental monitoring.
- ◆ Update and identify new measures to prevent, and where not preventable, mitigate negative impacts associated with all care and maintenance, operational and potential future decommissioning activities of Midgard Country Estate.
- ◆ Update and identify new measures to enhance or optimize beneficial (positive) impacts.
- ◆ Guide the Proponent on implementation of a monitoring programme aimed at monitoring and auditing compliance to the environmental management plan
- ◆ Ensure that appropriate environmental training is provided to responsible personnel and contractors.

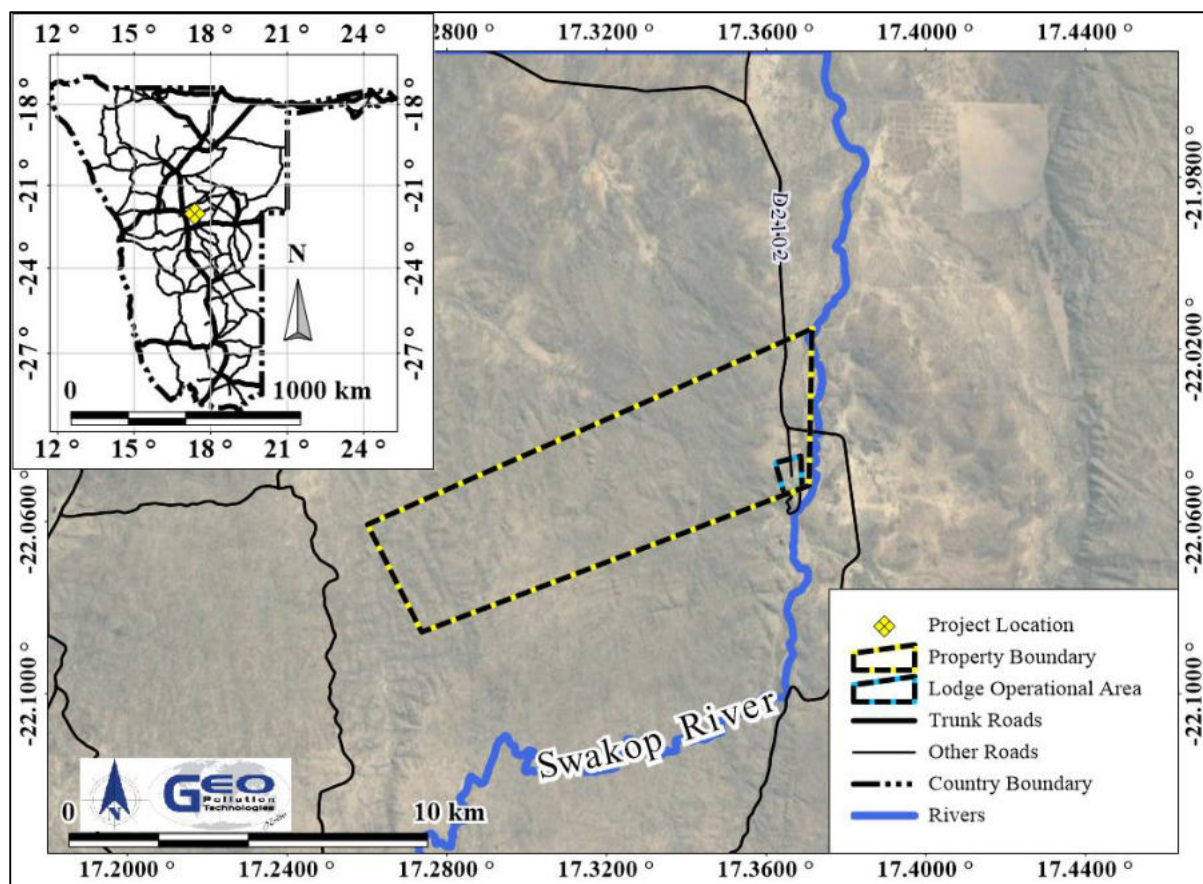


Figure 1-1 Project location

2 BRIEF PROJECT DESCRIPTION

Midgard Country Estate is situated on Farm Midgard (FMJ/00191) along the D2102 District Road that connects Okahandja with the B6 Trunk Road, east of Windhoek. It was established in 1993 and currently has 90 rooms and three refurbished rail carriages with 72 beds. The estate further provides various hospitality and recreational services including a restaurant, swimming pools, gym, sauna, spa, jungle gym, vintage automobile collection, a nine-pin bowling alley, tennis court, volleyball court, outdoor chess, hiking and driving trails, as well as events venues and conference facilities. Day-to-day operations rely on support infrastructure including water supply from boreholes, electricity supply from NamPower, as augmented by their own photovoltaic installation, and wastewater treatment for re-use and / disposal, in a biological wastewater treatment plant. Operational activities include day to day lodge operations with typical services such as guest bookings and reception, food and beverage services, housekeeping, laundry services, grounds maintenance and gardening, hosting activities, etc. Infrastructure maintenance continues on a daily basis and may include infrastructure repairs or replacements and some minor construction activities.

3 ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

To protect the environment and achieve sustainable development, all projects, plans, programmes and policies deemed to have adverse impacts on the environment require an environmental assessment, as per the Namibian legislation. The legislation and standards provided in Table 3-1 to Table 3-3 govern the environmental assessment process in Namibia and/or are relevant to the facility.

Table 3-1 Applicable Namibian law

Law as amended	Key Aspects
The Namibian Constitution	<ul style="list-style-type: none"> ◆ Promotes the welfare of people. ◆ Incorporates a high level of environmental protection. ◆ Incorporates international agreements as part of Namibian law.
Environmental Management Act Act No. 7 of 2007, Government Notice No. 232 of 2007	<ul style="list-style-type: none"> ◆ Defines the environment. ◆ Promotes sustainable management of the environment and the use of natural resources. ◆ Provides a process of assessment and control of activities with possible significant effects on the environment.
Environmental Management Act Regulations Government Notice No. 28-30 of 2012	<ul style="list-style-type: none"> ◆ Commencement of the Environmental Management Act. ◆ List activities that requires an environmental clearance certificate. ◆ Provides Environmental Impact Assessment Regulations.
Namibia Tourism Board Act Act no. 21 of 2000, Government Notice 261 of 200, 2000	<ul style="list-style-type: none"> ◆ Provides for the registration and grading of accommodation establishments. ◆ Provides 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. ◆ Provides regulations and minimum requirements pertaining to <ul style="list-style-type: none"> ○ Levies payable. ○ Registrations of regulated businesses. ○ Registrations of accommodation establishments.
Accommodation Establishments and Tourism Ordinance 20 of 1973	<ul style="list-style-type: none"> ◆ Consolidates and amend the laws relating to accommodation establishments and tourism and provide for the establishment of tourist recreation areas and incidental matters. ◆ Provides for regulations of tourism establishments. ◆ Numerous amendments and repeals.
Water Resources Management Act Act No. 11 of 2013	<ul style="list-style-type: none"> ◆ Provides for management, protection, development, use and conservation of water resources. ◆ Provides for licencing and permitting of boreholes, dams and abstraction of groundwater. ◆ Prevention of water pollution and assignment of liability.
Forest Act (Act 12 of 2001, Government Notice No. 248 of 2001)	<ul style="list-style-type: none"> ◆ Makes provision for the protection of the environment and the control and management of forest fires. ◆ Provides the licencing and permit conditions for the removal of woody and other vegetation as well as the disturbance and removal of soil from forested areas.
Forest Regulations: Forest Act, 2001 Government Notice No. 170 of 2015	<ul style="list-style-type: none"> ◆ Declares protected trees or plants. ◆ Issuing of permits to remove protected tree and plant species.

Law as amended	Key Aspects
Petroleum Products and Energy Act Act No. 13 of 1990, Government Notice No. 45 of 1990	<ul style="list-style-type: none"> ◆ Regulates petroleum industry and prescribe licences for fuel installations. ◆ Makes provision for impact assessment for fuel facilities. ◆ Petroleum Products Regulations (Government Notice No. 155 of 2000). ◆ Prescribes South African National Standards (SANS) or equivalents for construction, operation and decommissioning of petroleum facilities (refer to Government Notice No. 21 of 2002).
National Heritage Act Act No.27 of 2004; Government Notice No. 287 of 2004	<ul style="list-style-type: none"> ◆ Provides for the protection of all archaeological, and palaeontological objects and meteorites. ◆ National Heritage Regulations (Government Notice No 106 of 2005). ◆ Provides for permitting and consent in respect of works at or near known (or potentially present) significant archaeological, and palaeontological objects.
Public and Environmental Health Act Act No. 1 of 2015, Government Notice No. 86 of 2015	<ul style="list-style-type: none"> ◆ Provides a framework for a structured more uniform public and environmental health system, and for incidental matters. ◆ Deals with Integrated Waste Management including waste collection disposal and recycling; waste generation and storage; and sanitation.
Labour Act Act No 11 of 2007, Government Notice No. 236 of 2007	<ul style="list-style-type: none"> ◆ Provides for Labour Law and the protection and safety of employees. ◆ Labour Act, 1992: Regulations relating to the health and safety of employees at work (Government Notice No. 156 of 1997).
Hazardous Substances Ordinance Ordinance No. 14 of 1974	<ul style="list-style-type: none"> ◆ Applies to the manufacture, sale, use, disposal and dumping of hazardous substances as well as their import and export. ◆ Aims to prevent hazardous substances from causing injury, ill-health or the death of human beings.
Pollution Control and Waste Management Bill (draft document)	<ul style="list-style-type: none"> ◆ Not in force yet. ◆ Provides for prevention and control of pollution and waste. ◆ Provides for procedures to be followed for licence applications.

Table 3-2 Relevant multilateral environmental agreements for Namibia and the development Agreement

Agreement	Key Aspects
Charter of the Regional Tourism Organisation of Southern Africa (RETOSA), 1997	<ul style="list-style-type: none"> ◆ Development of tourism through effective marketing of the Region in collaboration with the public and private sector. ◆ To facilitate, encourage and assist in the development of legal and ethical tourism throughout the Southern African Region taking due consideration of the overall development of the people, the Region and the Region's natural and cultural resources.
Stockholm Declaration on the Human Environment, Stockholm 1972.	<ul style="list-style-type: none"> ◆ Recognizes the need for a common outlook and common principles to inspire and guide the people of

		the world in the preservation and enhancement of the human environment.
Protocol on the Development of Tourism in SADC, 1998	◆	The Protocol sets out SADC's objective to build upon the region's potential as a tourist destination.
Statutes of the World Tourism Organization, 1970	◆	Promotion and development of tourism with a view to contributing to economic development, international understanding, peace, prosperity, and universal respect for, and observance of, human rights and fundamental freedoms for all without distinction as to race, sex, language or religion.
United Nations Framework Convention on Climate Change (UNFCCC)	◆	The Convention recognises that developing countries should be accorded appropriate assistance to enable them to fulfil the terms of the Convention.
Convention on Biological Diversity, Rio de Janeiro, 1992	◆	Under article 14 of The Convention, EIAs must be conducted for projects that may negatively affect biological diversity.

Table 3-3 Standards or codes of practise

Standard or Code	Key Aspects
South African National Standards (SANS)	<ul style="list-style-type: none"> ◆ The Petroleum Products and Energy Act prescribes SANS standards for the construction, operations and demolition of petroleum facilities. ◆ SANS 10131 (2004) is aimed at above-ground storage tanks for petroleum products. ◆ SANS 10089-3:2010 is specifically aimed at storage and distribution of petroleum products at fuel retail facilities and consumer installations. ◆ Provide requirements for spill control infrastructure.
Department of Water Affairs, Ministry of Agriculture Water and Forestry: Code of Practice Vol 3 Biological Filtration Systems Code of Practice Vol 6 Wastewater Re-use Water Quality Standards for Effluent	<ul style="list-style-type: none"> ◆ Provides design parameters for waste water treatment plants and the re-use of waste water. ◆ Provides minimum requirements for the quality of waste water.

Tourism establishments are listed as activities requiring an environmental clearance certificate as per the following point from Section 6 of Government Notice No. 29 of 2012:

Section 2 of Government Notice No. 29 of 2012: Waste Management, Treatment, Handling and Disposal Activities

- ◆ 1(a) "The construction of facilities for the generation of electricity." The Proponent has an existing photovoltaic plant.
- ◆ 2.1 "The construction of facilities for waste sites, treatment of waste and disposal of waste." The Proponent temporarily stores waste at a designated facility before being collected and disposed of by a third party.

Section 6 of Government Notice No. 29 of 2012: Tourism Development Activities

- ◆ 6. "The construction of resorts, lodges, hotels or other tourism and hospitality facilities." The Estate and related infrastructure were constructed and are currently in operation and maintained accordingly.

Section 8 of Government Notice No. 29 of 2012: Water Resource Developments

- ◆ 8.1 “The abstraction of ground or surface water for industrial or commercial purposes.” The Proponent abstract groundwater to supply guests which is regarded as being for commercial purposes.
- ◆ 8.6 “Construction of industrial and domestic wastewater treatment plants and related pipeline systems.” The Proponent operates a biological waste water treatment plant.

Section 9 of Government Notice No. 29 of 2012: Hazardous Substance Treatment, Handling and Storage

- ◆ 9.1 “The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974.” The Proponent has a consumer fuel installation where fuel is stored and handled.
- ◆ 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.” The Proponent has a consumer fuel installation which requires a certificate from the Ministry of Mines and Energy.
- ◆ 9.5 “Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin.” The Proponent has a consumer fuel installation where fuel is stored and handled.

4 PERMITTING REQUIREMENTS

The Environmental Management Act defines the *environment* as: “*land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, paleontological or social values*”. Based on this,

Table 4-1 Permitting and authorisations

Act	Regulations	Type
Namibia Tourism Board Act 21 of 2000	Regulations Relating to the Registration of Accommodation Establishments (Government Notice 139 of 2004)	Registration with the Namibia Tourism Board to operate an accommodation establishment.
	Regulations relating to the Registration of Regulated Businesses (Government Notice 138 of 2004)	Registration as a conference centre operator.
Environmental Management Act 7 of 2007	List of activities that may not be undertaken without environmental clearance certificate: Environmental Management Act (Government Notice 29 of 2012)	An ECC is required for various aspects related to Midgard Country Estate. The listed activities with applicability are provided in section 3.
National Heritage Act 27 of 2004	National Heritage Regulations (Government Notice 29 of 2012) National Heritage Council declares heritage or protected places or objects.	Apply to the Council for a permit to carry out works or activities in relation to a protected place or protected object. Consent required to alter or develop any land on or in which an archaeological or palaeontological site or a meteorite is believed to be located. Some buildings at Midgard Country Estate is more than 50 years old.

Act	Regulations	Type
	<p>Defines “archaeological” in relation to a place or an object, as (a) any remains of human habitation or occupation that are 50 or more years old found on or beneath the surface on land or in the sea;</p> <p>(b) rock art, being any form of painting, engraving or other representation on a fixed rock surface or loose rock or stone which is 50 or more years old;</p> <p>Defines “heritage” as places and objects of heritage significance;</p> <p>Defines “heritage significance” as aesthetic, archaeological, architectural, cultural, historical, scientific or social significance.</p>	
Water Resources Management Act 11 of 2013	Water Resources Management Regulations (Government Notice No. 269 of 2023)	<p>Application for a licence to abstract and use water.</p> <p>Application for licence to discharge effluent or construct or operate a wastewater treatment facility or waste disposal site.</p> <p>Registration of all new and existing boreholes.</p> <p>(Note: With consent the Act allows for a combined licence to abstract water and discharge wastewater)</p>
Forest Act 12 of 2001	Forest Regulations: Forest Act, 2001 (Government Notice No. 170 of 2015)	<p>Issuing of permits and licences for harvesting, transportation, processing, and sale of forest produce.</p> <p>Issue permits for removal of protected plant species.</p>
Petroleum Products and Energy Act 13 of 1990	Petroleum Products Regulations: Petroleum Products Act of 1990 (Government Notice No. 155 of 2000).	Issuing of consumer fuel installation certificates .
Electricity Act 4 of 2007	Electricity Regulations: Administrative of 2011 (Government Notice No. 13 of 2011).	Issuing of a licence to for an installed capacity to generate electricity 500 kVA or more.

5 ENVIRONMENTAL MANAGEMENT PLAN

5.1 MANAGEMENT AND IMPLEMENTATION OF THE EMP

Each business or project will have its own management structure tasked with the management and implementation of an EMP.

Successful implementation of an environmental management plan is hinged on appointing key responsibilities and tasks to identified personnel. Members of staff may be assigned more than one position and carry the responsibility of more than one office. Therefore, for example, the environmental co-ordinator may also be the health and safety officer and / or community liaison officer. A list of key personnel as referred to in the documentation is as follows:

- ◆ General Manager
- ◆ Financial Manager
- ◆ Procurement Manager
- ◆ Maintenance manager
- ◆ Environmental Coordinator
- ◆ Financial Manager
- ◆ Human Resource Manager
- ◆ Community Liaison Officer (CLO)
- ◆ Health & Safety Officer

Table 5-1 provides a list of actions which have been assigned to specific personnel as per the related environmental management plan. The table should be completed with the relevant responsible parties by the Proponent.

Table 5-1 Specific identified actions and related responsible party

Responsible Party	Action Intervals	Action	Appointed Person
General Manager	Ongoing	<ul style="list-style-type: none"> ◆ Accountable and responsible for compliance and approval of any action plans. 	
Financial Manager	Once-off	<ul style="list-style-type: none"> ◆ Ensure budgetary allowance and/or insurance for any environmental incidents/damage (e.g. pollution clean-up due to fuel spills) or rehabilitation where infrastructure is removed. 	
	Ongoing	<ul style="list-style-type: none"> ◆ Financial provisions for employee development (training): ◆ Examples: <ul style="list-style-type: none"> ○ Educational and wellness programs (HIV/Aids, alcohol and drug abuse, financial advice, etc.). ○ Fire protection and prevention training. ○ Health and safety plan / first aid training. ○ Communication strategy. 	
Procurement Manager	Ongoing	<ul style="list-style-type: none"> ◆ Ensure contractors' awareness and compliance to the Proponent's requirements for contractors on site and to applicable sections of this EMP. 	
Maintenance Manager	Ongoing	<ul style="list-style-type: none"> ◆ Draft necessary maintenance programs and information on utilities (location, capacity, etc.) 	
Compliance Manager	Ongoing	<ul style="list-style-type: none"> ◆ Drafting and maintenance of permitting, registration and licensing register, etc. 	
Human Resources Manger	Ongoing	<ul style="list-style-type: none"> ◆ Keep labour related documentation. ◆ Employment contracts. ◆ Local labour requirement. ◆ Unskilled labour requirement. ◆ Logging of work hours. ◆ Identification card. ◆ Provide references to employees. 	
Health and Safety Officer	Once-off	<ul style="list-style-type: none"> ◆ Compile a health and safety plan. 	
	Ongoing	<ul style="list-style-type: none"> ◆ Health and safety incidents register and related actions. ◆ Health and safety committee meetings. ◆ Legal appointments. ◆ Safety training e.g. toolbox talks. 	

Community Liaison Officer	As required	<ul style="list-style-type: none"> ◆ Record communication to community members (of incidents of importance such as environmental incidents). ◆ Record consultation with the local and regional authorities. ◆ Record and respond to complaints from community members. 	
Environmental Coordinator	Once-off	<ul style="list-style-type: none"> ◆ Develop an environmental mitigation strategy / plan. ◆ Develop a disciplinary policy for non-compliance. 	
	Bi-annual report	<ul style="list-style-type: none"> ◆ Record of site inspections. ◆ Record of rehabilitation where required (dated photos of rehabilitated areas) 	
	As required	<ul style="list-style-type: none"> ◆ Environmental training of relevant staff on various aspects of environmental management (compliance to, and implementation, of the EMP) to be covered. Proof in the form of attendance registers kept on file. 	
	Ongoing	<ul style="list-style-type: none"> ◆ Recording of environmental performance and management. ◆ Recording of environmental incidents. Proof in the form of incidents register and communication to be kept on file. 	

Section 5.2 outlines the management of the environmental elements that may be affected by different activities or factors at Midgard Country Estate. Each impact are provided as standalone impacts for easy reference and distribution to relevant employees. Impacts are however not always completely independent of each and overlaps between two or more impacts are common. Furthermore, impacts addressed and mitigation measures proposed are seen as minimum requirements which can be elaborated on by the Proponent as the execution of the project progress and evolve. As such, the EMP is a living document that must be prepared in detail, and regularly updated, by the Proponent and/or its consultants.

A copy of the EMP and ECC must be present on site. All monitoring results must be reported on as indicated and copies of these reports must also be present on site for inspection by officials. Reporting is also important to allow for any future renewals of the ECC and must be submitted to the MEFT. Currently, all ECCs list a bi-annual monitoring frequency as one of the conditions. Should this change, the frequency of monitoring report submission should match that as prescribed.

Since the preventative and mitigation measures for various impacts are the same, regardless of whether it is the construction, maintenance, operational or decommissioning phases, these phases will be dealt with simultaneously to prevent duplication.

5.2 MANAGEMENT OF IMPACTS: ALL PHASES

5.2.1 Planning

Planning is ongoing throughout the life of a project. During planning for the operational, construction and decommissioning phases of the project, it is the responsibility of the Proponent to ensure they are and remain compliant with all legal requirements. The Proponent must also ensure that all required management measures are in place prior to, and during all phases, to ensure potential impacts and risks are avoided/minimised. The following actions are recommended for the planning phase and should continue during various other phases of the project:

- ◆ Ensure that all necessary permits from the various ministries, local authorities and any other bodies that governs the operations, maintenance / construction and decommissioning activities of the project remains valid (refer to Table 4-1).
- ◆ Ensure all appointed contractors and employees enter into an agreement which includes the EMP. Ensure that the relevant contents (sections) of the EMP are understood by the contractors, sub-contractors, employees and all personnel present or who will be present on site.
- ◆ Make provisions to have a Safety, Health and Environment (SHE) coordinator (or similar) to implement the EMP and oversee occupational health and safety as well as general environmental related compliance at the site.
- ◆ Make provisions for a CLO.
- ◆ Have emergency plans, equipment and personnel on site, where reasonable, to deal with all potential emergencies. These include:
 - This EMP;
 - SHE manuals;
 - Emergency response plans (firefighting, evacuation, spill clean-up, etc.);
 - Adequate protection and indemnity insurance cover for incidents where relevant;
 - Procedures, equipment and materials required for emergencies (e.g. firefighting equipment, first aid kits, etc.).
- ◆ If one has not already been established, establish and maintain a fund or insurance for environmental incidents or risks (E.g. spill clean-up and remediation in case of a major chemical or fuel spill).
- ◆ Establish and / or maintain an EMP compliance reporting system to report on aspects of operations, maintenance / construction, and decommissioning as outlined in the EMP.
- ◆ Submit bi-annual EMP compliance reports to MEFT
- ◆ Based on the current accepted requirements of MEFT, appoint a specialist environmental consultant to update the EMP and apply for renewal of the ECC prior to expiry.

5.2.2 Employment

Skilled and unskilled employees are required for the operations and maintenance / construction activities associated with Midgard Country Estate. The Proponent, through their own employee base, as well as those of contractors, thus contributes to a reduction in the unemployment levels in the region and Namibia.

Desired Outcome: Provision of employment to local Namibians.

Actions

Enhancement:

- ◆ The Proponent must, as far as is practical, employ Namibian citizens.
- ◆ If the skills exist locally, employees must first be sourced from the district, then the region and then nationally.
- ◆ Reputable contractors whose workforce constitutes local Namibians should receive preference.
- ◆ Deviations from the above practices are justified where contractors or people with the necessary skills are not locally available.

Responsible Body:

- ◆ Proponent

5.2.3 Skills and Development of Employees

During the operational and maintenance / construction phases, some training is provided to a portion of the workforce to be able to conduct certain tasks according to the required standards. Such skills transfer can be to an unskilled workforce for general tasks or to semi-skilled and skilled workers for specialised tasks. Development of people are key to the economic development of Namibia and it increases the overall employability of the general workforce.

Desired Outcome: To see an increase in skills and employability of local Namibians.

Actions

Mitigation:

- ◆ As far as is practically possible, employees must first be sourced of at local level and if not locally available, regional or national options should be considered.
- ◆ Skills development and improvement programs must be made available to employees as identified during performance assessments of employees.
- ◆ Inform employees about parameters and requirements for references upon employment.
- ◆ Ensure that all training is certified with certificates issued to employees or that, for informal training, managerial references are provided to employees, inclusive of training attendance, completion and implementation.

Responsible Body:

- ◆ Proponent

5.2.4 Revenue Generation

Revenue is generated through the provision of hospitality and tourism services and various levies and taxes are paid which contributes to Namibia's gross domestic product. The livelihoods of employees are sustained and the spending power of the local community increased. Income tax is paid to the national treasury.

Desired Outcome: Contribution to national treasury and the payment of relevant levies and fees.

Actions

Enhancement:

- ◆ Adhere to the relevant Namibian legislation pertaining to the payment of salaries, taxes, levies, etc.
- ◆ Set targets for local procurement.

Responsible Body:

- ◆ Proponent

5.2.5 Demographic Profile and Community Health

Midgard Country Estate is well established with a permanent employee base which sees little fluctuation in numbers. No significant expansion in operations is foreseen for the near future and the number of employees will thus mostly remain the same. Social ills, such as alcoholism and drug abuse (trade and use of illegal substances), and the spread of communicable diseases and sexually transmitted infections (STIs) may occur in worker compounds, especially as a result of workers' disposable income. These may be aggravated when an influx of foreign construction teams and contractors occur, either once doing work for the Proponent or at nearby locations (e.g. working on power lines, roads, mines, etc.). It is further aggravated by the high unemployment and poverty levels in the area.

Desired Outcome: To prevent the occurrence of social ills and prevent the spread of communicable diseases and STIs.

Actions:

Prevention:

- ◆ Implement educational and social upliftment programmes for employees on various topics of social behaviour and general upliftment of employees' social status (e.g. dangers of alcohol and drug abuse, making sound financial decisions, risks related to communicable diseases, etc.).
- ◆ Clear rules and restrictions on visitors to the employee compound.
- ◆ Appointment of reputable contractors where applicable.
- ◆ Disciplinary steps, within the legal parameters of Namibia, to be taken for socially deviant behaviour at the employee-housing compound, or during working hours, should be clearly stipulated in employment contracts.

Mitigation:

- ◆ Take disciplinary action against employees not adhering to contractual agreements with regard to socially deviant behaviour (e.g. alcohol or drug abuse during working hours).

Responsible Body:

- ◆ Proponent

5.2.6 Health

Daily operational and maintenance and construction activities on Midgard are reliant on human labour. Such activities have varying degrees of health risks. Examples include exposure to hazardous chemicals with inherent health hazards, such as fuel, disinfectants (e.g. pool and wastewater treatment plant chlorine), pool acid, pesticides, etc. Exposure can include dermal or eye contact, inhalation or ingestion. Treated effluent used for irrigation of gardens may still contain parasitic cysts, even after treatment with chlorine. As such exposure and ingestion of such water, or contact with plants and lawns irrigated with such water, continue to pose health risks.

Visitors and foreign tourists to Midgard Country Estate may unknowingly infect staff (or other guests) with an infectious disease/illness. This has the potential to spread among workers who are in close contact with each other.

Food and kitchen hygiene is important to prevent guests and staff from getting food poisoning. Certain guests may have severe allergies to certain foodstuffs.

Desired Outcome: To prevent health impacts.

Actions

Prevention:

- ◆ Ensure that all relevant employees receive adequate training on the health hazards associated with chemicals and fuel as well as safe handling techniques. Employees must also be trained in the use and understanding of the respective chemicals' material safety data sheets (MSDS).
- ◆ Maintain an MSDS file for all chemicals kept and used on site and ensure that summaries of the most important aspects of each is available (and visible) at each chemical's storage area.
- ◆ Ensure drinking water is safe for human consumption.
- ◆ Clearly label and lock all taps and outlets with treated effluent used for irrigation purposes.
- ◆ Do not irrigate vegetable gardens or lawns around swimming pools, where guest may sit or lie on the grass, with treated effluent, unless it can be ensured, that the water has drained and dried completely (refer to Water Resources Management Act, 2013 regulations).
- ◆ Encourage staff to immediately report any signs/symptoms of illness. Managers to take determine whether such staff should go off duty to prevent infection of other staff and whether medical treatment will be required.
- ◆ Maintain a robust food safety program with clearly defined hazard control points and ensure the cold chain is maintained for temperature sensitive foodstuffs.
- ◆ Regularly clean and disinfect areas with a high probability of bacterial or virus contamination such as bathrooms, restaurants, kitchens, etc.
- ◆ Promote good hygiene and regular hand washing among staff and especially those working in kitchens and with food and beverages.
- ◆ Ensure kitchen staff understand the risks associated with severe food allergies (as opposed to clients with certain food preferences) and that food prepared for clients who indicate such allergies are segregated from any allergy causing foods.
- ◆ Implement and maintain an integrated health and safety management system, to act as a monitoring and mitigating tool.
- ◆ Provide all employees with required and adequate personal protective equipment (PPE) where required.

Mitigation:

- ◆ Seek medical attention for all serious health related incidents.

Responsible Body:

- ◆ Proponent

5.2.7 Safety

Various operational and maintenance/construction activities have inherent safety risks. Examples include the operation of vehicles and machinery with moving parts, working with sharp utensils in the kitchen, working at heights, working with potentially dangerous chemicals that can ignite or explode (e.g. chlorine and pool acid when mixed), etc.

Encounters with wild animals and especially venomous species like snakes or scorpions may pose risks to staff and especially uninformed guests.

Desired Outcome: To prevent injury and damage to property.

Actions

Prevention:

- ◆ Develop a risk specific safety management plan inclusive of emergency equipment that must be present on site, emergency response drills, training and awareness, contact details of all emergency services, etc.
- ◆ Ensure that relevant personnel receive adequate training on the operational procedures of equipment and machinery and the handling of incompatible or dangerous substances (consults relevant MSDS instructions).
- ◆ Clearly label dangerous and restricted areas as well as dangerous equipment and products. This includes the waste water treatment plant.
- ◆ Implement a maintenance register for all equipment whose malfunction can lead to injury or exposure to hazardous substances.
- ◆ Provide all employees with required and adequate PPE where required.
- ◆ Train selected personnel in first aid and ensure first aid kits are available on site to treat minor injuries.

Mitigation:

- ◆ Treat all minor work related injuries or guest injuries and medical events immediately and obtain professional medical treatment if required.
- ◆ Assess any safety problems and implement corrective action to prevent future occurrences.

Responsible Body:

- ◆ Proponent

5.2.8 Security

Security risks will be related to unauthorized entry onto the Midgard Country Estate premises with the possibility of theft. Theft of guests' belongings may occur, especially in their rooms by housekeeping staff and or other patrons.

Desired Outcome: To prevent security incidents and theft.

Actions

Prevention:

- ◆ Security procedures and proper security measures must be in place to protect workers and guests.
- ◆ Reduce the amount of cash kept on site to reduce the risk of robberies.
- ◆ Lock away or store all equipment and goods on site in a manner suitable to discourage criminal activities (e.g. theft).
- ◆ Advise guests to lock away valuables in their rooms and not to leave valuable items unattended.
- ◆ Contractors on site must wear identifiable nametags so that staff (and guests) can recognise them as being permitted to be on site.

Mitigation:

- ◆ In line with the Labour Act and any other relevant legislation, take disciplinary action against staff who are guilty of theft.
- ◆ If the need arise, improve security measures to prevent entrance of potentially deviant people onto the premises.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

5.2.9 Traffic

Potential traffic impacts are limited to the turnoff from the district road to Midgard and the gravel road leading to the lodge and campsite. The D2102 District Road is however a relatively low traffic road and impacts here are expected to be unlikely.

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

Actions

Prevention:

- ◆ Erect clear signage regarding access and exit points at the facility as well as speed limits and animal crossings on internal roads.
- ◆ Maintain all roads used by visitors and employees at Midgard Country Estate, inclusive of those used for game viewing and sundowners, to such a standard that it is safe to drive on in order to reduce the likelihood of accidents and clearly indicate restricted roads or potentially dangerous areas with signs.
- ◆ Prepare a vehicle management and maintenance plan for all of Midgard Country Estate's own vehicles, such as game viewers.

Mitigation:

- ◆ In the unlikely event that any traffic impacts are expected, possibly as a result of delivery of equipment or construction material, traffic management should be performed to prevent these.

Responsible Body:

- ◆ Proponent

5.2.10 Fire

Construction activities, failing electrical infrastructure and fires outside of designated areas may increase the risk of the occurrence of uncontrolled fires which may spread into the nearby veld. Fuel stored and handled on site are flammable and increases the fire risk. Veld fires as a result of for example lightning may impact on the estate and its infrastructure.

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

Actions:

Prevention:

- ◆ Prepare a holistic fire protection and prevention plan. This plan must include evacuation plans and signage, an emergency response plan and a firefighting plan.
- ◆ Personnel training (safe operational procedures, firefighting, fire prevention and responsible housekeeping practices).
- ◆ Ensure all flammable chemicals are stored according to MSD and SANS instructions and all spills or leaks are cleaned immediately.
- ◆ Maintain regular site, mechanical and electrical inspections and maintenance.
- ◆ Maintain firefighting equipment and promote good housekeeping.
- ◆ Clean and maintain firebreaks at strategic locations on the property.
- ◆ Notify the local farmers' association as well as all surrounding farmers if burns (e.g. to create firebreaks) are planned.
- ◆ Allow fires used for purposes such as cooking (by staff or guests) in designated areas only.

Mitigation:

- ◆ Implement the fire protection and firefighting plan in the event of a fire.
- ◆ Quick response time by trained staff will limit the spread and impact of fire.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

5.2.11 Noise

Since Midgard is a tourist establishment, noise are typically kept to a minimum not to be a disturbance to guests. However, during construction and maintenance activities some noise generating activities can exist that may lead to hearing loss in workers and a nuisance to guests.

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

Actions

Prevention:

- ◆ Follow Health and Safety Regulations of the Labour Act to prevent hearing impairment.
- ◆ All machinery must be regularly serviced to ensure minimal noise production.

Mitigation:

- ◆ Hearing protectors as standard PPE for workers in situations with elevated noise levels.
- ◆ Scheduling of high noise activities to avoid guest disturbances.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

5.2.12 Waste Production

Various waste streams result from the operational and possible construction and maintenance activities. Waste may include hazardous waste associated with hydrocarbon products and chemicals, as well as soil and water contaminated with such products. Construction waste may include building rubble and discarded equipment. Domestic waste will be generated by the guests and employees. Waste presents a contamination risk and when not removed regularly may become a health and / or fire hazard and attract wild animals and scavengers. Sewage is a form of liquid biological waste that needs disposal.

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

Actions

Prevention:

- ◆ Implement waste reduction measures. All waste that can be re-used / recycled must be kept separate.
- ◆ Ensure adequate temporary storage facilities for disposed waste are available and ensure waste is suitably contained to prevent windblown waste from entering the environment.
- ◆ Prevent scavenging (human and non-human) of waste at the storage facilities.
- ◆ Educate employees on the importance of waste reduction measures and proper waste handling and disposal.

Mitigation:

- ◆ Waste should be disposed of regularly and at appropriately classified disposal facilities, this includes potentially hazardous material (broken solar panels, empty chemical containers, and contaminated materials, soil and water).
- ◆ Empty chemical containers that may present a contamination / health risk must be treated as hazardous waste. Workers should not be allowed to collect such containers for purposes of storing water or food. This can be achieved by puncturing or crushing such containers prior to disposal.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

5.2.13 Ecosystem and Biodiversity Impact

Midgard is an existing facility and no further impact on vegetation is expected. Poaching and illegal collection of plant and animal materials may occur, as well as illegal grazing by neighbours' livestock. Impacts may also be related to pollution of the environment.

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

Actions.

Enhancements

- ◆ Educate all contracted and permanent employees on the value of biodiversity and strict conditions prohibiting pollution and harvesting and poaching of fauna and flora must be part of employment contracts. Include prohibitions or regulations on the collection of firewood.
- ◆ If present, undertake eradication actions to remove alien invasive species such as *Prosopis* spp., *Opuntia* spp. (prickly pears), *Datura innoxia* (downy thorn-apple) and *Nicotiana glauca* (tree tobacco).
- ◆ Responsible encroacher bush management activities in areas with an excessive presence of invasive species.
- ◆ Consider erecting owl and bat houses to attract more owls and bats to allow for natural control of rodents and mosquitos.

Prevention:

- ◆ Inform all guests (and staff) upon arrival not to approach seemingly tame wild animals like baboons, and to be vigilant for, and not to confront, snakes or other potentially venomous animals. Guests and staff should be encouraged to report sightings of, or encounters with, dangerous animals.
- ◆ Where possible, removal of trees, especially protected species and large trees, must be avoided.
- ◆ The necessary permits from the Directorate of Forestry, MEFT, must be obtained for removal of all protected species.
- ◆ Regular inspection of fences and river courses for snares, traps or any other illegal activities.
- ◆ Strictly adhere to pesticide application instructions and use pesticides only for the purposes for which it is registered and marketed. Importantly, pesticides should not be used to kill vermin unless specifically registered for that purpose, and even then alternative, environmentally friendly methods should be investigated and used.
- ◆ Over-abstraction of groundwater may potentially have devastating effects on plant and animal populations reliant on it. This include the drying up of springs, dying of trees and migration or dying of animals.

Mitigation:

- ◆ For construction activities, contain construction material to a designated laydown area and prevent unnecessary movement out of areas earmarked for clearing and construction.
- ◆ Report any extraordinary events such as sightings of dead endangered or protected species, animals infected with rabies, nuisance animals such as baboons, etc. to the MEFT.
- ◆ Record any bird mortalities linked to the photovoltaic plant and if significant mortalities are recorded, consult with an avifauna specialist to devise strategies to limit such occurrences.
- ◆ Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts (see section 5.2.14).

Responsible Body:

- ◆ Contractor
- ◆ Proponent

5.2.14 Soil, Groundwater and Surface Water Contamination

Soil can become contaminated by spilled chemicals or fuel and this can seep into groundwater or be washed off and into the Swakop River during rain events. Leaking fuel tanks or leaking sewer wand wastewater treatment plant infrastructure may present a higher risk of soil and ultimately groundwater contamination.

Disposal of treated effluent from the wastewater treatment plant should not be allowed into the primary aquifer associated with the Swakop River, as the water supply of the lodge is located there.

Desired Outcome: Prevent any form of contamination of the soil, groundwater and surface water.

Actions

Prevention:

- ◆ All chemicals should be stored and used as per their MSDS.
- ◆ Regular fuel tank dips and fuel volume reconciliations will ensure and fuel losses, possibly due to leaks, are quickly detected.
- ◆ All refuelling should take place on an impermeable surface.
- ◆ If servicing of vehicles are performed at Midgard Country Estate, it should be on an impermeable surface or drip trays should be used to collect all oil or fuel.
- ◆ Regular inspection and maintenance of all potentially polluting equipment and sewage infrastructure to detect leaks or damaged structures.
- ◆ Removal of waste should be at regular (weekly) intervals, or sooner if necessary, to maintain visual orderliness, but more so to not give time for liquid waste to enter the soil substrate.
- ◆ The procedures followed to prevent environmental pollution, and compliance with these procedures, must be audited and corrections made where necessary.

Mitigation:

- ◆ Any fuel spillage of more than 200 litres must be reported to the Ministry of Mines and Energy as per the consumer fuel installation requirements.
- ◆ Spill clean-up means must be readily available on site (at fuel facility and chemical storage areas) as per the relevant MSDS and spills must be cleaned up immediately.
- ◆ Polluted soil must be removed and remediated where possible. Polluted soil and building rubble must be transported away from the site to an approved and appropriately classified waste disposal site.
- ◆ Strictly adhere to the “Special” effluent standards as determined by the Ministry of Agriculture, Water and Land Reform (Annexure 11 of Water Resources Management Regulations: Water Resources Management Act, 2013).

Responsible Body:

- ◆ Proponent
- ◆ Contractors

5.2.15 Groundwater Availability

The over abstraction of groundwater may lead to declining water levels. This may negatively impact on surrounding users as well as existing habitats that depend on groundwater. For example the availability of groundwater may have an operational impact on Midgard and surrounding farms, as well at a wider spatial scale. Over abstraction of groundwater by surrounding users may contribute to the decline in water levels (cumulative impact).

Desired Outcome: To utilise the groundwater sustainably.

Actions

Prevention:

- ◆ Spread the water abstraction points over a larger area to diffuse the impact on groundwater levels.
- ◆ Bi-annual re-evaluation of abstraction strategy based on groundwater levels as per the monitoring data (see Table 6-1).
- ◆ Maintenance and cleaning of boreholes and installed infrastructure when required.

Mitigation:

- ◆ Implement water use reduction measures.
- ◆ Optimise water usage and implement water loss prevention strategies.

Responsible Body:

- ◆ Proponent

5.2.16 Water Re-use

Water is a valuable commodity in Namibia. The re-use of water through the sewage reclamation process for irrigation purposes, will reduce possible demand on water supply as provided by boreholes. The re-purposed water will be used for irrigation for the gardens.

Desired Outcome: Provision and sustainable supply of reclaimed water for irrigation purposes to reduce the demand on the borehole water supply.

Actions

Mitigation:

- ◆ All personnel and guest must be educated (e.g. notices in toilets) on items that may not be disposed of in the toilets and drains, such as sanitary products and chemicals that may block, fill or reduce the capacity of the reclamation facility. This will maximize the efficiency of the reclamation facility.
- ◆ Regular maintenance of the facility to ensure optimum functioning.
- ◆ Ensure employees responsible for operations of the facility are trained on the correct operational procedures.
- ◆ Educational programs on water conservation, use (and dangers) of reclaimed water to be presented to all employees.
- ◆ Re-used water must be free of pathogens (refer to Table 6-1).

Responsible Body:

- ◆ Proponent

5.2.17 Air Quality

If the wastewater treatment plant malfunction, foul odours can be released that will be a nuisance to staff and guests. Similarly windblown dust and dust from gravel roads may also be a nuisance.

Desired Outcome: To prevent odours and dust.

Actions

Mitigation:

- ◆ Regular maintenance on the wastewater treatment plant.
- ◆ Speed limits on gravel roads.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

5.2.18 Archaeological, Heritage and Cultural Impact

Areas along the river may previously have been inhabited by San people. Although unlikely some archaeological artefacts may thus be present. The nearby graveyard has heritage and cultural value. No impact on the graveyard is expected from Midgard's operational and construction activities. Some buildings may be older than 50 years and will require permission from the National Heritage Council to be altered or demolished.

Desired Outcome: To preserve any artefacts of archaeological, heritage or cultural significance.

Actions

Prevention:

- ◆ Inform all employees to be vigilant for any extraordinary finds and to take action not to cause any damage.

Mitigation:

- ◆ If such a site or any other archaeologically important artefact is found a "chance finds procedure" must be initiated which includes stopping any further work that can cause damage and reporting to superiors and the relevant authorities.
- ◆ For any human remains, the Namibian Police must be informed as a first action.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

5.2.19 Impacts on Utilities and Infrastructure

Any damage caused during construction, maintenance and operation activities to existing infrastructure and services supply like roads and electricity where present. This includes infrastructure essential for the operations of Midgard Country Estate.

Desired Outcome: No impact on utilities and infrastructure.

Actions

Prevention:

- ◆ The Proponent must determine and map exactly where utilities and infrastructure are situated within the estate's operational area. This include water pipelines, telecommunications cables, sewers, belowground power cables, etc.).
- ◆ Maintain servitudes where it falls within the locus of control of the Proponent.
- ◆ Appointing qualified and reputable contractors is essential.
- ◆ All contractors must ascertain themselves of the presence of any utilities and infrastructure before any excavations and groundwork commence.

Mitigation:

- ◆ Business continuity plan for the loss of utilities on file and implemented if an incident occurs.

Responsible Body:

- ◆ Proponent
- ◆ Contractors

6 MONITORING REQUIREMENTS

Table 6-1 provides a summary of proposed monitoring requirements and frequencies. All incidents and actions must be recorded as soon as it happens in order to ensure it is not forgotten at a later stage (continuous monitoring). Summaries of these records should be provided in the bi-annual EMP compliance monitoring report to be submitted to MEFT. Where permit or licence conditions' monitoring requirements differ from the EMP, the permit or licence condition must be adhered to.

Table 6-1 Monitoring requirements

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
Planning	Proof of permits/licences/certificates	For the EMP monitoring report to indicate the Proponent's adherence to relevant legislation	Once of or when it is renewed	<ul style="list-style-type: none"> ◆ Copy of permits/licences/certificates
	EIA/EMP/Bi-annual monitoring reports	For the EMP monitoring report to indicate the Proponent's adherence to relevant legislation and the ECC	Once off or when updated	<ul style="list-style-type: none"> ◆ Written verification that copies are available for inspection at Midgard Country Estate
	Managerial structure with assigned responsibilities	For the EMP monitoring report to indicate the Proponent's adherence to the EMP and ECC	Once off or when changed	<ul style="list-style-type: none"> ◆ Written verification of the structure and assigned responsibilities
Employment	Employment figures	For the EMP monitoring report to provide an quantitative measure of the positive contribution the Proponent makes towards the employment sector	Bi-annual checks and reporting	<ul style="list-style-type: none"> ◆ Number of male vs female employees ◆ Number of Namibian vs foreign employees
Skills and Development of Employees	Records of training and copies of certificates and/or references on file	For the EMP monitoring report to provide an overview of the positive contribution the Proponent makes towards the development of employees	Bi-annual checks and reporting	<ul style="list-style-type: none"> ◆ Type of training and number of people who received said training with attendance registers as proof ◆ One or two copies of certificates or references as examples
Demographic Profile and Community Health	Records of all educational and social upliftment programmes	For the EMP monitoring report to provide an overview of the positive contribution the Proponent makes towards the social development and wellness of employees	Bi-annual checks and reporting	<ul style="list-style-type: none"> ◆ Type of training and number of people who received said training with attendance registers as proof
Health	Presence of MSDS instructions on file and at applicable locations	For the EMP monitoring report to indicate adherence to typical health requirements	Bi-annual checks and reporting	<ul style="list-style-type: none"> ◆ Copy of MSDS file index/table of contents as proof

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
	Keep records of all mild to serious health related incidents with actions taken.	For the EMP monitoring report to indicate Proponent's commitment to ensuring the health of employees and guests	Continuous record keeping with bi-annual summary report	<ul style="list-style-type: none"> Summary of incidents and actions
Safety	Presence of MSDS instructions on file and at applicable locations	For the EMP monitoring report to indicate adherence to typical safety requirements	Bi-annual checks and reporting	<ul style="list-style-type: none"> Copy of MSDS file index/table of contents as proof
	Signage	For the EMP monitoring report to indicate adherence to typical safety requirements	Bi-annual reports but once-off proof of presence of signage thereafter only of any new signage erected	<ul style="list-style-type: none"> Photographs of safety and restricted area signs as proof
	Keep records of all mild to serious safety related incidents with actions taken.	For the EMP monitoring report to indicate Proponent's commitment to ensuring the safety of employees and guests	Continuous record keeping with bi-annual summary report	<ul style="list-style-type: none"> Summary of incidents and actions
	First aid training events	For the EMP monitoring report to indicate Proponent's commitment to ensuring the safety of employees and guests	Bi-annual checks and reporting	<ul style="list-style-type: none"> Level of training and number of people who received said training with attendance registers as proof One or two copies of certificates or references as examples
Security	Security related incidents with action taken to prevent future occurrences.	For the EMP monitoring report to indicate the Proponent's commitment to ensuring the security of employees and guests	Continuous record keeping with bi-annual summary report	<ul style="list-style-type: none"> Summary of incidents and actions
Traffic	Signage	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Bi-annual reports but once-off proof of presence of signage thereafter only of any new signage erected	<ul style="list-style-type: none"> Photographs of speed limit, warning and restricted area signs as proof
Fire	Holistic fire protection and prevention plan	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Once-off proof of presence of such plan	<ul style="list-style-type: none"> Copy of plan

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
	Firefighting equipment presence	For the EMP monitoring report to indicate the Proponent's adherence to the fire safety requirements	Once-off proof of presence of such equipment	◆ Photographs of equipment with copy of register of the types and quantity of firefighting equipment
	Servicing of firefighting equipment	For the EMP monitoring report to indicate the Proponent's adherence to the annual service requirements of firefighting equipment	In the bi-annual report corresponding to the date the equipment was serviced	◆ Servicing register with photos of proof or a compliance certificate issued by the service agent.
	Fire related incidents with action taken to prevent future occurrences.	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Continuous record keeping with bi-annual summary report	◆ Summary of incidents and actions
Noise	Complaints with action taken to address the complaint	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Continuous record keeping with bi-annual summary report	◆ Summary of complaints and actions
Waste	Waste reduction and/or recycling plan/initiatives	For the EMP monitoring report to indicate the Proponent's commitment to reduce waste and prevent pollution	Once-off proof of presence of such plan/initiatives and then when changes to such plan/initiatives are made	◆ Copy of plan or brief description of initiatives
	Waste volumes	For the EMP monitoring report to indicate the Proponent's successful implementation of waste reduction measures	Continuous record keeping with bi-annual summary report	◆ Summary of waste volumes for every six month period
	Hazardous waste	For the EMP monitoring report to indicate the Proponent's proper handling of hazardous waste	Continuous record keeping with bi-annual summary report	◆ Type and volume of waste with hazardous waste safe disposal certificates
	Waste containment	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Bi-annual checks and reporting	◆ Photos of waste storage areas showing successful (or not) containment of waste

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
Ecosystem and Biodiversity Impact	Training of staff on value of biodiversity and protection of the environment	For the EMP monitoring report to indicate the Proponent's commitment to conservation of biodiversity and the environment	Continuous record keeping with bi-annual summary report	◆ Type of training and number of people who received said training with attendance registers as proof
	Communications to guests to warn them of potentially dangerous animals or situations	For the EMP monitoring report to indicate the Proponent's commitment to guest safety and to prevent human wildlife conflict	Once-off or when new communication strategies are devised	◆ Copies of pamphlets and/or photos of signage as proof
	Incidents register related to encounters with potentially dangerous wild animals	For the Proponent's own record keeping and for the EMP monitoring report to indicate adherence to the EMP	Continuous record keeping with bi-annual summary report	◆ Summary of incidents and actions
	Observations and reporting of poached, injured, dead or diseased wild animals	To enhance knowledge and promote data sharing with MEFT	Continuous record keeping and reporting to MEFT with bi-annual summary report	◆ Summary of observations and proof of reporting to MEFT
	Bush clearing or protected species removal permits	For the EMP monitoring report to indicate the Proponent's adherence to relevant legislation	Continuous record keeping with bi-annual summary report	◆ Copy of permit(s)
	Presence of MSDS instructions for chemicals on file and at applicable locations	For the EMP monitoring report to indicate adherence to typical pollution prevention requirements	Bi-annual checks and reporting	◆ Copy of MSDS file index/table of contents as proof
	Effluent Disposal Permit	For the EMP monitoring report to indicate the Proponent's adherence to relevant legislation	Once-off	◆ Copy of permit
Soil, Groundwater and Surface Water Contamination	Effluent quality analysis	For the EMP monitoring report to indicate the Proponent's adherence to effluent disposal permit conditions	As per effluent disposal permit	◆ Summary of monitoring results
	Spills or leakages	For the EMP monitoring report to indicate adherence to the EMP	Continuous record keeping with bi-annual summary report	◆ Product and estimated volume spilled with date of spill, duration of spill and remedial action taken

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
	Potable water sampling	For the EMP monitoring report to indicate adherence to the water abstraction permit conditions	Parameters and frequency as set out by the water abstraction permit	◆ Summary of potable water analysis results
	Effluent sampling	For the EMP monitoring report to indicate adherence to the effluent disposal permit conditions	Parameters and frequency as set out by the effluent disposal permit	◆ Summary of effluent analysis results
Groundwater Availability	Abstraction volumes and water levels	For the EMP monitoring report to indicate adherence to the EMP and water abstraction permit conditions	Monthly rest water levels in abstraction and monitoring boreholes and abstracted volumes for each borehole	<ul style="list-style-type: none"> ◆ Rest water levels and abstracted volumes for each borehole ◆ Proof of submission of records to the Department of Water Affairs if the abstraction permit has this requirement
	Register of borehole maintenance and cleaning	For the EMP monitoring report to indicate adherence to the EMP and the Proponent's commitment to sustainable groundwater use	Record every time when maintenance and/or cleaning are performed and include in bi-annual summary report	◆ Register of maintenance and/or cleaning
Water Re-use	Discoveries and reporting	For the EMP monitoring report to indicate adherence to the National Heritage Act	Record any discovery with bi-annual summary report	◆ Summary of discoveries and evidence of reporting to the National Heritage Council or Namibian Police
Air Quality	Complaints by guests or staff, or incidents detected by staff, of foul smelling odours originating from the wastewater treatment plant or excessive dust and actions taken	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Record any complaints or incidents with bi-annual summary report	◆ Summary of complaints and/or incidents and action taken
Archaeological, Heritage and Cultural	Discoveries and reporting	For the EMP monitoring report to indicate adherence to the National Heritage Act	Record any discovery with bi-annual summary report	◆ Summary of discoveries and evidence of reporting to the National Heritage Council or Namibian Police

Impact	Monitoring	Purpose	Frequency	Included in Bi-Annual Report
Impacts on Utilities and Infrastructure	Incidents such as water and electricity supply interruptions, loss of telecommunications, downtime of sewage treatment plant, etc. and actions taken	For the EMP monitoring report to indicate the Proponent's adherence to the EMP	Record any incidents with bi-annual summary report	● Summary of incidents and action taken

7 DECOMMISSIONING AND REHABILITATION

Closure and decommissioning of Midgard Country Estate as a whole is not foreseen during the validity of the ECC or in the foreseeable future. However, it is more likely that certain components may be decommissioned or changed. Decommissioning is therefore included for this purpose as well as the fact that construction activities may also include modification and decommissioning. Future land use after decommissioning should be assessed prior to decommissioning and rehabilitation initiated if the land would not be used for future purposes. Should decommissioning occur at any stage, rehabilitation of the area may be required. Decommissioning will entail the complete or partial removal of all infrastructure including buildings and underground infrastructure not required for future land use. Any pollution present on the site must be remediated. The impacts associated with this phase include noise and waste production as structures are dismantled. Noise must be kept within Health and Safety Regulations of the Labour Act and WHO standards and waste should be contained and disposed of at an appropriately classified and approved waste facility and not dumped in the surrounding areas. The EMP will have to be reviewed at the time of decommissioning to cater for changes made to the site and to implement guidelines and mitigation measures.

8 ENVIRONMENTAL MANAGEMENT SYSTEM

The Proponent, as part of the O & L Group, implements numerous in-house and international policies and standards to ensure protection of health, safety environment and quality. These include various management standards and a Corporate Social Responsibility strategy as well as Hazard Analysis and Critical Control Points 10330. The Proponent may subscribe to a group environmental management system that ensure ongoing incorporation of environmental constraints. At the heart of an EMS is the concept of continual improvement of environmental performance with resulting increases in operational efficiency, financial savings and reduction in environmental, health and safety risks. An effective EMS would need to include the following elements:

- ◆ A stated environmental policy which sets the desired level of environmental performance;
- ◆ An environmental legal register;
- ◆ An institutional structure which sets out the responsibility, authority, lines of communication and resources needed to implement the EMS;
- ◆ Identification of environmental, safety and health training needs;
- ◆ An environmental program(s) stipulating environmental objectives and targets to be met, and work instructions and controls to be applied in order to achieve compliance with the environmental policy; and
- ◆ Periodic (internal and external) audits and reviews of environmental performance and the effectiveness of the EMS; and
- ◆ The EMP.

9 CONCLUSION

Midgard Country Estate has a positive impact on the tourism and hospitality sector operational in the area and Namibia. It provides accommodation and tourism related services relatively close to Windhoek and the Hosea Kutako International Airport. Through this, employment opportunities and skills development to a local workforce are sustained. Revenue is generated that contributes to the Namibian economy.

Negative impacts associated with the operations and maintenance / construction activities can successfully be mitigated. Implementing a SHE policy or similar will contribute to effective management procedures to prevent and mitigate impacts. All regulations relating to tourism and health and safety legislation should be implemented. Groundwater and soil pollution must be prevented at all times. Fire prevention should be key and fire response plans must be in place and regular training provided. All staff must be made aware of the importance of biodiversity and the poaching or illegal harvesting of animal and plant products prohibited. Any waste produced must be removed from site and disposed of at an appropriate facility or re-used or recycled where possible. Hazardous waste must be disposed of at an approved hazardous waste disposal site.

The updated EMP should continue to be used as an on-site reference document for the operations of the lodge. Parties responsible for transgressing of the EMP should be held responsible for any rehabilitation that may need to be undertaken. The Proponent could use an in-house Environment Management System in conjunction with the environmental management plan. All operational personnel must be taught the contents of these documents.

10 REFERENCES

Faul A, Botha P, van der Merwe J.A; 2020 November; Refurbishment and Operations of Midgard Country Estate: Environmental Assessment Scoping Report