REPUBLIC OF NAMIBIA

ENVIRONMENTAL MANAGEMENT ACT, 2007

(SECTION 32)

APPLICATION FOR ENVIRONMENTAL CLEARANCE CERTIFICATE

Revenue stamp or revenue franking machine impression

PART A: DETAILS OF APPLICANT

1. Name:
Alistair Services Namibia (Pty) Ltd
2. Business Registration/Identity No.
2017/0259
3. Correspondence Address:
PO Box 2184, Windhoek
4. Name of Contact Person:
Bronwynn Basson
5. Position of Contact Person:
Manager
6. Telephone No.:
+264 (61) 25 11 89
7. Fax No.:
+ 264 (61) 25 21 57
8. E-mail Address:
bronwynn@spc.com.na

PART B: SCOPE OF THE ENVIRONMENTAL CLEARANCE CERTIFICATE

1. The environmental clearance certificate is for:

Activity 1. (c) The construction of facilities for refining of gas, oil and petroleum products.

Activity 2.1 The construction of facilities for waste sites, treatment of waste and disposal of waste.

Activity 2.3 The import, processing, use and recycling, temporary storage, transit or export of waste.

Activity 5.1 (d) The rezoning of land from use for nature conservation or zoned open space to any other land use.

Activity 9.1: Manufacturing, storage, handling, or processing of hazardous substances as defined in the Hazardous Substances Ordinance, 1974.

Activity 9.4 The storage and handling of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.

Activity 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.

2. Details of the activity(s) covered by the environmental clearance certificate:

Note: Please attach plans to show the location and scope of the designated activity(s), and use additional sheets if necessary:

Title of Activity

Construction and Operation of an Offshore Oil and Gas Operations Supply Base in Lüderitz, //karas Region

Nature of Activity:

Alistair Services Namibia (Pty) Ltd proposes to construct and operate an offshore oil and gas operations supply base in an existing industrial zone. Earthworks and installation of services will be done in preparation for the construction of warehouses, workshops, offices, a training centre, fuel station, waste processing centre and other facilities.

Location of Activity:

Lüderitz, //Karas Region

Scale and Scope of Activity:

The scope of this project is limited to obtaining an Environmental Clearance Certificate for the following:

Environmental Assessment for the Proposed Construction and Operation of an Offshore Oil and Gas Operations Supply Base in Lüderitz, //Karas Region

THE PROPOSED DEVELOPMENTS

Alistair Services Namibia (Pty) Ltd (Alistair hereafter) proposes to construct and operate an Offshore Oil and Gas Operations Supply Base in Lüderitz, Namibia. The site will be prepared for the construction of warehouses, workshops, offices, a training centre, fuel station, waste processing centre and other facilities. These will include facilities for the storage of dangerous goods including oilfield explosives, radioactive sources, oilfield chemicals and vehicle fuel.

OPINION WITH RESPECT TO THE ENVIRONMENTAL AUTHORISATION

An EIA will be undertaken, and the relevant report will be prepared for the proposed activity in which the recommendation with respect to the environmental authorization will be outlined.

PART C: DECLARATION BY APPLICANT

I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief. I understand the environmental clearance certificate may be suspended, amended or cancelled if any information given above is false, misleading, wrong or incomplete.

Ndeshihafela Neliwa Environmental Consultant

Signature of Applicant Full name in Block Letters Position

on behalf of Alistair Services Namibia (Pty) Ltd 10 October 2025

Date



45 Feld Street, Windhoek, Namibia PO Box 81808, Windhoek, Namibia **Tel:** (+264) 61 248 614 **Fax:** (+264) 61 238 586 **Web:** www.gcs-na.biz

Environmental Impact Assessment for the Proposed Construction and Operation of an Offshore Oil and Gas Operations Supply Base

Final Scoping Report

Version - Final 01 October 2025



Alistair Services Namibia (Pty) Ltd GCS Project Number: 25-0005



GCS Water Environmental Engineering Namibia (Pty) Ltd. Reg No: 2006/717 Est. 2008

Offices: Johannesburg (Head Office) | Durban | Gaborone | Lusaka | Maseru | Windhoek | Ostrava

Director: AC Johnstone

Final Scoping Report Version - Final



01 October 2025

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Director	Daniel Kriel		October 2025

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EXECUTIVE SUMMARY Introduction

Alistair Services Namibia (Pty) Ltd (Alistair Services) proposes to construct and operate an offshore oil and gas operations supply base in an existing industrial zone. Earthworks and installation of services will be done in preparation for the construction of warehouses, workshops, offices, a training centre, fuel station, waste processing centre and other facilities.

GCS Environmental South Africa (GCS) has been appointed as the EAP to apply for the Environmental Clearance Certificate (ECC) according to the Scoping and Environmental Impact Assessment (S&EIA) process. The process will be undertaken in terms of the Environmental Management Act, 2007 (Act No. 7 of 2007) (EMA) and the Environmental Impact Assessment (EIA) Regulations of 2012, (GG No. 4878 GN No. 30). The Ministry Environment, Forestry and Tourism is the Competent Authority (CA) in respect of the application process.

Proposed Activities

Table 12-1: indicate all activities associated with project from the construction phase to the decommissioning phase.

Table 12-1:Project Activities

Project Phase	Activities
Construction Phase	Site Preparation: Earthworks to level site by grubbing and bulldozer to create platform for warehouses, workshops, offices, a training centre, fuel station, waste processing centre and other facilities and Storage of dangerous goods (oilfield explosives, radioactive sources, oilfield chemicals and vehicles).
	Concrete batching.
	Installation essential electrical infrastructure and communication services.
	Anticipated daily heavy and light vehicle movements to and from site
	Rehabilitation of disturbed areas during construction
	Fuel storage
	Vehicle movement.
	Operation of the project equipment and supporting infrastructure as per developed procedures and quality standards.
	The preparation and training of site personnel on emergency procedures such as outages, equipment failures and natural disasters.
Decommissioning Phase	Identify all equipment, machinery, structures, and systems that require decommissioning
	Removal of infrastructure
	The dismantling of equipment, machinery, and any structures
	Following remediation and the removal of structures, rehabilitation of the affected areas

Public Participation Process

Stakeholder Identification: Existing stakeholder and I&AP databases were sourced from the client for review and updating. The following sectors of society were included in the database, which will be used to notify stakeholders of the application:

- Local government authorities.
- Landowners and neighbouring landowners.
- Agriculture, water bodies and farmers' organisations.
- National and local media.
- Neighbouring industry, mining, business and commerce.
- Conservation and environmental bodies, both as authorities and non-governmental organisations (NGOs).
- Community representatives, community-based organizations, development bodies.
- Representatives for disadvantaged people, women and youth.
- Project Announcement: The first step of this phase informs I&APs of the proposed project and invites them to register as interested and affected parties. This is a 12-day process in terms of the EIA Regulations:
 - Distribution of Notification Letters and Background Information Document (BID):
 A BID was compiled which provided a summary of the proposed project and the process to be undertaken. The BID was circulated to all identified I&APs as per the I&AP database.
 - Site Notice Placements: The site notices were placed at Lüderitz. Notices were published in English.
 - Written Notice: Letters were sent to I&APs on the database to invite to invite them to participate in the engagement process.
 - Newspaper Advertisements: An a3dvertisement was placed in and appeared on 30 July 2025 in The Namibian and New Era newspaper informing the public of the submission of the application for the project.
 - Public Meeting: Public meeting at the project site was held on 31 July 2025 to inform the I&APs of the planned project in more detail and to obtain comments and concerns to be addressed in the finalisation of the reports. No, I&APs attended the meeting.
- One email, from Julien Vumazonke of NAMDEB, was received after the closing of the initial public disclosure period. NAMDEB has been registered as an I&AP and the Scoping Report was made available to them for review.
- Scoping Report Review: The second step entailed the review of the draft report and soliciting comments for consideration in the finalization of the report; 12 days was allowed for this review.

- Comments and Response Report (CRR): No comments were received on the Draft Scoping Report therefore, a CRR has not been compiled.
- Notification of submission of final report: A notification will be sent to I&APs informing them of the submission of the final report and the availability of the report on the GCS website.

Project Alternatives

Location Alternatives

Alternative locations were not considered, as this site is deemed the most suitable for the intended scope of work. This project will be developed and operated into an existing facility, which is already situated over a proven hydrocarbon reserve. Additionally, the project will benefit from established infrastructure and accessibility, helping to minimise both development costs and operational challenges. From an environmental perspective, it poses a lower environmental threat as it will be undertaken in an area that already zoned or approved for oil and gas activities and will not be stretching to areas of conservation.

No-Go Alternative

The "No-Go" alternative is the option of not proceeding with the activity, which typically implies a continuation of the status quo. This option means that the proposed project and the associated activities will not take place at the proposed site. If the Project does not proceed, the anticipated benefits will not occur. In considering the purpose of the proposed project, the 'no-go' option cannot be considered as the preferred alternative.

Environmental Baseline

The Project area is characterized by a climate that is typical of that of dry and arid regions of Southern Africa. Summer temperatures range from 20°C to 35°C during the day and winter temperatures range from 18°C to 24°C during the day but can drop to freezing at night.

Lüderitz is located the Namaqua Metamorphic Complex (NMC) in the southern parts, that stretches to the Northern Cape of South Africa. The coastal areas around Lüderitz are characterised by the harsh conditions of the Namib Desert and the Succulent Karoo biome. The area is home to species like Welwitschia mirabilis, a plant found nowhere else, as well as various woody legumes and succulent-stemmed species like baobabs, *commiphoras*, bottle-trees, and *kokerbooms*.

Impact assessment

Planning And Design Phase Impacts

No planning and design phase impacts were deemed to have a significant impact on the

environment. The impacts were assessed to a **Medium to Low** (negative) significance, without mitigation measures. With the implementation of the recommended mitigation measures as well as in the EMP, the significance of the planning and design phase negative impacts is likely to be reduced to a **Low**.

Construction Phase Impacts

None of the negative construction phase impacts were deemed to have a highly significant impact on the environment. The construction impacts were assessed to a **Medium to Low** (negative) significance, without mitigation measures. With the implementation of the recommended mitigation measures, the significance of negative construction phase impacts is likely to be reduced to a **Low**.

Operational Phase

None of the negative operational phase impacts were deemed to have a highly significance impact on the environment. The operational impacts were assessed to a **Medium to Low** (negative) significance, without mitigation measures. With the implementation of the recommended mitigation measures, the significance of the operational phase impacts is likely to be reduced to a **Low** (negative).

Mitigation Measures and Environmental Management Plan

With the implementation of the recommended mitigation measures, the significance of the construction and operational phase impacts is likely to be reduced to Low.

An Environmental Management Plan (EMP) is contained in Appendix A of this report. The purpose of the EMP is to outline the type and range of mitigation measures that should be implemented during the construction and operational phases of the project to ensure that negative impacts associated with the development are avoided or mitigated.

It is important that an Environmental Control Officer (ECO) be employed on site during the construction phase to ensure that all the mitigation measures discussed in this report and the EMP are enforced.

It is noted that these mitigation measures and any others identified by MEFT: DEAF could be enforced as Conditions of Approval in the ECC, should MEFT: DEAF issue an ECC.

Level of Confidence in Assessment

With reference to the information available at the project planning cycle, the confidence in the environmental assessment undertaken is regarded as being acceptable for decision-making, specifically in terms of the environmental impacts and risks. The Environmental Assessment Practitioner believes that the information contained within this Final Scoping Report is adequate to allow MEFT: DEAF to be able to determine the environmental

acceptability of the proposed project.

It is acknowledged that the project details will evolve during the detailed design and construction phases. However, these are unlikely to change the overall environmental acceptability of the proposed project and any significant deviation from what was assessed in this Final Scoping Report should be subject to further assessment. If this was to occur, an amendment to the ECC may be required in which case the prescribed process would be followed.

Way Forward

The FESR will be prepared and submitted to MEFT:DEAF for consideration and decision making. If MEFT:DEAF approves, or requests additional information / studies all registered I&APs and stakeholders will be kept informed of progress throughout the assessment process.

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LIST OF ABBREVIATIONS

Abbreviation	Description
BID	Background Information Document
CRR	Comment and Response Report
EA	Environmental Aiuthorisation
ECC	Environmental Clearance Certificate
EAP	Environmental Assessment Practitioner
EMA	Environmental Management Act
GG	Government Gazette
GN	Government Notice
I&AP	Interested and Affected Parties
NMC	Namaqua Metamorphic Complex
PPP	Public Participation Process
ROV	Remote Operated Vehicle
S&EIA	Scoping and Environmental Impact Assessment
SP	Significance points

UNITS OF MEASUREMENT

Unit of Measure	Description
°C	Degrees Celsius
km	kilometre
m	metre
masl	metres above sea level

1 INTRODUCTION

1.1 Activity Background

Alistair Services Namibia (Pty) Ltd (Alistair Services) proposes to construct and operate an offshore oil and gas operations supply base in an existing industrial zone at Lüderitz, //Karas Region, Namibia.

The Proponent aims to provide logistics support specifically for the oil and gas industry. Their activities will broadly involve supporting oilfield development through integrated logistics services such as transportation, warehousing, and material handling. To enable these operations, the rezoning of the proposed site/ property from "Undetermined" to "Special" is required. This will accommodate a range of light industrial uses, including but not limited to: storage of oilfield equipment, storage of cement, storage of oilfield chemicals, machine-shop activities, pressure-testing services, vehicle refuelling, vehicle and equipment workshop operations, training programs and office functions.

GCS Water and Environmental Engineering Namibia (Pty) Ltd (GCS has been appointed as the EAP to apply for the Environmental Clearance Certificate (ECC) according to the Scoping and Environmental Impact Assessment (S&EIA) process. The process will be undertaken in terms of the Environmental Management Act, 2007 (Act No. 7 of 2007) (EMA) and the Environmental Impact Assessment (EIA) Regulations of 2012, (GG No. 4878 GN No. 30). The Ministry Environment, Forestry and Tourism: Department of Environmental Assessment (MEFT:DEAT) is the Competent Authority (CA) in respect of the application process.

1.2 Purpose of the Scoping Report

The proposed project triggers the following listed activities:

Table 1-1:Triggered Activities

Activity	Description
Activity 1(c)	The construction of facilities for refining of gas, oil and petroleum products.
Activity 2.1	The construction of facilities for waste sites, treatment of waste and
	disposal of waste.
Activity 2.3	The import, processing, use and recycling, temporary storage, transit or
	export of waste.
Activity 5.1 (d)	The rezoning of land from use for nature conservation or zoned open space
	to any other land use.
Activity 9.1	Manufacturing, storage, handling, or processing of hazardous substances as
	defined in the Hazardous Substances Ordinance, 1974.
Activity 9.4	The storage and handling of dangerous goods, including petrol, diesel, liquid
	petroleum gas or paraffin, in containers with a combined capacity of more
	than 30 cubic metres at any one location.
Activity 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 environmental scoping assessment report aims to address the following:

- Identification of potential positive and negative environmental impacts.
- Evaluation of the nature and extent of potential environmental impacts
- Identify a range of management actions that could mitigate the potential adverse impacts to required levels.
- Consult relevant stakeholders regarding the proposed development.
- Provide sufficient information to the Ministry of Environment, Forestry and Tourism to make an informed decision regarding the proposed project.

2 PROJECT APPLICANT AND ENVIRONMENTAL ASSESSMENT PRACTITIONER

2.1 Project Applicant

The contact details of the Applicant are provided in Table 2-1.

Table 2-1:Applicant Details

Applicant Name	Alistair Services Namibia (Pty) Ltd
Company/ Trading name (if any)	
Company Registration Number	2017/0259
Company Representative	Bronwynn Basson
Telephone No.	+264 (61) 25 11 89
Facsimile No.	+ 264 (61) 25 21 57
E-mail Address	bronwynn@spc.com.na
Physical Address	
Postal Address	PO Box 2184, Windhoek

2.2 Details of the Environmental Consultant

The contact details of the environmental Consultant are provided in Table 2-2.

Table 2-2:Consultant Details

Consultant Name	Caroline Henderson
Company Name	GCS Water and Environmental Engineering Namibia (Pty) Ltd
Physical Address	c/o GCS Environment South Africa (Pty) Ltd 63 Wessel Rd, Edenburg, Sandton
Postal Address	P.O. Box 2597, Rivonia, 2128
Telephone	+27 (0)11 803 5726/ +27(0) 82 600 8795
Email address	callyh@gcs-sa.biz

3 REGULATORY FRAMEWORK

3.1 List of Applicable Laws and Legislation

The legislation, regulations, guidelines, and plans which is deemed applicable to the Project is outlined Table 3-1.

Table 3-1: Applicable Laws and Legislation

Table 3-1: Applicable L	•
Laws and Regulations	Applicability
Constitution of the Republic of Namibia, 1990	The Constitution of Namibia is the supreme law in the country, establishing the three branches of government which is the Executive, Legislature, and Judiciary, and safeguarding a range of fundamental rights and freedoms. Environmental provisions are found in Chapter 11, Article 95, titled "Promotion of the Welfare of the People." This article mandates that the Namibian government must actively uphold the welfare of its citizens by implementing policies that support the conservation of ecosystems, ecological processes, and biodiversity, as well as the sustainable use of natural resources for the benefit of both current and future generations. It also requires the government to prevent the dumping or recycling of foreign nuclear waste within Namibian borders.
Environmental Management Act (2007) - Ministry of Environment, Forestry and Tourism (MEFT)	 The purpose of the act is to give effect to Article 95(l) and 91(c) of the Namibian Constitution by establishing general principles for the management of the environment and natural resources: To support the coordinated and integrated management of the environment to give statutory effect to Namibia's Environmental Assessment Policy. To enable the Minister of Environment and Tourism to give effect to Namibia's obligations under international conventions. The legislation allows for regulatory oversight of specific listed development activities, particularly those occurring within designated sensitive areas. These activities require an Environmental Assessment to be conducted prior to any development approval. The legislation outlines the conditions under which such assessments are necessary. Unless an exemption is granted by the Ministry of Environment, Forestry and Tourism in consultation with the relevant CA for the activities listed under the Act must undergo an Environmental Assessment.
Environmental Assessment Policy (1994)	This policy seeks to encourage sustainable development and economic progress while ensuring long-term environmental protection by mandating environmental assessments prior the commencement activities. Annexure B outlines a list of activities that could have significant negative impacts on the environment and therefore require prior authorisation.
Forest Act 12 of 2001 - Minister of Environment, Forestry and Tourism (MEFT)	The act provides for the establishment of a Forestry Council and the appointment of certain officials. to consolidate the laws relating to the management and use of forests and forest produce. to provide for the protection of the environment and the control and management of forest fires. Under Part IV Protection of the environment, Section 22(1) of the Act, it is unlawful for any person to cut, destroy, or remove: • any vegetation which is on a sand dune or drifting sand or in a gully unless the cutting, destruction or removal is done for the purpose of stabilising the sand or gully or • any living tree, bush or shrub growing within 100m of a river, stream, or watercourse. Should either of the above be unavoidable, it will be necessary to obtain a permit from the Ministry. Protected tree species as listed in the Regulations shall not be cut, destroyed, or removed.
Hazardous Substance Ordinance 14 of 1974 Ministry of Health and Social Services	The act amends provisions related to hazardous waste by establishing controls over substances that may harm human health or cause death due to their toxic, corrosive, irritant, highly sensitising, or flammable properties, or due to pressure they may generate under certain conditions. It also regulates and restricts the import, sale, use, handling,

Laws and Regulations	Applicability
(MoHSS)	modification, disposal, or dumping of such substances, along with related matters.
Water Act 54 of 1956 Ministry of Agriculture, Water and Land reform (MAWLR)	This act governs the management, protection, and utilisation of water resources for domestic, agricultural, urban, and industrial use. According to Section 6, public water cannot be privately owned, and its use and control are subject to the regulations set out in the Act. Under the provisions of this legislation, the proposed project must implement appropriate measures to prevent water pollution. Additionally, permits will be necessary for both the abstraction of groundwater and the construction or operation of water-related infrastructure.
The Nature Conservation Ordinance 4 of 1975, Ministry of Environment, Forestry and Tourism (MEFT) Namibia's Environmental Assessment Policy for Sustainable Development and Environmental Conservation of 1995	It is essential to avoid disturbing or destroying protected plant species, as well as the eggs of protected and game bird species. If such actions cannot be avoided, a permit must be obtained from the Minister of Environment, Forestry and Tourism. Additionally, if the Proponent intends to operate a nursery for the propagation of indigenous plant species for rehabilitation, a permit will also be necessary. Prescribes Environmental Impact Assessments for any developments with potential negative impacts on the Environment
Minerals (Prospecting and Mining) Act 33 of 1992 and special regulations	Sections 50, 52, 54, 57 and 130 of this act outlines regulations for managing environmental impacts related to the exploration and extraction of mineral resources
Namibia's Environmental Assessment Policy for Sustainable Development and Environmental Conservation of 1995	Requires environmental impact assessments for all developments with potential negative impacts on the Environment.
Draft Pollution and Waste Management Bill (1999)	Protection for species, resources or components of the environment.

4 ENVIRONMENTAL ASSESSMENT PROCESS

4.1 Environmental Management Act No. 7 of 2007

The Environmental Management Act (EMA) provides a list of activities, development or execution, which require an Environmental Clearance Certificate (ECC) from the Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs and Forestry (MEFT: DEAF) prior to construction. Due to the nature of the proposed project, an ECC will be required prior to project commencement. Accordingly, an Environmental Impact Assessment (EIA) process as per the requirements of EMA: Environmental Impact Assessment Regulations (18 January 2012) must be conducted to inform the MEFT: DEAF's decision regarding the ECC application.

4.2 Competent Authority

The competent authority is the Ministry of Environment, Forestry and Tourism, of which the Department of Environmental Affairs and Forestry (MEFT: DEAF) as the regulator of the EIA process. As such, the application for an ECC and all reports and documentation associated with the Scoping/ EIA process will be submitted to MEFT: DEAF for a decision.

4.3 Environmental Impact Assessment (EIA)

The EMA defines the EIA as a process of identifying, predicting, and evaluating the risks and consequences of activities, alternatives to these activities and options for mitigation of such activities. This is done with a view of minimising negative impacts, optimising benefits and promoting compliance with the principles of environmental management. Figure 4-1 below depicts the different stages of the EIA process.

4.4 Public Participation Process

The purpose of the Public Participation Process (PPP) is to allow for the participation of interested and affected parties in decisions concerning matters that may affect them. Registered I&APs are kept informed of the PPP throughout the EIA process, are given the opportunity to review and comment on the Scoping/ EIA reports and documents, receive feedback on how comments have been considered, and will be informed of the outcome of the assessment. All comments are recorded and presented to the project team and CA by means of the Project Comments and Responses Report (CRR).

Application

- Review of project against EMA listed activities to determine the need for an EIA process
- Compile and submit an ECC Application to the competent authority and MEFT:DEAF

Scoping

- Identify and consult with Interested and Affected Parties (IA&Ps)
- Identify potential environmental and social impacts
- Determine Terms of Reference for further study during EIA/EMP (if required)
- Compile Draft Scoping Report and Draft EMP, and circulate to IA&Ps for review and comment
- Finalise Scoping Report and Draft EMP with I&AP review outcomes

Impact Assessment

- Conduct further specialist studies if required
- Detailed assessment of environmental and social impacts
- Compile Draft EIA and EMP, and circulate to IA&Ps for review and comment
- Finalise EIA and EMP with IA&P review outcomes and submit to the competent authority and MEFT:DEAF for decision making
- Notify IAPs of MEFT:DEAF decision

Current stage

Figure 4-1: The EIA Process

4.5 Contents of the Scoping Report

This scoping study was carried out in accordance with the EMA (Act 7 of 2007) and its 2012 EIA Regulations (GG No. 4878 GN No. 30). After applying for an ECC, the first stage in the EIA process is to submit a scoping report. This report is structured as follows:

Table 4-1: Contents of the Scoping Report

Description	Section
 The location of the activity. 	Section 4
 A description of the scope of the proposed activity, including- all listed and specified activities triggered. 	Section 5
 A description of the activities to be undertaken, including associated infrastructure. 	
 A description of the policy and legislative context within which the development is proposed 	Section 6
 A motivation for the need and desirability for the proposed activity in the context of the preferred location. 	Section 7
 A comparison of the alternatives considered. 	Section 8
 A description of the present environmental and socio- economic situation/ environmental baseline 	Section 9
 Details of the public participation process undertaken. 	Section 10
A description and significance assessment of risks or impacts	Section 11
 Conclusions to the report and Way Forward 	Section 12
Environmental Management Plan	Appendix A

5 PROJECT DESCRIPTION

5.1 Project Site Location

Figure 5-1 details the location of the proposed project at Lüderitz.

5.2 Overview of Activity

Table 5-1 outlines planned activities on the premises of the proposed offshore oil and gas operations supply base. A conceptual site layout and a portfolio of projections of the site are included in Appendix E.

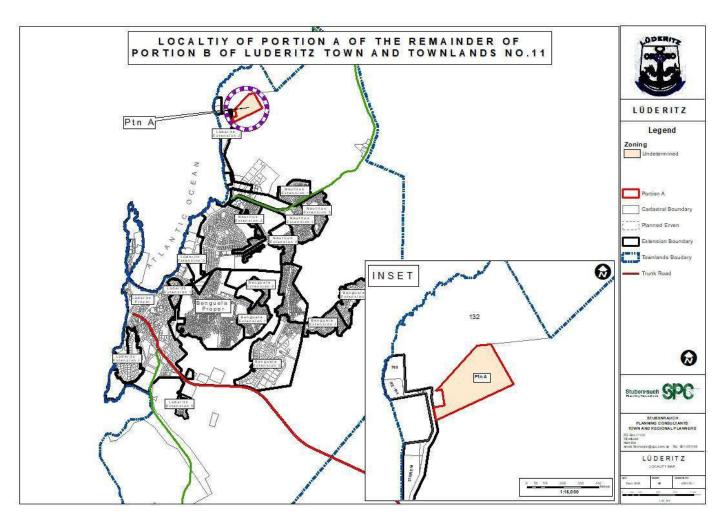


Figure 5-1: Project Location

Table 5-1:Project Activities

Project Phase	Activities					
Construction Phase	Site Preparation: Earthworks to level site by grubbing and bulldozer to					
	create platform for warehouses, workshops, offices, a training centre, fuel					
	station, waste processing centre and other facilities and storage of					
	dangerous goods (oilfield explosives, radioactive sources, oilfield chemicals and vehicles).					
	Concrete batching.					
	Installation essential electrical infrastructure and communication services.					
	Anticipated daily heavy and light vehicle movements to and from site					
	Rehabilitation of disturbed areas during construction					
Operational Phase	Oil and gas extraction					
	Separation and processing of produced fluids (oil, gas, water)					
	Fuel storage					
	Vehicle movement.					
	Operation of the project equipment and supporting infrastructure as per developed procedures and quality standards.					
	The preparation and training of site personnel on emergency procedures					
	such as outages, equipment failures and natural disasters.					
Decommissioning Phase	Identify all equipment, machinery, structures, and systems that require					
	decommissioning					
	Removal of infrastructure such subsea infrastructure,					
	The dismantling of equipment, machinery, and any structures					
	Following remediation and the removal of structures, rehabilitation of the affected areas will begin					

5.3 Site Services

The project will include the following infrastructure:

- Access Road Route: An existing road will be utilized for the project; no widening or upgrades will
 be undertaken, requiring no approval from the Roads Authority. Traffic impact is expected to be
 minimal, with adequate road widths for industrial vehicles and on-site space for truck
 manoeuvring to avoid disruption to public roads.
- Water Supply: Desalinated water will be provided by Nampwater. This is a water service provider
 that supplies water in bulk to industries, government institutions, municipalities, local
 authorities, commercial entities such as mines, and to the Directorate of Water Supply and
 Sanitation in the Ministry of Agriculture, Water and Forestry.
- Power supply: Electricity will be supplied by Nampower, which supplies bulk electricity to Regional Electricity Distributors (REDs), mines, farms and local authorities (where REDs are not operational) throughout Namibia. The subject site will be connected to Lüderitz Town Council's electricity grid upon subdivision approval.
- Water and sewer services will be extended from existing infrastructure in Lüderitz Extension 2, following the Council's engineering standards.
- Waste Management: Skips will be made available on site and solid waste will be driven away to

the local dump site.

• Stormwater runoff will be managed within street reserves, adhering to natural drainage patterns.

6 NEED AND DESIRABILITY

The proposed development by Alistar Logistics Namibia is expected to significantly boost the Lüderitz economy by attracting investment, creating jobs, and supporting the oil and gas sector. This project will be developed in an existing industrial area, which is already strategically situated in relation to proven offshore hydrocarbon reserves. Additionally, the project will benefit from established infrastructure and accessibility, helping to minimize both development costs and operational challenges. From an environmental perspective, it poses a lower environmental threat as it will be undertaken in an area that is already zoned or approved for oil and gas activities and will not extend to areas of conservation importance. It will lead to improvements in local infrastructure, such as roads and utilities, and introduce modern logistics practices. The project will enhance workforce skills through training, promote innovation, and position Lüderitz as a key logistics hub for Namibia and the broader Southern Africa region.

7 PROJECT ALTERNATIVES

Alternatives are defined as: "different means of meeting the general purpose and requirements of the activity" EMA, Act No. 7 of 2007 of Namibia and EIA Regulations, 2012. This section outlines the alternatives considered for the proposed activity.

7.1 Location Alternatives

Alternative locations were not considered, as this site is deemed the most suitable for the intended scope of work. This project will be developed in an existing industrial area, which is already strategically situated in relation to proven offshore hydrocarbon reserves. Additionally, the project will benefit from established infrastructure and accessibility, helping to minimize both development costs and operational challenges.

7.2 Layout and Design Alternatives

Layout and design have been done only to a conceptual level (Appendix E). The site's limited dimensions mean that no significantly different layout options were considered.

7.3 No-go Alternatives

The "No-Go" alternative is the option of not proceeding with the activity, which typically implies a continuation of the status quo. This option means that the proposed project and the associated activities

will not take place at the proposed site. If the Project does not proceed, the anticipated benefits will not occur. In considering the purpose of the proposed project, the 'no-go' option cannot be considered as the preferred alternative.

8 PRESENT ENVIRONMENTAL SITUATION

8.1 Climate

The Project area is characterized by a climate that is typical of extremely dry and arid regions of Southern Africa (Mendelsohn, Jarvis, Roberts, & Robertson, 2002). Summer temperatures range from 20°C to 35°C and winter temperatures from 18°C to 24°C during the day, but can drop to freezing at night. The area is prone to strong winds and cool temperatures due to its location on the Atlantic coast. The area experiences extremely low and erratic rainfall, with an annual average of 30 mm. Coastal fog is a more significant source of moisture to coastal onshore ecosystems than is rainfall.

8.2 Geology

Namibia is characterised by numerous lithographies interspersed with sandy sediments. Lüderitz is located in the Namaqua Metamorphic Complex (NMC) in the southern region that stretches to the Northern Cape of South Africa (Mendelsohn, Jarvis, Roberts, & Robertson, 2002). The NMC comprises high-grade metamorphic rocks like gneisses, schists and amphibolites.

8.3 Topography and land uses

The Tsaus Mountains are the most prominent mountain range near Lüderitz but do not extend into Lüderitz itself. The proposed site is located on the slopes of a rocky promontory that ends in the shoreline of the Atlantic Ocean (Figure 8-1). To the south lies industrial area, to the east is undeveloped hillside with some wind turbines along the crest of ridge and the town's sewage works on the other side of the ridge, while to the north of the rocky promontory is a bay that is a popular recreation area (this bay is not visible from the proposed site, nor will it be affected by activities on the Alistair site).



Figure 8-1: Topography in the area in which the proposed development will be situated

8.4 Fauna and Flora

The region of Namibia in which Lüderitz lies contains three biomes, namely, Namib Desert, Succulant Karoo and Nama Karoo (Botanical Society of Namibia website, accessed 20/08/2025 [Biomes and vegetation types - Botanical Society of Namibia]. Lüderitz is located at the junction of the Namib Desert and Succulent Karoo biomes. The Namib Desert contains of 16% of Namibia's endemic plant species (Antje Burke, 2020), while the Succulent Karoo is internationally recognized as a hotspot for succulent plants, many of which are endemic to the biome.

Plants in the Lüderitz area are adapted to extremely arid conditions. Figure 8-2 shows typical plant species found in the Namib Desert biome, however, none of these species is present on the project site. The project site is located adjacent to the Atlantic coastal zone on an exposed, rocky slope that is subject to strong winds and sand transport, so that it hosts only a few hardy succulent species.



Gravel plains and inselbergs of the central Namib



The endemic *Stipagrostis seelyae*, named after Dr Mary Seely, who led research in the Namib for many years.



The iconic Welwitschia (Welwitschia mirabilis) is endemic to Namibia.



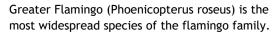
Various species of tough, perennial grasses stabilise the dunes on the eastern edge of the Namib.

Figure 8-2: Plant species found in the Namib Desert biome.

The Lüderitz region is home to a diverse complement of animal species, as illustrated in Figure 8-3. However, none of these species is likely to be present on or in proximity to the Alistair site on the outskirts of the industrial zone. Over the hill inland of the sewage works a herd of gemsbok is found

frequently grazing the grassy field created by seepage from the sewage works, and brown hyena occasionally stray along the shoreline from the north.







The African penguin (Spheniscus demersus), also known as the jackass penguin and black-footed penguin is a species of penguin, confined to southern African waters.



Bitis cornuta is a venomous viper species found in rocky desert areas, along the Atlantic coast.



The western rock skink (*Trachylepis sulcata*) is found in Namibia, South Africa, and Angola.



The brown hyena (*Hyaena brunnea*), also called strandwolf for its common occurrence on coastlines, of which the largest remaining population is in the southern Kalahari Desert and coastal areas in Namibia.



The gemsbok or gemsbuck (*Oryx gazella*) is a large antelope that is native to the arid regions of Southern Africa, such as the Kalahari Desert.

Figure 8-3: Animal species found in the Lüderitz area (iNaturalist, 2025)

8.5 Socio-Economic Environment

This section provides a description of socio-economic conditions in the project's area of influence. The information on this socio-economic baseline study was obtained through a review of publicly available information (Namibia Statistics Agency, 2023).

8.5.1 Demography

Lüderitz is located in the //Kras Region which has a population size of 109 893, (Namibia Statistics Agency, 2023). Table 8-1 indicates the population of Lüderitz by gender.

Table 8-1: Population by gender (Namibia Statistics Agency, 2023)

Female	8 294
Male	7 831
Population	16 125

8.5.2 Livelihoods

Household livelihood data is crucial for assessing poverty, hunger, and overall living standards. In this context, livelihood includes not just income, but also the main goods produced for consumption or sale. Table 8-2 provides details on households' primary sources of income. In Namibia, 46.6% of households rely mainly on salaries and wages for their livelihood. Another 13.8% depend on old age pensions, while 10.7% rely on farming. Additionally, 3.6% of households depend on government social grants as their main means of support.

Table 8-2: Household livelihood data (Namibia Statistics Agency, 2023)

Main source of livelihood/survival	Namibia	Urban	Rural
Households	756 339	414 119	342 220
Salaries and /or wages	46.6	59.7	30.8
Old age pension	13.8	7.3	21.8
Farming (Subsistence and Commercial)	10.6	1.0	22.2
Business activities non-farming	9.0	11.5	6.0
Child support (Parents)	2.4	3.3	1.4
Grants	2.6	1.9	3.3
In-kind receipts	2.1	2.2	1.9
Drought relief assistance	1.4	0.4	2.6
Other sources of Livelihood	3.7	4.2	3.0
Source of livelihood is not specified	3.3	4.2	2.1

Note: Grants include state maintenance, foster parent, vulnerable, and disabilities grants

8.5.3 Education

School attendance refers to full-time participation in any regular public or private educational institution for structured instruction lasting more than a year. Table 8-3 shows school attendance among individuals aged 6 and above, broken down by area. According to the data, half (50.0%) of this population had left

school, while 31.2% were attending primary or secondary education. Only 5.3% were enrolled in tertiary institutions, and adult education had the smallest share at just 0.3%. A higher percentage of individuals in urban areas (54.5%) had left school compared to rural areas (45.2%). Adult education had the lowest attendance in both settings, with only 0.2% in urban and 0.4% in rural areas.

Table 8-3: Percentage distribution of the population aged 6 years and above by school attendance and area (Namibia Statistics Agency, 2023)

				Schoo	l Attenda	nce (%)		
Area	Population 6 years and above	Never attended	Attending pre-primary	Attending primary or secondary school	Attending tertiary	Attending adult education programme	Left school	Don' t Know
Namibia	2 499 760	9.7	2.1	31.2	5.3	0.3	50.0	1.4
Urban	1 282 263	5.2	1.9	28.2	8.8	0.2	54.5	1.3
Rural	1 217 497	14.4	2.4	34.5	1.6	0.4	45.2	1.4
//Kharas	94 051	3.3	1.5	23.7	3.1	0.1	67.7	0.8
Erongo	204 857	4.0	1.8	24.1	5.1	0.1	63.4	1.5
Hardap	89 839	6.4	1.4	27.9	1.8	0.1	61.4	1.1
Kavango East	176 061	11 0	23	413	4.5	0.4	39 4	1.1
Kavango West	98 423	13.2	2.6	42.0	2.9	0.5	38.0	0.8
Khomas	428 173	4.4	1.7	22.6	12.9	0.1	56.9	1.4
Kunene	96 189	36.2	1.8	25.1	1.7	0.4	33.8	1.1
Ohangwena	270 762	11.2	2.9	41.9	2.3	0.6	39.4	1.7
Omaheke	83 255	19.2	1.6	25.4	2.4	0.2	50.4	0.8
Omusati	259 248	9.9	2.7	37.6	2.6	0.5	44.7	1.9
Oshana	192 718	4.8	2.3	30.3	9.0	0.3	51.9	1.4
Oshikoto	209 359	9.9	2.4	34.4	3.0	0.5	48.0	1.8
Otjozondjupa	182 476	13.5	1.7	27.2	3.3	0.1	52.8	1.3
Zambezi	114 349	10.9	2.1	32.3	4.3	0.2	49.7	0.6

9 PUBLIC PARTICIPATION

Detailed records of all aspects of the public participation process are attached in Appendix C.

- Stakeholder Identification: Existing stakeholder and I&AP databases were sourced from the client for review and updating. The following sectors of society were included in the database, which will be used to notify stakeholders of the application:
 - o Local government authorities.
 - o Landowners and neighbouring landowners.
 - o Agriculture, water bodies and farmers' organisations.
 - National and local media.

- o Neighbouring industry, mining, business and commerce.
- Conservation and environmental bodies, both as authorities and non-governmental organisations (NGOs).
- Community representatives, community-based organizations, development bodies.
- o Representatives for disadvantaged people, women and youth.
- Project Announcement: The first step of this phase informs I&APs of the proposed project and invites them to register as interested and affected parties. This is a 12-day process in terms of the EIA Regulations:
 - Distribution of Notification Letters and Background Information Document (BID): A BID
 was compiled which provided a summary of the proposed project and the process to be
 undertaken. The BID was circulated to all identified I&APs as per the I&AP database.
 - Site Notice Placements: The site notices were placed at L\u00fcderitz. Notices were published in English.
 - Written Notice: Letters were sent to I&APs on the database to invite to invite them to participate in the engagement process.
 - Newspaper Advertisements: An advertisement was placed in and appeared on 30 July 2025 in The Namibian and New Era newspaper informing the public of the submission of the application for the project.
 - Public Meeting: Public meeting at the project site was held on 31 July 2025 to inform the I&APs of the planned project in more detail and to obtain comments and concerns to be addressed in the finalisation of the reports. No, I&APs attended the meeting.
 - One email, from Julien Vumazonke of NAMDEB, was received after the closing of the initial public disclosure period. NAMDEB has been registered as an I&AP and the Scoping Report was made available to them for review.
- Scoping Report Review: The second step entailed the review of the draft report and soliciting comments for consideration in the finalization of the report; 12 days was allowed for this review.
- Comments and Response Report (CRR): No comments were received on the Draft Scoping Report therefore, a CRR has not been compiled.
- Notification of submission of final report: A notification will be sent to I&APs informing them of the submission of the final report and the availability of the report on the GCS website.

10 RISK / IMPACT ASSESSMENT

10.1 Planning and Design Phase Impacts

During the planning and design phase consideration should be given to aspects such as impacts of existing municipal infrastructure.

Connections to the municipal reticulation systems for water, electricity and sewerage will be extended to incorporate the proposed Alistair site. Stormwater run-off will follow the natural drainage paths on site to connect to the municipal stormwater drainage system in accordance with the City of Luderitz's stormwater engineering standards. No significant impacts to the municipal services system are anticipated.

10.2 Construction Phase Impacts on the Biophysical Environment

The construction phase impacts are those impacts on the biophysical and socio-economic environment that would occur during the construction phase. The activities are inherently temporary in duration but may have longer lasting and, in some cases, permanent impacts.

10.2.1 Flora and Fauna Impacts (Biodiversity)

The site is vacant desert land at present, its substrate a mixture of coastal sand and rocks. It is sparsely vegetated. It is anticipated that the proposed development site and installation of bulk services (e.g. water, sewage, access route, etc.) would have localized, insignificant negative impacts on flora and fauna should the proposed mitigation measures as outlined in the EMP be implemented.

10.2.2 Surface and Ground Water Impacts

Due to the extreme desert climate, surface and groundwater impacts are likely to be minimal. The occasional storm coinciding with the construction phase could result in stormwater runoff but this will, within a very short distance, enter the sea at the nearby shoreline (drainage is all directly towards the coastline to the west). The risk of contaminating water sources by accidental spillage of oils and fuels and other equipment used during construction can be virtually eliminated by immediate spill clean-ups, given the absence of regular rainfall.

10.2.3 Soil Erosion Impacts

Although site clearing (removal of vegetation) and topsoil stockpiling normally render a construction site vulnerable to erosion, again the desert context will minimize this risk.

10.3 Construction Phase Impacts on the Socio-Economic Environment

10.3.1 Heritage impacts

No archaeological and heritage resources are expected to be found on the site. The project management

should however be made aware of the provisions of the National Heritage Act regarding the prompt reporting of archaeological finds, and the requirement for a Chance-Find Procedure (Appendix E).

10.3.2 Health, Safety and Security Impacts

Working conditions on site need to ensure that the health and safety of construction workers are ensured at all times. The use of local labour during construction is strongly encouraged to reduce the need for a migrant workforce. Health and Safety requirements need to comply with the Labour Act No. 11 of 2007 and international health and safety standards during construction.

Traffic Impacts

Traffic can be expected to increase during the construction phase of the project in areas where construction will take place. Lowbed trucks and other large transporters will be needed to deliver, handle and position construction materials and possibly to remove spoil material. Not only will the increase in traffic result in associated noise impacts, but it will also impact on the roads in the area, particularly in the center of the town through which all vehicles entering or leaving the town by road, or entering and leaving the harbour, must pass.

10.3.3 Noise Impacts

Construction will result in associated noise impacts associated with the operation of construction plant and vehicles. The impact is however limited in duration and will take place in an industrial area in which people are not resident.

10.3.4 Dust and Gaseous Emissions Impacts

Excavations and stockpiling during the construction phase will result in dust impacts, especially in the context of strong coastal winds. Dust impacts will be primarily associated with the temporary construction phase, since the entire site will be paved during construction.

10.3.5 Municipal Services

The construction phase will result in additional people on-site, who will require provision of the following services:

- Potable water for domestic (ablution and drinking) purposes.
- Temporary toilets.
- Solid waste management (domestic and construction waste).

These services, if not managed well, are likely to create an opportunity for water wastage; litter, solid and human waste pollution.

10.3.6 Storage and Utilization of Hazardous Substances

Hazardous substances are regarded by the Hazardous Substance Ordinance (No. 14 of 1974) as those substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature. During the construction period, the use and on-site storage of these types of hazardous substances, such as shutter oil, curing compounds, solvents, primers, adhesives and diesel could have negative impacts on the workforce, and on the surrounding environment should such substances spill and enter the environment.

10.4 Operational Phase Impacts

Operational phase activities are inherently long-term in duration and may generate impacts that are periodic but regular, or continuous and permanent.

10.4.1 Noise Impacts

Operational activities - heavy vehicle movement, loading and stacking bulk materials, pressure-testing - on and around this site will result in noise impacts. However, this is an industrial area in which higher noise limits apply.

10.4.2 Airborne emission Impacts

In this windy coastal environment airborne emissions will be rapidly dispersed, and wind-blown sand is likely to be the greatest issue. Fugitive vehicle (oil tanker) emissions will be the biggest contribution to airborne emissions from the Alistair operations.

10.4.3 Social Impacts

The proposed development is expected to enhance access to commercial and developmental opportunities, improve local infrastructure and services and to create employment in Lüderitz.

10.5 Cumulative Impacts

Potential cumulative impacts must be seen in the context of Luderitz's planned spatial expansion and economic growth in response to the development of the offshore oil and gas field. The contribution of the Alistair site operations to such longer-term transformation will be insignificant in relation to all the other changes and developments anticipated in the municipal area. The road network is likely to experience considerable strain, because there is no by-pass of the town centre for industrial traffic.

10.6 Summary of Impact Significance

A summary of impact significance ratings without mitigation is presented in Table 10-1. Note that all impacts are assumed to be NEGATIVE *unless otherwise indicated*. Given the very limited alternatives considered, the table below applies to all alternatives except the No-go alternative.

Table 10-2 and Table 10-3 provide a summary of the mitigation measures proposed for construction and operational phase impacts, respectively. The decommissioning phase is included in the EMP (Appendix A) only at a very conceptual level because the project developer has not considered decommissioning in their planning and decommissioning, if it occurs at all, will 25 to 35 years hence.

Table 10-1: Summary of the significance of the potential impacts

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	Significance	Probability	Confidence	Reversibilit y	Cumulative impact
PLANNING AND DESIG	N PHASE									
	Selected	No mitigation	Local	Medium- Low	Short term	Medium	Probable	Certain	Reversible	Medium (-ve)
1. Existing Service	site	Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)
Infrastructure	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
No	No go	Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
CONSTRUCTION PHAS	E									
	Selected	No mitigation	Coast	Medium	Short term	Medium	Probable	Certain	Reversible	Medium (-ve)
2. Biodiversity	site	Mitigation	Local	Very Low	Short term	Very Low	Probable	Certain	Reversible	Low (-ve)
(Fauna and Flora)	No. 70	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	No go	Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Selected	No mitigation	Local	Medium	Short term	Medium	Probable	Certain	Reversible	Medium (-ve)
3. Surface &	site	Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Medium- Low (-ve)
ground water		No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	No go	Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
4. Soil erosion	Selected site	No mitigation	Local	Medium	Short term	Medium - low	Probable	Certain	Reversible	Medium - low (-ve)

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	Significance	Probability	Confidence	Reversibilit y	Cumulative impact
		Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	140 go	Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Selected	No mitigation	Local	Very low	Short term	Very low	Probable	Certain	Irreversible	Very low (-ve)
E Horitone	site	Mitigation	Local	Negligible	Short term	Negligible	Probable	Certain	Irreversible	Negligible (-ve)
5. Heritage	No se	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Selected	No mitigation	Local	Medium- Low	Short term	Medium- Low	Probable	Certain	Reversible	Medium- Low (-ve)
6. Health,	site	Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)
safety and security	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	No go	Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Selected	No mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)
7. Traffic	site	Mitigation	Local	Very low	Short term	Very low	Probable	Certain	Reversible	Very low
impacts	impacts	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	No go	Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	Significance	Probability	Confidence	Reversibilit y	Cumulative impact
	Selected	No mitigation	Local	Medium	Short term	Medium - low	Probable	Certain	Reversible	Medium - Low (-ve)
8. Noise	site	Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Very low (-ve)
impacts	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	No go	Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Selected	No mitigation	Local	Medium	Short term	Low	Probable	Certain	Reversible	Low (-ve)
9. Emissions	site	Mitigation	Local	Low	Short term	Very Low	Probable	Certain	Reversible	Very Low (-ve)
impacts	No so	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	No go	Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Selected	No mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)
10. Municipal	site	Mitigation	Local	Very low	Short term	Very low	Probable	Certain	Reversible	Very low (-ve)
services	No se	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	No go	Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Selected	No mitigation	Local	Low	Short term	Medium	Probable	Certain	Reversible	Low (-ve)
11. Waste	site	Mitigation	Local	Very low	Short term	Low	Probable	Certain	Reversible	Very low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	Significance	Probability	Confidence	Reversibilit y	Cumulative impact
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Selected	No mitigation	Local	Low	Short term	Medium	Probable	Certain	Reversible	Low (-ve)
12. Hazardous	site	Mitigation	Local	Very low	Short term	Low	Probable	Certain	Reversible	Very low (-ve)
Substances	Substances No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	No go	Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
OPERATIONAL PHA	SE									
1. Noise	Selected	No mitigation	Local	Medium- Low	Medium term	Medium- Low	Probable	Certain	Reversible	Medium- Low (-ve)
	site	Mitigation	Local	Low	Medium term	Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
2. Emissions	Selected	No mitigation	Local	Medium- Low	Medium term	Low	Probable	Certain	Reversible	Medium- Low (-ve)
	site	Mitigation	Local	Low	Medium term	Very Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
3. Social impact	Selected	No mitigation	Local	Medium	Long term	Low (+)	Probable	Probable	Reversible	Medium (+)
	site	Mitigation	Local	Medium	Long term	Low (+)	Probable	Probable	Reversible	Medium (+)

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	Significance	Probability	Confidence	Reversibilit y	Cumulative impact
	No go	No	Local	Neutral	Long	Neutral	Probable	Probable	Reversible	Neutral
		mitigation			term					
		Mitigation	Local	Neutral	Long	Neutral	Probable	Probable	Reversible	Neutral
					term					

Table 10-2: Proposed mitigation measures for the construction phase

	CONSTRUCTION PHASE IMPACTS							
Impact	Mitigation Measures							
Flora and Fauna	 Prevent the destruction of protected and endemic plant species. Transplant removed plants where possible, or plant new plants in lieu of those that have been removed. The plants that are to be kept should be clearly marked with "danger tape" to prevent accidental removal or damage. Regular inspection of the marking tool should be carried out. Recommend the planting of local indigenous species of flora as part of the landscaping as these species would require less maintenance than exotic species. 							
Water Impacts	 Protected trees are not to be removed without a valid permit from the local Department of Forestry. No dumping of waste products of any kind other than rock and soil spoil. The movement of construction vehicles should be limited where possible to the existing roads and tracks. Drip trays must be placed underneath construction vehicles when not in use to contain all oil that might be leaking from these vehicles. Ensure that oil/ fuel spillages from construction vehicles and machinery are minimized and that where these occur, that they are appropriately dealt with. Contaminated runoff from the construction sites should be prevented from entering soil and groundwater. All materials on the construction site should be properly stored. Disposal of waste from the sites should be properly managed and taken to the designated municipal landfill site. Construction workers should be given ablution facilities at the construction sites that are located at least 30 m away from any drainage lines and that are regularly serviced. 							

	CONSTRUCTION PHASE IMPACTS
Impact	Mitigation Measures
	• Should it be necessary to wash construction equipment this should be done on a paved base with drainage to an oil: water separator and sediment trap, before the runoff is discharged from the construction site.
Soil Erosion	 Appropriate erosion control structures must be put in place where soil may be prone to erosion, should rainfall occur during the construction period.
	Appropriate remedial actions are to be undertaken wherever erosion is evident.
Heritage	• Project management is to be made aware of the provisions of the National Heritage Act regarding the prompt reporting of archaeological finds.
	• In the event of such finds construction is halted and a Chance-Find Procedure (Appendix D) implemented immediately.
Health, Safety and Security	Construction personnel should not overnight at the site, except for security personnel.
	Ensure that all construction personnel are appropriately trained in health and safety best practice procedures
	and environmentally responsible practices.
	Provide a first aid kit and a trained paramedic on site full-time to apply first aid when necessary.
	 Implement access control measures to restrict unauthorized access to the site.
	Clearly demarcate dangerous areas and no-go areas on site.
	 Staff and visitors to the site must undergo induction in all health and safety measures and emergency procedures.
	The contractor must comply with all applicable occupational health and safety requirements.
	• The workforce should be issued with all necessary personal protective equipment (PPE) and instructed in its proper use.
Traffic	Limit and control the number of access points to the site.
	Ensure that road junctions have good sightlines.
	Construction vehicles need to be in a roadworthy condition and maintained throughout the construction phase.
	Develop a traffic management plan with the Luderitz municipal Traffic Department for the center of the town
	Adhere to municipal speed limits and traffic calming measures.
	Implement traffic control measures where necessary.
Noise	Neighbours/ adjacent property owners are to be advised in advance of the commencement of construction.

CONSTRUCTION PHASE IMPACTS	
Impact	Mitigation Measures
	 Establish and publicize a public grievance process and phone number for continuous communication between neighbours and contractor. Limit construction times to legally mandated daylight hours. Install noise reduction technology on construction vehicles and machinery as needed. Do not allow the use of horns as a general communication tool, but use only where necessary as a safety measure.
Dust and Emissions	 It is recommended that dust suppressants such as Dustex be applied to all site clearance activities to ensure at least 50% control efficiency on all unpaved areas, and to reduce water usage. During high wind conditions the contractor should have the discretion to cease works until the wind has abated. Cover any soil stockpiles with plastic or fixers (Dustex) to minimize windblown dust. Provide workers with dust masks and enforce their use.
Waste	 A sufficient number of waste bins should be placed around the site for solid general refuse. A sufficient number of skip containers for heavy waste and rubble should be provided for around the site. Solid waste will be collected and disposed of at the municipal landfill, A site for spoil and rock waste, if it has to be disposed of off-site, should be selected in consultation with the local authority. It should not be located where it could be a visual intrusion in a tourist/ recreational area.
Hazardous Substances	 Storage of the hazardous substances in a bunded area, with a volume of 120 % of the largest single storage container or 25 % of the total storage containers, whichever is greater. Refuel vehicles in designated areas that have a protective surface covering and utilize drip trays for stationary plant.

Table 10-3: Proposed mitigation measures for the operational phase

OPERATIONAL PHASE IMPACTS		
Impact	Mitigation Measures	
Noise	• Continuous monitoring of noise levels should be conducted to make sure the noise levels do not exceed acceptable limits for industrial areas.	
	No activity having a potentially significant noise impact on residential areas should be allowed before 06:00 hours and after 20:00 hours.	

OPERATIONAL PHASE IMPACTS		
Impact	Mitigation Measures	
Airborne Emissions	Monitor ambient air quality on the perimeter of the site at 6-monthly intervals.	
	 Monitoring is to include criteria pollutants: SOx, NOx, PM10, PM2.5 and total particulates (dust fallout) 	
Social Impacts	 A public grievance procedure should be established and publicized, and details of communication channels posted on boards leading to the site's access points Alistair should establish targets for local employment and for vulnerable groups, notably women and youth, in its 	
	recruitment strategy. • Local procurement should be investigated as part of the company's social investment strategy.	

11 ENVIRONMENTAL MANAGEMENT PLAN

An Environmental Management Plan (EMP) is contained in Appendix A of this report. The purpose of the EMP is to outline the type and range of mitigation measures that should be implemented during the construction and operational phases of the project to ensure that negative impacts associated with the development are avoided or mitigated. Decommissioning is included at a very conceptual level only due to the long time horizon involved.

12 CONCLUSION

12.1 Planning And Design Phase Impacts

No planning and design phase impacts were deemed to have a significant impact on the environment. The impacts were assessed to a **Medium to Low (negative)** significance, without mitigation measures. With the implementation of the recommended mitigation measures as well as in the EMP, the significance of the planning and design phase negative impacts is likely to be reduced to a **Low**.

12.2 Construction Phase Impacts

With reference to Table 10-1, none of the negative construction phase impacts were deemed to have a highly significant impact on the environment. The construction impacts were assessed to a **Medium to Low (negative)** significance, without mitigation measures. With the implementation of the recommended mitigation measures, the significance of negative construction phase impacts is likely to be reduced to a **Low**.

12.3 Operational Phase

With reference to Table 10-1, none of the negative operational phase impacts were deemed to have a high significance impact on the environment. The operational impacts were assessed to a **Medium to Low (negative)** significance, without mitigation measures. With the implementation of the recommended mitigation measures, the significance of the operational phase impacts is likely to be reduced to a **Low (negative)**.

12.4 Mitigation Measures

With the implementation of the recommended mitigation measures, the significance of the construction and operational phase impacts is likely to be reduced to **Low**.

It is extremely important that an Environmental Control Officer (ECO) be employed on site during the construction phase to ensure that all the mitigation measures discussed in this report and the EMP are enforced.

It is noted that these mitigation measures and any others identified by MEFT: DEAF could be enforced as

Conditions of Approval in the ECC, should MEFT:DEAF issue a positive decision.

12.5 Level of Confidence in Assessment

With reference to the information available at the project planning cycle, the confidence in the environmental assessment undertaken is regarded as being acceptable for decision-making, specifically in terms of the environmental impacts and risks. The Environmental Assessment Practitioner believes that the information contained within this Final Scoping Report is adequate to allow MEFT:DEAF to be able to determine the environmental acceptability of the proposed project.

It is acknowledged that the project details will evolve during the detailed design and construction phases. However, these are unlikely to change the overall environmental acceptability of the proposed project and any significant deviation from what was assessed in this Final Scoping Report should be subject to further assessment. If this was to occur, an amendment to the ECC may be required in which case the prescribed process would be followed.

12.6 Way Forward

The FESR will be prepared and submitted to MEFT: DEAF for consideration and decision making. If MEFT: DEAF approves, or requests additional information / studies all registered I&APs and stakeholders will be kept informed of progress throughout the assessment process.

13 REFERENCES

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