




Environmental Management Plan (EMP) for the Township Establishment on Block 23, Matutura (Extension 1 -5, Extension 6-12, Proper, Extension 24-25, Extension 27, Extension 29-31, Extension 36-37), Remainder of Portion 5 of Swakopmund Town and Townlands No.41 Erongo Region - 20 April 2017.



March 2021

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<p>Submitted to</p> <div style="text-align: center;">  <p>REPUBLIC OF NAMIBIA MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM</p> <p>Ministry of Environment, Forestry and Tourism The Environmental Commissioners Office Department of Environmental Affairs (DEA) Private Bag 13306, Windhoek, Namibia</p> </div>	

Document Control

Report Title	Environmental Management Plan (EMP) for the Township Establishment on Block 23, Matutura (Extension 1 -5, Extension 6-12, Proper, Extension 24-25, Extension 27, Extension 29-31, Extension 36-37), Remainder of Portion 5 of Swakopmund Town and Townlands No.41 Erongo Region - 20 April 2017.
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	For review by the Ministry of Environment, Forestry and Tourism: Office of the Environmental Commissioner, interested and affected parties and stakeholders.

Document Control Statement:

To ensure that this Environmental and Social Management Plan (ESMP) is kept up-to-date and that the most recent version is used by staff and contractors, its distribution and revision will be controlled.

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Abbreviations

CEMP	Construction Environmental Management Plan
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
DRC	Democratic Resettlement Community
GHG	Greenhouse Gas Emissions
GN	Government Notice
HSE	Health Safety and Environmental
ISO	International Standards Organisation
I&AP's	Interested and Affected Parties
MEFT	Ministry of Environment, Forestry and Tourism
MSDS	Material Safety Data Sheets
NAMBAP	Namibia Planning Advisory Board
SANS	South African National Standard

Definitions of Terms

Term	Definition
Corrective Action	Action to eliminate cause of a detected nonconformity
Duration	Refers to the length of time over which an environmental impact may occur;
Environment	Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, and their interrelation
Environmental Audit	An assessment of the extent to which an organization is observing practices which minimize harm to the environment
Aspect	Element of an organization activities or products or services that can interact with the environment.
Environmental impact	Any change to the environment, weather adverse or beneficial, wholly or partially resulting from an organization aspects
Frequency	the number of times during the project or specific project phase or activity that an environmental effect might occur (e.g., one time or multiple times) in a specified time period
Hazard	Source, situation, or act with a potential for harm in terms of human injury or ill health, or combination of these

Hazard identification	The process of recognizing a hazard in existence and defining its characteristics
Incident	Work-related events in which an injury or ill health or fatality occurred. Or could have occurred
Interested Parties	Person or group, inside or outside the workplace, concerned with or affected by the Integrated management system of an organization
Impact	<p>Any consequence caused by a proposed activity on the environment, including effects on human health and safety, fauna, flora, soil, air, water, climate, landscape, and historical monuments, or other physical structures, or the interaction among those factors.</p> <p>It also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors.</p>
Non conformance	Non-fulfilment of a requirement as per IMS standards, Applicable Rules & Regulations & Client requirements
Ill health	Identifiable, adverse physical or mental condition arising from and/or made worse by a work activity and/or work related situation
Risk	Combination of the likelihood of an occurrence of a hazardous event or exposures and the severity of injury or ill health that can be caused by the event or exposures
Risk Assessment	The process of evaluating the risks arising from a hazards, taking into account the adequacy of any existing controls, and deciding whether or not the risks is acceptable
Occupational Health and Safety	The condition and factors that affect or could affect the health and safety of employees or other workers (including temporary workers and contractor personnel), visitors or any person in the workplace
Preventative Action	The action to eliminate the cause of a potential nonconformity or other undesirable potential situation
Project	The features and activities that are a necessary part of the Project Proponent's development, including all associated facilities without which the Project cannot proceed. The Project is also the collection of features and activities for which authorization is being sought.
Project Site	The (future) primary operational area for Project activities.
Project Footprint	The area that may reasonably be expected to be physically touched by Project activities, across all phases. The Project Footprint includes land used on a temporary basis such as construction laydown areas or construction haul roads, as well as disturbed areas in transport corridors, both public and private.

1. Introduction

The Environmental Impact Assessment (EIA) Regulations as Gazetted in Government Notice (GN) 28,29 and 30 which was promulgated on 6 February 2012 for the Environmental Management Act (EMA) No 7 of 2007, states that land use and development activities as well as construction of infrastructure are listed activities that may not be undertaken without an Environmental Clearance Certificate (ECC).

There is an Environmental Clearance Certificate (ECC) in place issued for the development of the Block 23, Matutura Township and the remainder of Portion 5 of Swakopmund Town and Townlands No 41, Erongo Region and issued on 20 April 2017.

The Northern Blocks or as it is known now as the Matutura township on which land servicing and construction activities takes place, already commenced in 2016 is made up of Extension 1 -5, Extension 6-12, Proper/Block, Extension 24- 25, Extension 27, Extension 29-31, Extension 36-37.

The application is to renew the expired ECC issued on renewal on 20 April 2017 to the Swakopmund Municipality and to rename it accordingly as;

Environmental Clearance Certificate (ECC) for the Township Establishment on Block 23, Matutura (Extension 1 -5, Extension 6-12, Proper, Extension 24- 25, Extension 27, Extension 29-31, Extension 36-37), Remainder of Portion 5 of Swakopmund Town and Townlands No.41 Erongo Region - 20 April 2017.

This document is a framework of the Construction Environmental Management Plan (EMP) for the proposed establishment (land servicing - electrical, water, roads, sewer) and construction of single residential units, general residential units, local business, general business and institutional infrastructure) of Block 23, the Northern Blocks also known as Matutura Township Establishment, Matutura (Extension 1 -5, Extension 6-12, Proper, Extension 24- 25, Extension 27, Extension 29-31, Extension 36-37), Remainder of Portion 5 of Swakopmund Town and Townlands No.41 Erongo Region.

This Environmental Management Plan (EMP) has been developed to ensure environmental management and compliance to the Environmental Management Act (No. 7 of 2007) and its Regulations of 2012 and to mitigate the potential negative occupational health and safety, environmental and socio-economic impacts that the proposed developments could cause during its life cycle stages.

It was prepared from information from the initial baseline assessment study done by Ritta Khiba Planning Consultants for, Matutura extensions in Swakopmund: Fourteen Township Establishments in 2013. "Swakopmund Municipality, NAMPAB and Townships Board for the need and desirability as well as for layout approvals for the township establishments for Matutura, Proper, Extension 1-12 and Swakopmund Extension 37 and 38.

It was also completed from information gathered from knowledge of the sites due to several site visits as well as from experience with EIA's and EMP's reviewed and conducted for other similar developments and literature review.

The assessment concluded that these developments will not pose any long term irreversible threats to the receiving or surrounding environment, health and safety of workers and next door neighbours if, the operations are conducted along the guidelines of this Construction Environmental Management Plan (cEMP).

The document contains practical measures that should be adhered to by the developers of some of these extensions that still needs to be developed and to be enforced by the Municipality of Swakopmund in order to, prevent and mitigate potentially negative impacts on workers, next door neighbours, the community and the receiving environment.

The document also provides for strategies that the regulator the Ministry of Environment, Forestry and Tourism (MEFT) use to monitor for compliance and the provisions of the ECC in order to reduce and mitigate any possible impacts.

As such we humbly appeal to the MEFT to review and approve this cEMP in order to renew and reword the expired Environmental Clearance Certificate for comprehensiveness.

2. Background and Township Information

Ritta Khiba Planning Consultants was commissioned by the Municipality of Swakopmund to formalise the Democratic Resettlement Community (DRC) on Tender 09/2012 to subdivide portions of the remainder of portions 5, 27 and B of Swakopmund Town and Townlands No 41, consolidate and re-subdivide, obtain approval for need and desirability and proceed with township establishment on portions 1 to 13 and remainder which is the Northern Blocks and later renamed Matutura.

Ritta Khiba Planning Consultants submitted the applications for the NAMPAB and Townships Board for the need and desirability as well as for layout approvals for the township establishments of the Matutura Extensions in March 2013.

An application with an Environmental Baseline Assessment for the exemption and release from certain listed activities as contained in the Environmental Management Act No 7 of 2007 was submitted to the Ministry of Environment and Tourism on 3 July 2013 for Environmental Clearance.

An Environmental Clearance was issued to the Municipality of Swakopmund in September 2013 with the subject: Environmental Clearance for the formalisation of the DRC informal settlement, Township Establishment on Erf 184 and Mile 4, Proper as well as portion 90 of the remainder of portion B of Swakopmund town and townlands, Swakopmund, Erongo Region, Namibia.

Communication and an application was submitted to the Ministry of Environment and Tourism on the 11th November 2016 by the Municipality of Swakopmund to change the heading of approval letter in order to reflect the requested recommendation because the Local Authority had problems at the Townships Board with the Environmental Clearance due to the heading not reflecting what has been applied for and approved by the Municipality of Swakopmund and thus being rejected.

Another Environmental Clearance was issued on the 06 June 2014 with the subject: Environmental Clearance for the Environmental Baseline Assessment for the proposed township establishment on Portions A, B, C of the remainder of portions B of Swakopmund Town and Townlands No 41, Erongo Region.

When this ECC expired another application was lodged for renewal and adjustments and a EIA and EMP submitted. The renewal was issued on the 20th April 2017 with the subject; Environmental Clearance Certificate for the Township establishment on Block 23, Matutura, remainder of Portion 5 of Swakopmund Town and Townlands No 41, Erongo.

The Northern Blocks or as it is known now as the Matutura township is made up of Extension 1 -5, Extension 6-12, Extension 24- 25, Extension 27, Extension 29-31, Extension 36-37.

Extensions 1 ,2 6,7,8,9,10,11,27,28,29,30,31,34,35,37 are serviced and most portions build up on with the exception of extensions 3,12,13,18 known as Proper, 24,25 and 36 which are un-serviced and left to be serviced and build up. This application for an ECC and this EMP will be applicable to and shared with those developers for those extensions that still need to be serviced and developed.

The Northern Blocks/Matutura consisted of 2 831 erven earmarked for the low-medium income earners.



Figure 1 Locality map indicating the location of the current township of Matutura, Swakopmund



Figure 2 Locality map indicating the different extensions in Matutura, Swakopmund



Figure 3 Locality map indicating the different extensions in Matutura, Swakopmund

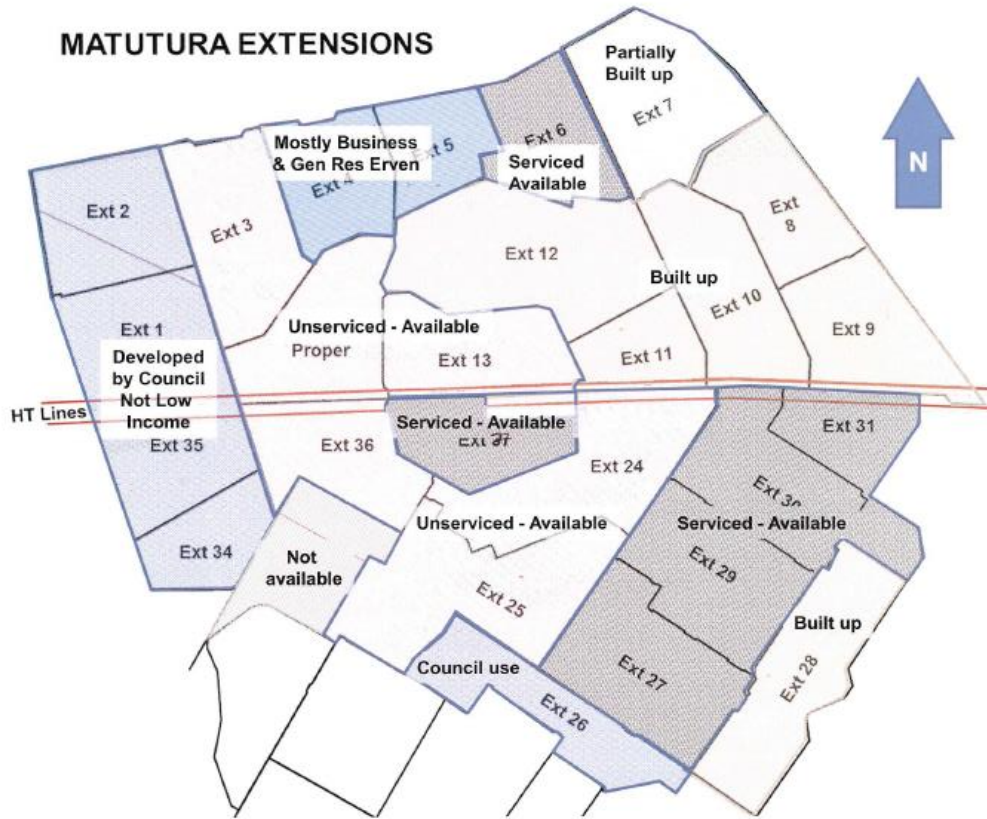


Figure 4 Municipal map indicating the different serviced and un-serviced extensions in Matutura, Swakopmund



Figure 5 Un-serviced portion on the left and serviced portions of Matutura Extensions on the right



Figure 6 Serviced Extension of Matutura



Figure 7 Serviced Extension of Matutura



Figure 8 Un-serviced Extension of Matutura



Figure 9 Un-serviced Extension of Matutura



Figure 10 Un-serviced Extension of Matutura

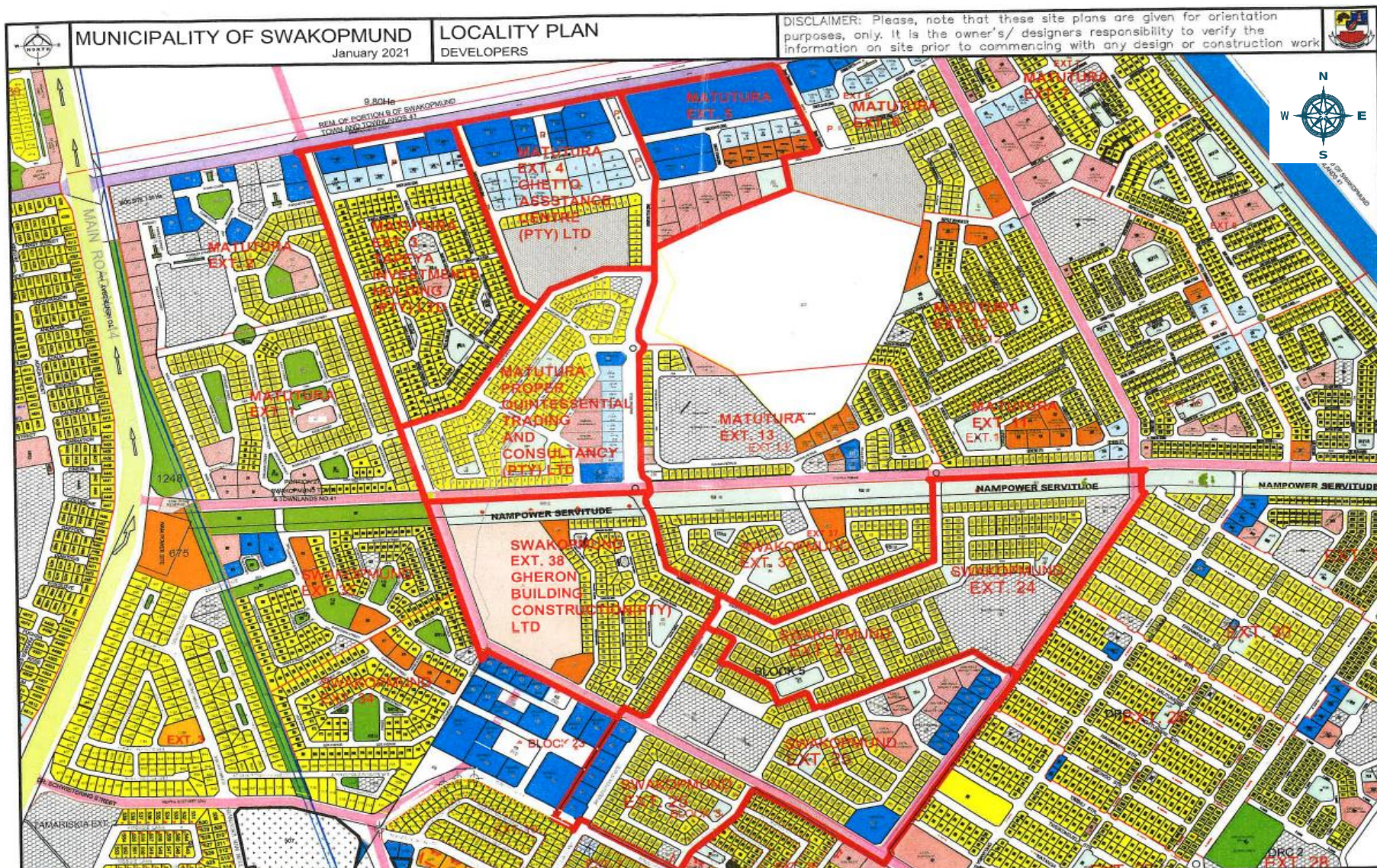


Figure 11 Municipal locality map of Matutura extensions issued to developers

2.1. Existing Environment

Surrounded by the Namib Desert on three sides and the cold Atlantic waters to the west, Swakopmund enjoys a mild desert climate (BWn, according to the Köppen climate classification). The average temperature ranges between 15 °C to 25 °C. Rainfall is less than 20 mm per year. The cold Benguela current supplies moisture for the area in the form of fog that can reach as deep as 140 km inland.

Fogs that originate offshore from the collision of the cold Benguela Current and warm air from the Hadley Cell create a fog belt that frequently envelops parts of the Namib Desert. Coastal regions can experience more than 180 days of thick fog a year and, it is a vital source of moisture for desert life. The fauna and flora of the area have adapted to this phenomenon and now rely upon the fog as a source of moisture.

The Swakopmund area is underlain by rocks of the Damara Sequence, intruded by dolerite dykes of Karoo age. Bedrock occurs on or near-surface in much of Swakopmund's eastern and central suburbs.

A greater part of Swakopmund is located on deep luvio-marine deposits. These deposits consist largely of non-cohesive, granular, gravelly, medium grained sands. The upper surface layer is generally loose, but the medium dense to dense sands are at depths of about 0,5 m.

Examination of soil profiles indicates that the sands generally have a low collapse potential, but the upper loose surface layers are compressible and subject to substantial settlement under load.

Two kinds of drought resistant woody shrubs are predominant in the undisturbed areas behind Mondesa to the North namely the Dollar bush (*Tetraena stapffii*), so-called because of its coin-like round leaves, and the Ink/Pencil Bush (*Arthroa leubnitziae*), with its fine leaves and spindly appearance. The Pencil bush is a hardy scrub seen along the Namibian Atlantic coast and Namib Desert, with small white flowers and small succulent oblong leaves

Both these kinds of plants are indigenous to this habitat and classed as Namibian Endemics. They are well adapted to an area which receives an average of less than 20 mm of rain a year, and then mostly in single downpours. Often there is no rain at all for several years.

Lizards mostly inhabits the cluster of these endemic shrubs.

Also inhabiting these undisturbed areas are lizards and birds which have adapted to the desert environment. The Northern Blocks/Matutura which will be the scope of operations and area of influence is currently partially

inhabitat and the area was minimal vegetation and devoid of any visible animals. Only domesticated dogs and cats are the only visible animals in these location.



Picture 1 The dollar bush (*Zygophyllum stapfii*)



Picture 2 The Ink/Pencil Bush (*Arthroa leubnitziae*),

3. Legal requirements

Below are some of the National legislative framework the developers for the remainder of extensions to be serviced and built on should adhere to.

Relevant Legislation, Regulations and Guidelines	Regulatory authority	Aspects	Summary of legislative provisions	Relevance to the works
Atmospheric Pollution Prevention Ordinance 11 of 1976	Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs	<ul style="list-style-type: none"> • Air quality and GHG • Emissions • Health and safety • Biodiversity • Communities and • Socio-economic 	<p>Section 5 provides that no person may carry on a scheduled process on any premises in a controlled area without a current registration certificate.</p> <p>In addition, no person may erect or cause to be erected any building or plant, which is intended to be used for the purpose of carrying on any scheduled process, unless he is the holder of a provisional registration certificate authorising such building or plant.</p>	Fugitive emissions in the form of dust liberation from civil works will require comprehensive management and monitoring programmes to be in place.
Constitution of the Republic of Namibia 1 of 1990	Government of the Republic of Namibia	<p>Air quality and GHG emissions</p> <ul style="list-style-type: none"> • Non-mineral waste • Water use and quality control • Hazardous materials and contamination • Noise and vibration • Visual amenities • Land use stewardship • Biodiversity 	<p>In Namibia, environmental protection is enshrined in the Constitution and Sustainable development is a cornerstone of Vision 2030.</p> <p>Since 1990, the Government of Namibia has adopted a number of policies that promote sustainable development.</p> <p>Most of these have their roots in the following two articles of the Namibian Constitution: Article 91(c), which</p>	The works needs to fully adhere to the requirements of environmental and ecosystem protection to ensure that the area of influence is maintained for the benefit of current and future generations.

		<ul style="list-style-type: none"> • Heritage and archaeology • Disaster management and risk • Communities and socio-economic • Occupational Health and safety 	<p>defines the functions of the Ombudsman to include:... the duty to investigate complaints concerning the over-utilisation of living natural resources, the irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia ...and Article 95(1), which commits the state to actively promote and maintain the welfare of the people by adopting policies aimed at the:</p> <p>... maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future ...The State is thus committed to actively promoting and maintaining the Environmental welfare of Namibians by formulating and institutionalising policies that can realise the above-mentioned sustainable development objectives. The integration of the principles of sustainable development into national policies in Namibia is supported by various key international, regional and national legal instruments and policy documents.</p>	
Environmental Management Act 7 of	Ministry of Environment,	<ul style="list-style-type: none"> • Air quality and GHG emissions 	Adequate public participation is required as a first step of the	The EIA process described in the act

<p>2007 (and accompanying regulations Government Notice (GN) 29 and 30, Government Gazette (GG) 4878, 6/2/2012;</p>	<p>Forestry and Tourism: Department of Environmental Affairs</p>	<ul style="list-style-type: none"> • Non-mineral waste • Water use and quality control • Hazardous materials and contamination • Noise and vibration • Visual amenities • Land use stewardship • Biodiversity • Heritage and archaeology • Disaster management and risk • Communities and socio-economic • Occupational Health and safety 	<p>environmental assessment process in order for interested and affected parties to give their input and grievances (Section 2(b-c). Protection of Namibia's cultural and natural heritage, including its biological diversity for the benefit of present and future generations (Section 2(d). This section requires that projects with significant environmental impacts are subjected to a thorough environmental assessment process (Section 27).</p>	<p>must be followed such as conducting public participation. This was previously done and since this is an ECC renewal application it is not done due to the scope and extent of the project and justifications have been given in this EMP.</p> <p>An Environmental Clearance certificate is required for the continuation of the land servicing and construction that commenced in 2014 for the remainder of the extensions and this is only issued after successful review and approval of this submitted EMP document.</p>
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Relevant Legislation, Regulations and Guidelines	Regulatory authority	Aspects	Summary of legislative provisions	Relevance to the works
Regional Councils Act No 22 of 1992	Ministry of Urban and Rural Development	<ul style="list-style-type: none"> • Land use stewardship • Communities and socio-economic 	Regional Councils are responsible for the planning and coordination of regional policies and development	They are tasked with the planning, implementation and evaluation of development in their regions and thus the Erongo Regional Council and elected Councillors are Interested and Affected Parties (I&AP's) to these developments
Labour Act 11 of 2007 No. 156 Labour Act, 1992: Regulations relating to the health and safety Of Employees at work	Ministry of Labour, Industrial Relation and Employment Creation: Office of the Labour Commissioner	<ul style="list-style-type: none"> • Health and safety • Hazardous materials and contamination • Noise and vibration • Communities and socio-economic 	<p>The regulations relating to the Health and Safety of Employees at Work contain extremely comprehensive provisions on a wide range of health and safety issues in the workplace of which the following are of relevance to construction activities</p> <p>CHAPTER 1 governs the RIGHTS AND DUTIES OF EMPLOYERS</p> <ul style="list-style-type: none"> • CHAPTER 3 provides for WELFARE AND FACILITIES AT WORK-PLACES. Regulation 30 • CHAPTER 4 contains Comprehensive provisions on the SAFETY OF MACHINERY. • CHAPTER 6 PHYSICAL HAZARDS AND GENERAL PROVISIONS 	The Municipality of Swakopmund is obliged to enforce compliance on developers to implement stringent health and safety and PPE policies.

			<ul style="list-style-type: none"> • CHAPTER 7 MEDICAL EXAMINATIONS AND EMERGENCY ARRANGEMENTS • CHAPTER 8 CONSTRUCTION SAFETY 	
<p>South African National Standard (SANS) –Code of Practice, SANS 10103:2008, The measurement and rating of environmental noise with respect to annoyance and to speech communication, and as required by the regulations of the South African Department of Environmental Affairs and Tourism (DEAT), No 154 Noise Control Regulations in Terms of Section 25 of the Environmental Conservation Act, 1989 (Act No 73 of 1989), Govt Gaz. No.</p>	<p>Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs</p> <p>The Municipality of Swakopmund: Environmental Health Department</p>	<ul style="list-style-type: none"> • Health and safety • Noise and vibration • Communities and socio-economic 	<p>Noise nuisance means any sound which disturbs or impairs, or is likely to disturb or impair the convenience, peace, safety or health of any person residing within municipal areas</p>	<p>Developers should ensure that noise emissions from their operations comply with the requirements of these Regulations and Code of Practice</p>

Relevant Legislation, Regulations and Guidelines	Regulatory authority	Aspects	Summary of legislative provisions	Relevance to the works
National Heritage Act 27 of 2004	National Heritage Council	<ul style="list-style-type: none"> • Heritage and archaeology • Communities and socio-economic 	<p>In terms of Section 57 (7) no person may without a permit:</p> <p>(a) use an archaeological or palaeontological object or meteorite for the purpose of study, conservation or presentation;</p> <p>(b) uncover or expose, or move from its original position, any archaeological or palaeontological object or meteorite;</p> <p>(c) carry out an investigation or survey of any land for the purpose of finding any archaeological or palaeontological object or meteorite;</p> <p>(d) alter or develop any land on or in which an archaeological or palaeontological site or a meteorite is believed to be located;</p> <p>(e) carry out an act likely to endanger an archaeological or palaeontological object or meteorite;</p>	<p>Developers should ensure that if any archaeological or palaeontological objects as described in this Act are found in the course of its construction operations or closure that such find be reported to the relevant Ministry immediately. If necessary the relevant permits must be obtained before disturbing or destroying any object of heritage significance as envisaged by this Act.</p>
Road Traffic and Transport Act 22 of 1999; (as amended by the Road Traffic and Transport Amendment Act 6 of 2008)	Municipality of Swakopmund	<ul style="list-style-type: none"> • Air quality and GHG emissions • Hazardous materials and contamination • Disaster management and risk • Communities and socio-economic • Health and safety 	<p>In terms of Section 64 the operator of a motor vehicle shall, inter alia ensure that the conveyance of dangerous goods is undertaken in accordance with such requirements as are prescribed by or under this Act or any other law pertaining to such goods.</p>	<p>Construction activities must comply with these regulations for safe transportation methods of plant and equipment to work sites.</p>

Relevant Legislation, Regulations and Guidelines	Regulatory authority	Aspects	Summary of legislative provisions	Relevance to the works
The Pollution Control and Waste Management Bill, 1999	Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs	<ul style="list-style-type: none"> • Water use and quality control • Hazardous materials and contamination • Noise and vibration • Visual amenities • Land use stewardship • Biodiversity • Heritage and archaeology • Disaster management and risk • Communities and socio-economic • Occupational Health and safety 	The Bill aims to promote sustainable development; to prevent and regulate the discharge of pollutants to the air, water and land, to regulate noise, dust and odour pollution, to make provision for the establishment of an appropriate framework for integrated pollution prevention and control, to establish a system of waste planning and management and to enable Namibia to comply with its obligations under international law in this regard	There will be discharge of pollutants to the air, water and land, generation of noise, dust and odour pollution during the civil works and construction phases and this must be reduced to as low as reasonably possible if it cannot be mitigated

Relevant Legislation, Regulations and Guidelines	Regulatory authority	Aspects	Summary of legislative provisions	Relevance to the works
Public Health Act 36 of 1919	Ministry of Health and Social Services Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs	<ul style="list-style-type: none"> • Air quality and GHG emissions • Hazardous materials and contamination • Noise and vibration • Disaster management and risk • Communities and socio-economic • Health and Safety 	Section 132: empowers the Minister to make regulations regarding, inter alia, the drainage of land or premises, the disposal of liquids and the removal and disposal of rubbish, refuse, manure and waste matters as well as regarding the establishment and carrying on of factories or trade premises which are liable to cause offensive smells or effluvia or to discharge liquid or other material liable to cause such smells or effluvia or to pollute streams and prohibiting the establishment or carrying on of such factories in unsuitable localities. Section 119: no person shall cause a nuisance on any premises owned or occupied by him. Offensive smells or effluvia and excessive smoke are deemed to be nuisances.	Relevant for the purposes of land development activities and the provisions of the Act that regulate trades which are liable to cause offensive smells and nuisances and in this case will be dust and noise as well as management of Covid-19 Regulations and protocols

Relevant Legislation, Regulations and Guidelines	Regulatory authority	Aspects	Summary of legislative provisions	Relevance to the works
Soil Conservation Act 76 of 1969 (as amended in South Africa to March 1978)	Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs	<ul style="list-style-type: none"> Water use and quality control Land use stewardship Biodiversity 	In terms of section 3 of the Act, the Minister of Agriculture, Water and Forestry ("the Minister") may either by written notice in the Gazette or by written notice to the owner or occupier of land issue directions in respect of, inter alia: (a) the drainage of vleis, marshes, natural water sponges and water courses; (b) the protection and stabilising of barrier dunes on the coast, of other dunes where drift sand occurs or may occur and of the vegetation occurring thereon; (c) the prevention of erosion, the denudation, disturbance or drainage of land; and (d) any other disturbance of the soil which creates or may create conditions which cause or may cause any form of erosion or pollution of water by silt or drift sand.	Land servicing activities may impact on conditions which cause or may cause erosion and will be obliged to comply with any such directions as may be issued by the Minister in terms of this Act. Storm water draining infrastructure needs to be installed and managed accordingly.
Tobacco Products Control Act No 1 of 2010	Ministry of Health and Social Services (MHSS)	<ul style="list-style-type: none"> Community health Fire safety 	prohibited distance of smoking tobacco products from public places and workplaces	By law you may not smoke next to others or shared public spaces and workplaces. For fire safety management smoking is banned from some work areas.

Relevant Legislation, Regulations and Guidelines	Regulatory authority	Aspects	Summary of legislative provisions	Relevance to the works
Social Security Act 34 of 1994	Social Security Commission Ministry of Labour	<ul style="list-style-type: none"> Disaster management and risk Communities and socio-economic Health and safety 	<p>This Act provides for the payment of maternity leave benefits, sick leave benefits and death benefits to employees and pension benefit to retired employees.</p> <p>The act applies in relation to every employer, and employee.</p> <p>The Act requires that, every employer, in the prescribed manner and period, registers himself or herself with the Commission as an employer and every employee employed by him or her.</p>	Developers are required to register and pay contributions to the Social Security Commission for all their current and future employees.
Water Act 54 of 1956		<ul style="list-style-type: none"> Mineral waste Non-mineral waste Water use and quality control Hazardous materials and contamination Land use stewardship Biodiversity Disaster management and risk Communities and socio-economic 	<p>This Act provides for the control, conservation and use of water for domestic, agricultural, urban and industrial purposes and for the control of certain activities on or in water in certain areas.</p> <p>The user of water for industrial purposes must furnish the Department of Water Affairs in writing with those particulars regarding the use and disposal of purified or treated water as may be prescribed by regulation (section 21(1)(c)).</p>	<p>Municipal water supplies and discharge will be to the Municipal sewer.</p> <p>Any effluent produced will have to be treated in accordance with requirements set out in section 21(1) and (2) of the Act.</p> <p>The applicable standards for Namibia are those which were promulgated by the Minister by Notice in the Gazette in 1962 (R553 Regional Standards for Industrial Effluent, in Government Gazette No 217 dated 5 April 1962).</p>

				Should waste water be discharged, a permit is required. Developers and contractors are obliged to have a comprehensive plan in place to avoid the pollution of ground water.
Water Resources Management Act 24 of 2004		<ul style="list-style-type: none"> • Mineral waste • Non-mineral waste • Water use and quality control • Hazardous materials and contamination • Land use stewardship • Biodiversity • Disaster management and risk • Communities and socio-economic 	This was enacted to replace the Water Act 54 of 1956, which is generally outdated, with a view to reforming the use and management of Namibia's water resources. However, this Act has not yet been put into force. Similar to the 1956 Act, even though the main thrust is geared at freshwater. 56 to 71) which deals with Water Pollution Control stipulates that a person may not discharge effluent directly or indirectly to any 'water resource' unless such person is in compliance with a permit issued in terms of section 60. The term 'Effluent' is defined to mean "...any liquid discharged as a result of domestic, commercial, industrial or agricultural activities".	This Act has yet to enter into force. As such, the provisions of the Water Act 54 of 1956 regarding pollution of water still apply. See comments above for the Water Act 54 of 1956.

4. Construction Environmental Management Plan (cEMP)

The purpose of a construction environmental management plan is to outline how a construction project will avoid, minimise or mitigate effects on the environment and surrounding area.

This CEMP has been drawn up to give guidance on how to address environmental, health and safety and social risks relating to the township establishment of the remaining Matutura extensions.

It is relevant to those extensions that still needs to serviced and construction to take place on as it, summarizes the mitigation and control measures that the Municipality of Swakpomund must enforce on developers and developers on contractors.

The cEMP details the implementation of mitigation measures in accordance with environmental commitments outlined in the environmental management plan, requirements of planning conditions, or other legislative requirements. This is a 'live' document that will be reviewed and updated at regular intervals throughout the project life cycle.

4.1. Structure of the cEMP

This main structure of this cEMP will be according to the chapters below;

- Framework/Design Phase EMP which includes the Site Establishment and provide pre-construction information as soon as is practicable
- Construction Phase EMP- ensures that a construction phase plan is drawn up by the contractor if there is only one contractor, or by the principal contractor if there is more than one contractor
- Operational Phase EMP –the daily management and excution of the planned activities
- Closure/Aftercare Restoration and Rehabilitation Phase EMP – is a site specific plan to ensure that appropriate environmental management practices during the wrapping up of works and site cleanup.

4.2. Purpose

The purpose of this construction environmental management plan is to;

- Highlight stakeholder requirements.
- Ensure that the development is compliant with current environmental legislation;
- Outline Environmental Management System requirements (in accordance with ISO 14001:2015);
- Identifying those construction activities that may have a detrimental impact on the environment;
- Detailing the mitigation measures that will need to be taken, and the procedures for their implementation;
- To protect the environmental, cultural and social values of the area and surrounds which could potentially be affected during both the construction and operation phases.
- Ensure that any adverse effects are minimised during construction;
- Describe any site-specific method statements required;
- Outlines the communications including external and internal to be utilised

The EMP also serves to highlight specific requirements that will be monitored during the development and should the environmental impacts not have been satisfactory prevented or mitigated, corrective action will have to be taken.

The document should, therefore, be seen as a guideline that will assist in minimising the potential environmental impact of activities

4.3. Scope

The initial focus of this cEMP is to meet regulatory compliance of the Environmental Management Act No 7 of 2007 and its Regulations and, the protection of staff, next door neighbours, the environment and traffic management due to, an increase in activities under the direct control of developers and area of influence where activities may give rise to significant impacts on the social and natural environment.

The applicable subject areas are Air quality, Water quality and drainage, Noise and vibration, Geology and soils, Landscape and visual impact, Nature conservation, Archaeology and cultural heritage, People and communities, Waste, Energy, Transport and Materials.

The EMP will focus on and operate during the whole implementation / construction period and maintenance phase of the projects.

4.4. Roles and Responsibilities

Supervision and monitoring are fundamental to the successful implementation of an EMP. Therefore, it is vital that monitoring of the extent to which the mitigation measures of this EMP, are adhered to by consultants and contractors, takes place.

All of the issues described and discussed in this document will require monitoring, and it will be the responsibility of Developers and Principal Contractors to undertake this monitoring according to the specifications of this EMP.

- To draft and implement a monitoring programme to assess compliance with the EMP.
- To appoint a Health, Safety and Environmental Officer (HSEO) during the Construction Phases.
- To undertake the monitoring of operations during the operational phase.
- Any problems that are identified or encountered must be reported to Developers and Principal Contractors management so that appropriate action may be taken to rectify the situation.

4.4.1. Developers

The developers will be responsible for ensuring that;

- The environmental policy is communicated to all personnel throughout the proposed projects and ensure that employees, contractors and visitors understand and adhere to the cEMP.
- Responsible for providing the required resources (including financial and technical) to complete the required tasks.
- Appoint Project Managers and Site Manager for the various areas of construction.
- All employees, contractors and visitors are inducted on occupational, health, safety, environmental, site security and social issues.
- The entire project teams, including contractors, comply with the requirements as set out in this cEMP.
- All employees are provided with sufficient training, supervision, and instruction to fulfil this requirement and;

- Any employees allocated specific environmental responsibilities are notified of their appointment and confirm that their responsibilities are clearly understood.

4.4.2. Project Managers

Project managers will play the lead role in planning, executing, monitoring, controlling and closing projects and also ensure that;

- Adequate financial and human resources are made available for implementation of this cEMP.
- Compliance with this cEMP including overseeing all day to day activities during the duration of the project, including routine and non-routine maintenance works, as well as decommissioning tasks.
- Responsible for the management, maintenance and revisions of this cEMP.
- All personnel are aware of the commitments made in this cEMP and any other relevant regulatory requirements applicable to the project.
- All employees and contractors participate in a site induction process prior to commencing work on the project at all times.
- Maintain the community issues and grievance registers, and keep records of complaints.
- Ensure that best environmental practice is undertaken throughout the duration of the projects and
- Report any non-compliances or accidents to the Municipality and the regulatory authority.

4.4.3. Site Managers

Site managers are responsible for preparing sites prior to the commencement of construction work. This includes setting out the site and organising activities. They will plan projects and ensure that they meet agreed specifications budgets and timescales in addition to ensuring that;

- All employees, contractors and visitors to the site are conversant with the requirements of this cEMP, relevant to their roles on site and adhere to this cEMP at all times.
- Provide environmental awareness / management training and site inductions for all employees, contractors and visitors.
- Monitor daily operations and ensure adherence by personnel to the cEMP.
- Receive, respond to and record complaints and
- Report any non-compliance or accidents to the Project Managers.

4.4.4. Contractors and sub-contractors

All contractors will be answerable for guaranteeing and proving that all personnel employed by them are compliant with this cEMP and be responsible for;

- Undertaking activities in accordance with this cEMP as well as relevant policies, procedures, management plans, statutory requirements, and contract requirements.
- Implement appropriate environmental and safety management measures.
- Report environmental issues, including actual or potential environmental incidents and hazards, to the Project Managers and;
- Ensure appropriate corrective or remedial action is taken to address all environmental hazards and incidents reported.

4.4.5. Employees, service providers and visitors

Will be required to comply with the requirements of this this cEMP throughout the project whilst onsite in addition to;

- Adhering to this cEMP at all times.
- Ensure attendance of site inductions.
- Ensure appropriate sessions for certain activities have been attended and are fully understood and;
- Report any operations and conditions that stray from the cEMP or any non-compliant issues or accidents to the Site Managers and Project Managers.

4.4.6. Appointment of a Health, Safety and Environmental Officer

The position of Health, Safety and Environmental Officer (HSEO) has been created to ensure that the mitigation measures and other requirements set forth in the EMP are adhered to.

It is recommended that Developers and Principal Contractors appoint an HSEO during the construction phase of the project.

The following guidelines apply to the functions of an HSEO:

- The HSEO should have the ability to understand the contents of the Environmental Management Plan (EMP) and explain it to the

contractor, the site staff, the supervisors and any other relevant personnel or I&AP's.

- The HSEO would have to be on site on a regular basis preferably daily to supervise environmental actions associated with construction activities.
- The HSEO should be able to understand, interpret, monitor, audit and implement the EMP. This is his most important function.
- The HSEO must then give feedback of the audits to Developers and Principal Contractors and Contractors. This must be in the form of a written report.
- The HSEO must ensure that the contractor understands what is to be done to rectify and address any problems that have arisen from the audit.

5.Environmental Management Plan

5.1. Framework/Design Phase EMP

The design phase or site establishment ESMP information should be reasonably obtainable by or on behalf of the developers and Principal contractors, which is relevant to the construction work and is of an appropriate level of detail and proportionate to the risks involved, including information about:

- The project.
- Planning and management of the project.
- Health and safety hazards, environmental aspects including design and construction hazards and how they will be addressed.
- Information in any existing health and safety file
- This should be implemented from site establishment to completion during the construction phase

Aspects and hazards	Impacts	Mitigation/Management Action (objectives and targets)	Responsible Party
Key personnel identification	<ul style="list-style-type: none"> • Delays in reporting incidents and accidents 	<ul style="list-style-type: none"> • Provide details of key personnel such as; supervisors, safety officers, first aiders, fire marshals, and so on. 	Principal contractor Contractors
Roles and responsibilities	<ul style="list-style-type: none"> • Construction site safety • Project delays • Cost overruns • Confusing and uncertainty 	<ul style="list-style-type: none"> • Contractor will be responsible for planning, leading, executing, supervising and inspecting the building construction project. The responsibility extends from the beginning to the end of the project, regardless of its scope and ensuring the project follows local standards and laws • The contractor must guarantee health and safety in the construction site, by implementing adequate procedures and raising awareness among workers. The contractor is also responsible for the proper operation of equipment and preventing any accidents from misuse. 	Owner or client, The management team, and the contractor

		<ul style="list-style-type: none"> The contractor deals with any emergencies and unforeseen issues at the project site, and must report them to the client's supervision staff. 	
Boundaries and access	<ul style="list-style-type: none"> Disputes Unauthorised access Injuries or fatalities Theft and vandalism 	<ul style="list-style-type: none"> Put in place strictly-defined boundaries comprising fences, hoardings and gates. These not only deter thieves and intruders, but also to protect the public from inadvertently straying into a potentially dangerous area. Temporary buildings may be designed to extend right up to boundary lines or be limited by building regulations to be sited a minimum distance away. 	Principal contractor
Site layout	<ul style="list-style-type: none"> Inappropriate storage which can result in damage to products and materials. Poor siting of plant. Poor siting of welfare facilities. Inadequate space provision. Unsatisfactory access. Security and safety issues. Poor wayfinding (due to complex layouts or inadequate signage). Demoralised workers, delays and increased costs. 	<p>Before construction can begin, all Contractors shall submit a site layout plan to the HSEO for approval, including:</p> <ul style="list-style-type: none"> Site access (including entry and exit points). All material and equipment storage areas (including storage areas for hazardous substances such as fuel and chemicals). Construction offices and other structures. Security requirements (including temporary and permanent fencing, and lighting) and accommodation areas for security staff. Solid waste collection facilities and waste treatment facilities for litter, kitchen refuse, sewage and workshop-derived effluents. Storm water control measures. Provision of potable water and temporary ablution facilities. Only designated areas may be used for the storage of materials, machinery, equipment and site offices. The site offices should not be sited in close proximity to steep areas, as this will increase soil erosion. Preferred locations would be disturbed areas along routes. Offices (and in particular the ablution facilities, aggregate stockpiles, spoil areas and hazardous material stockpiles) must be located as far away as possible from any watercourse/waterway. Regardless of the chosen site, the Contractor's intended mitigation measures shall be indicated on the plan. Determining the sizes, and other constraints of those facilities. 	Principal contractor HSE Officer

Aspects and hazards	Impacts	Mitigation/Management Action (objectives and targets)	Responsible Party
Site rules	<ul style="list-style-type: none"> Injury to person or property 	<ul style="list-style-type: none"> Establishing the inter-relationships between the facilities. Optimising the layout of the facilities on the site. Site rules on Personal protective equipment, Parking, Use of radios and mobile phones, Smoking, Restricted areas, Hot works and Emergency arrangements ect to be put in place Site rules should be clear and easily understandable and should be brought to the attention of everyone on site that is expected to follow them. They might be communicated during site inductions, and details of site rules should be included in the construction phase plan. 	Principal contractor HSE Officers
Safety induction	<ul style="list-style-type: none"> Injury to person or property 	<ul style="list-style-type: none"> Principal contractors ensure suitable site inductions are provided. Workers on construction sites are fully informed about the organisation and operation of the site and of their responsibilities Contractors must provide each worker under their control with appropriate supervision, instructions and information so that construction work can be carried out, so far as is reasonably practicable, without risks to health and safety, and that this must include a suitable site induction, where not already provided by the principal contractor. Site inductions should be proportionate to the nature of the visit; escorted visitors need not have the level of detail that unescorted visitors should have. 	Principal contractor Sub-contractor HSE Officers
Safety signs	<ul style="list-style-type: none"> Injury to person or property 	<ul style="list-style-type: none"> Provide and erect prohibition, warning, mandatory, fire safety, emergency escape, or first aid signs Erect clearly visible signs that do not confuse readers Fire exit signs should be displayed immediately above or near to the exit opening, 	Principal contractor
Communication and liaison	<ul style="list-style-type: none"> Internal and external grievances 	<ul style="list-style-type: none"> Establish a chain of command for communication on a construction project 	Principal contractor Contractors

	<ul style="list-style-type: none"> Misunderstandings, delays and issues down the road 	<ul style="list-style-type: none"> Establishing a clear line of communication that includes identifying points of contact with contact information for key team members Contract documents, including the drawings, specifications, change order forms and requests for information establish the basis for all construction communication and must be in place Avoid using jargon or terms that the people you are communicating with might not understand. Avoid using foul language or allowing your emotions to impact your message Put in place a grievance, internal and external communications policies and procedures 	
Security	<ul style="list-style-type: none"> Theft, Violence and Vandalism 	<ul style="list-style-type: none"> Erect temporary structure of solid construction, erected around the perimeter of construction sites to shield them from view and prevent unauthorised access Roving security guards to be appointed and on duty during high construction periods. Shipping containers with locks to be procured to store materials and inventory Site offices and welfare facilities with locks to be procured 	Principal contractor
Site hoarding and billboard	<ul style="list-style-type: none"> Injury to person or property Unauthorised access to site 	<ul style="list-style-type: none"> Erect information boards displaying visual information on the project taking place as well as minimum PPE required to come onsite and contact details of key site staff Erect temporary structure of solid construction, erected around the perimeter of construction sites to shield them from view and prevent unauthorised access Minimum height of 2.4 m and form a barrier around the perimeter of a site Visual break between the local environment and the construction site will be put in place No unauthorised pedestrian or vehicular access shall be allowed into fenced, off-limit areas. Fencing shall be kept neat at all times. The Contractor shall be responsible for the maintenance of all fences. 	Principal contractor

		<ul style="list-style-type: none"> • If fencing is removed temporarily for the execution of work, the Contractor shall reinstate it as soon as practicable. • Until re-instatement, the contractor shall demarcate the working area by surrounding it with danger-tape marking. • Breaches in the fencing must be repaired immediately. • The purpose of the fenced areas is to control construction and personnel activity within the designated areas, and limit unauthorised access. 	
Welfare facilities	<ul style="list-style-type: none"> • Non-compliance to the Labour Act No 11 of 2007 and its Regulations relating to the health and safety Of Employees at work • Flouting workers rights and needs 	<ul style="list-style-type: none"> • The principal contractor should provide for Sanitary conveniences, Washing facilities, Drinking water, Changing rooms and lockers and Facilities for rest before any construction work starts and for the duration of the construction work • The principal contractor should liaise with other contractors involved in the project to ensure appropriate welfare facilities are provided. • This should continue throughout the construction phase to take account of any changes which might change the requirement for the provision of welfare facilities. 	Principal contractor Sub-contractors
Fire precautions and smoking restrictions	<ul style="list-style-type: none"> • Injury and fatalities to workers • Damage and destruction to property • Pollution of the environment 	<ul style="list-style-type: none"> • Enforcement of Tobacco Products Control Act No 1 of 2010 • Do not smoke in areas of high fire risk or chosen 'no smoking' areas. • Dispose of matches and cigarette butts cautiously. • Control all hot works by a permit to work system to make certain that risks are effectively controlled. • Before beginning hot works make sure the nearby region is free of flammable material. 	HSE Officers
Emergency procedures	<ul style="list-style-type: none"> • Injury to person or property • Fatalities • Operations interruptions and work stoppages 	<ul style="list-style-type: none"> • Develop an emergency plan so that quick and effective action can be taken in the event of a problem to ease the severity of the situation and to limit the consequences. • The plan should include serious injuries, explosion, flood, poisoning, electrocution, fire, chemical spill, structural collapse, Covid-19 etc. • The plan should comprises agreed, recorded and rehearsed strategies, enabling those on site to respond effectively and reliably. 	HSE Officers

		<ul style="list-style-type: none"> The emergency plan should identify the emergency resources that can be called upon if necessary, and estimated response times, based upon distances from fire stations, hospitals, and so on. The plan should also identify on-site resources such as fire extinguishers, spills containment equipment, first aid equipment, and so on. On-site first aiders and other medical staff should be identified. 	
Aesthetic and Visual Pollution	<ul style="list-style-type: none"> Distortion of the visual character of the natural surroundings harmful changes in the natural environment. oversaturation of anthropogenic visual information within the landscape Value degradation of properties 	<ul style="list-style-type: none"> Avoid the excessive use of physical advertising Avoid waste production Lower consumption levels Reduce site traffic Signs against littering Build structures that fit into the surroundings Higher fines and better control mechanisms regarding vandalism 	Principal contractor HSE Officers
Site transport, parking restrictions and traffic impacts	<ul style="list-style-type: none"> Injured or fatalities as a result of being struck by moving plant vehicles or their loads striking people, particularly when reversing vehicles striking services and obstructions manufacturers instructions for safe use being disregarded inadequate training of drivers and signallers; and 	<ul style="list-style-type: none"> Planning and managing vehicle operations on construction sites Organise construction sites so that vehicles and pedestrians using site routes can move around safely. The routes need to be suitable for the persons or vehicles using them, in suitable positions and sufficient in number and size Provision and maintenance of safe workplaces, safe vehicles, safe drivers and safe work practices. Selecting and maintaining vehicles; and Implementing safe driving and working practices. Provide car and van parking for the workforce and visitors away from the work area; Control entry to the work area; and Plan storage areas so that delivery vehicles do not have to cross the site. 	Principal contractor HSE Officers

	<ul style="list-style-type: none"> • unsafe loading and transportation of materials on vehicles. • Obstruction of adjacent roads • Increased heavy mobile equipment traffic in neighbourhood • lost productivity, • added project costs, and • bad public relations with the surrounding communities. 	<ul style="list-style-type: none"> • Employers should take steps to make sure that all workers are fit and competent to operate the vehicles, machines and attachments they use on site • The need for vehicles to reverse should be avoided where possible as reversing is a major cause of fatal accidents. • Install turning circles so that vehicles can turn without reversing. • Make sure that all drivers and pedestrians know and understand the routes and traffic rules on site. Use standard road signs where appropriate • Provide induction training for drivers, workers and visitors and send instructions out to visitors before their visit. • Install aids for drivers, plant and vehicle marshalls, lighting and pedestrians on site should wear high-visibility clothing 	
Existing services	<ul style="list-style-type: none"> • Damage to existing services such as electrical cables, water lines, sewerage lines and telecommunication cables are often damaged when excavations are being carried out on construction projects. 	<ul style="list-style-type: none"> • Obtain all the necessary permits before excavating, drilling, cutting into, or demolishing structures • Ensure all the known services are located • Clearly mark these services • Protect the services where possible • Ensure all newly installed services are clearly marked on the ground and on drawings • Ensure workers are aware of the services and take precautions not to damage them • Clearly highlight the risk of damaging the services in risk assessments and at prestart meetings • Use personnel that are adequately trained and competent, so they don't accidentally operate a machine in a way that damages a service 	Principal contractor Contractors HSE Officers
Water supply	<ul style="list-style-type: none"> • Sanctions • Penalties and fines • Community compliants 	<ul style="list-style-type: none"> • Water supply pipelines will be according to contract specifications, following the most direct, yet most ecologically responsible route agreed to with the engineer and as per contract documentation • Point out to contractors where they can obtain water (e.g. water for mixing of cement as well as for drinking). 	Principal contractor Contractors HSE Officers

		<ul style="list-style-type: none"> Contractors shall not make use of/collect water from any other source than those pointed out to them as suitable for use by them. 	
Ground conditions and existing structures	<ul style="list-style-type: none"> Pollution on health, the natural environment or general amenity, and the potential sensitivity of the area Cost overruns Escalation of insurance costs 	<ul style="list-style-type: none"> Conduct a thorough investigation and assessment of ground conditions and stability: <p>The following conditions might be considered:</p> <ul style="list-style-type: none"> General landforms. Flood risk. Historical or present risk of landslides or subsidence. Soil types. Drainage and run-off. The proximity of the site to any proposed buildings or excavations. The presence of any expansive clays. The historic use of the site such as buried structures, contamination, earthworks and uncompacted fill. 	Principal contractor Contractors HSE Officers
Authorisation requirements	<ul style="list-style-type: none"> Risk of harm to those who have to build, use and maintain structures Fines, penalties and sanctions 	<ul style="list-style-type: none"> Obtain construction permits before commencing work from the Municipality of Swakopmund Submi the site waste management, Health, Safety and Environmental Management Plan to the Municipality fo Swakopmund All houses to be build must have approved building plans from the building control department of the Municipality of Swakopmund Inform other bodies that work is going to begin such as emergency services, utility providers, next door neighbours, suppliers and subcontractors, iInsurers, funders and telecommunication providers 	Principal contractor Contractors HSE Officers
Confined spaces	<ul style="list-style-type: none"> Inhalation of dust, toxic substances, Electrocutions, Explosions, and Asphyxiation. 	<ul style="list-style-type: none"> Communications from the host employer to the contractors regarding the existence and nature of confined spaces on site as well as from the contractors to the host employer regarding the contractors' confined space policies as well as what hazards they encounter during entry must be put in place 	Principal contractor Contractors HSE Officers

		<ul style="list-style-type: none"> • Competent people must be appointed to evaluate the work site and identify confined spaces, including permit spaces. • Where engulfment is possible from water or other flowable material monitoring must be implemented and, can be mechanical or it could be a person continuously observing the conditions who has direct communication with the entrants/attendant. • Workers that enters a confined space must be protected by eliminating the hazard or using isolation methods such as lockout/tagout. 	
Issues relating to plant and equipment	<ul style="list-style-type: none"> • Public safety, employee safety • Programme, lead times and continuity of use. • Crane zones and lifting operations • Emissions • Storage and theft • Insurance • Power and fuel • Maintenance and breakdowns • Standards and regulations • Nuisance (noise, vibration, dust etc • Logistics, access, segregation and diversions. 	<ul style="list-style-type: none"> • Prevent nuisance in the operation of construction plant, in particular in relation to encroachment onto neighbouring sites, damage to neighbouring property, noise, vibration, dust, mud, disruption to traffic and so on. • Careful planning and the strict application of site rules to contractors and sub-contractors must be enforced to help alleviate such problems, with particular consideration given to; hours of operation, transport routes, washing down of vehicles, damping dust, the provision of hard surfaces for vehicles, the provision of information and help lines and so on. 	Principal contractor Contractors HSE Officers
Housekeeping and waste management	<ul style="list-style-type: none"> • Creation of additional hazards and danger • Slips, trips and falls • Injuries and fatalities • Work area obstructions 	<ul style="list-style-type: none"> • Employees should report any hazards on the construction site to their supervisor. • Keep all walking and working surfaces clean and clear of debris. Clean as you go to prevent build-up of debris and to minimize the amount of time needed to clean a larger mess at the end of the day. 	Principal contractor Contractors HSE Officers

		<ul style="list-style-type: none"> Identify designated areas for storing tools and materials. Out-of-place objects such as leaning wood, plywood and other materials can cause trips and falls. Stack materials orderly and secure them so they won't fall. Extension cords and airlines should be elevated, if possible, out of walkways, or covered with lumber or plywood. When not in use, coil up and neatly store. Noncombustible scrap material and debris that consist of form and scrap wood with protruding nails, and all other debris, must be kept cleared from work areas, passageways, and stairs, and from around buildings or other structures. Combustible scrap materials and debris must be removed at regular intervals during the course of construction without increasing the hazard exposure to employees who remove such debris. All construction waste must first be collected into containers before disposal. These wastes include General Waste and Trash (nontoxic, non-hazardous) and Hazardous Wastes. Separate containers must be provided for the collection and separation of waste, trash and other refuse. Additional separate containers must be provided with lids for hazardous wastes to prevent sparks or other ignition sources from coming into contact with hazardous wastes. Hazardous Wastes can include used oil, used oil filters, oily rags and flammable wastes as well as caustics, acids, harmful dusts, etc. 	
Liqued Waste	<ul style="list-style-type: none"> Soil pollution Nuisance Attraction of Pests 	<ul style="list-style-type: none"> No effluent will be treated on site. Portable toilets will be provided for the construction teams A timetable for the emptying of these toilets will be obtained from the Municipality with their septic tank effluent removal truck 	Principal contractor Contractors HSE Officers
Socio-economic impact	<ul style="list-style-type: none"> High economic growth Provision of decent jobs and cultivating new skills Shelter and security 	<ul style="list-style-type: none"> Main construction and installation contractors (including their sub-contractors) used Developers will be required to develop and implement their own Employee Relations Management Plan (ERMP) beneficial to the local labour pool 	Principal contractor Contractors HSE Officers

	<ul style="list-style-type: none"> • Sense of community • Anti-Social Behaviour • Social Conflict 	<ul style="list-style-type: none"> • Measures will be implemented by main construction and installation contractors to maximise employment as far as practical from the local communities • Information will be provided to the local communities by main construction and installation contractors on the nature and levels of employment required; • At all times the individual recruited will be the person who is most suited to the particular post, based on the applicant's abilities, qualification, experience and merit as measured against the job description and person specification • A grievance procedure for managing all community complaints related to the recruitment process will be established. All employment-related grievances, including those associated with recruitment processes, will be recorded and reported, along with details of measures taken to resolve concerns raised; • Employee awareness campaigns to encourage workers to use the income gained from employment in a responsible manner that benefits themselves and their household members, both now and in the future. • Local procurement of supply chain goods and services will be enforced and maximised where possible • Local targets (for skilled and unskilled workers) will be used to maximise employment as far as practical for the existing residents of Swakopmund 	
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5.2. Construction Phase EMP

This is the phase where excavations and earthworks will be done and then services such as water, electricity, sewerage, roads those unserviced extensions within the greater Matutura neighbourhood are done followed by construction of residential, general residential, general business and local business properties.

The mitigations measured proposed herein must be implemented and managed continuously during the construction phase.

Aspects and hazards	Impacts	Mitigation/Management Action measures (objectives and targets)	Responsible Party
Aesthetics	<ul style="list-style-type: none"> Land pollution 	<ul style="list-style-type: none"> The site shall be kept visually and aesthetically pleasing, especially in and around the Contractor camp. The HSEO shall regularly inspect the site to ensure that it is neat and clean. Where required the Contractor camp shall be screened by the Contractor to ensure that there is no unacceptable visual intrusion in the area of the site. Screening can be done by use of shade cloth or corrugated fencing. 	Principal contractor Contractors HSE Officers
Archaeology and heritage	<ul style="list-style-type: none"> Destruction of Archaeological sites. 	<ul style="list-style-type: none"> If any artifact on site is uncovered, work in the immediate vicinity shall be stopped immediately. Should any archaeological sites be uncovered during construction, their existence shall be reported to the National Heritage Council immediately. The position of any known sites shall be shown on the final design plans. Such areas shall be marked as no go areas. Artifacts shall not be removed under any circumstances. Any destruction of a site can only be 	Principal contractor Contractors HSE Officers

		<p>allowed once a permit is obtained and the site has been mapped and noted.</p> <ul style="list-style-type: none"> The permit shall be obtained from the National Heritage Council by a reputed Archaeologist. 	
Site Establishment and sanitation	<ul style="list-style-type: none"> Soil pollution Water pollution 	<ul style="list-style-type: none"> Site establishment shall take place in an orderly manner and all required amenities shall be installed at Camp sites before the main workforce move onto site. The Construction camp shall have the necessary ablution facilities with chemical toilets at commencement of construction activities. The Contractor shall inform all site staff to make use of supplied ablution facilities and under no circumstances shall indiscriminate sanitary activities be allowed other than in supplied facilities. Ablution facilities shall be within 100m from workplaces but not closer than 50m from any natural water bodies. There should be enough toilets available to accommodate the workforce (minimum requirement 1: 20 workers). Toilets shall be serviced regularly The Contractor shall supply waste collection bins where such is not available and all solid waste collected shall be disposed of at the Municipal landfill The disposal of waste shall be in accordance with all relevant legislation. Under no circumstances may solid waste be burnt on site. 	Principal contractor Contractors HSE Officers
Fauna and Flora	<ul style="list-style-type: none"> Intentional or unintentional killing of fauna on site. Unnecessary removal of flora. 	<ul style="list-style-type: none"> The areas to be developed are inhibited by few woody shrubs of the Dollar bush and the hardy shrub Ink/Pencil bush and there are no trees The only species of fauna found in the areas to be developed are lizards and birds Special care should be taken not to damage or remove any such species unless absolutely necessary. 	Principal contractor Contractors HSE Officers

		<ul style="list-style-type: none"> • Permits for removal must be obtained should such species be affected. • All shrubs and bush not interfering with the operation of the developments shall be left undisturbed, clearly marked and indicated on the site plan. • The contractor must ensure that no faunal species are disturbed, trapped or killed during the construction phase. • The Contractor and their employees shall not bring any domesticated animals onto the site. • The Contractor shall ensure that the work site be kept clean, tidy and free of rubbish that would attract animals. 	
Occupational Health and Safety	<ul style="list-style-type: none"> • Health and Safety of employees on site 	<ul style="list-style-type: none"> • The construction phase is expected to present the most challenges from a health and safety point of view. • A clear operating plan should be in place to guide the health and safety requirements during the construction phase. • This plan should guide construction staff in terms of their responsibilities in terms of health and safety during the construction phase. • It should be ensured that construction activities are conducted in such a manner that it does not increase the risk of injury or fatalities of construction staff and that the appropriate measures are in place to prevent any incidents and accidents 	Contractors HSE Officers
Clearing and Grubbing	<ul style="list-style-type: none"> • Topsoil • Flora 	<ul style="list-style-type: none"> • The extent of all construction site footprints will be minimised and limited to existing and / or already disturbed areas wherever possible. • The areas needing to be cleared and the degree of clearing required will be determined and demarcated in consultation with the HSEO before clearing begins. • The Contractor shall at all times carefully consider what machinery is appropriate to the task while minimising the extent of environmental damage. 	Principal contractor Contractors HSE Officers

		<ul style="list-style-type: none"> • Topsoil shall be cleared of woody vegetation, and specifically exotic vegetation, before ripping and removing. • The topsoil is regarded as the top 300 mm of the soil profile • Topsoil is to be handled twice only – once during clearing and stockpiling & once during rehabilitation • Soil stockpiles shall not be higher than 2.5m or stored for a period longer than one year. • The slopes of soil stockpiles shall not be steeper than 1 vertical to 2.5 horizontal. • No vehicles shall be allowed access onto the stockpiles after they have been placed. • Stockpiles shall not be allowed to become contaminated with oil, diesel, petrol, garbage or any other material, which may inhibit the later growth of vegetation. • The Contractor shall apply soil conservation measures to the stockpiles to prevent erosion. This can include the use of erosion control fabric. • If at any stage of the clearing operations archaeological artefacts are unearthed or identified, the National Heritage Council must be contacted immediately to conduct a thorough scientific investigation of the finds. 	
Prevention of disease	<ul style="list-style-type: none"> • Health of workers 	<ul style="list-style-type: none"> • The Contractor shall take all the necessary precautions against the spreading of disease such as Covid-19, flu, TB, etc. • All employees that come onsite must obey Covid-19 protocols and measures must be put in place. • This can then be used as evidence in court should any claims be instituted against Developers and or their Contractors. • The workforce shall also be sensitised to the effects of sexually transmitted diseases, especially HIV/AIDS. 	Contractors HSE Officers

		<ul style="list-style-type: none"> • General health issues shall be brought under the attention of the site staff and condoms shall be supplied on site. 	
Site Buildings / Construction Camp	<ul style="list-style-type: none"> • Visual pollution • Aesthetics • Injury to workers and damage to property 	<ul style="list-style-type: none"> • The planning and design for the Construction Camp must ensure that there is minimal impact on the environment. • The Construction Camp will be placed within an existing disturbed area as far as possible. • The Construction Camp site will be identified by the Contractor in consultation with the HSEO, and negotiated by the Site Manager with the Town Planner of the Municipality of Swakopmund • All site buildings to be of a container or prefabricated type. No permanent structures will be permitted. • With the decommissioning of the structures all compacted platforms and slab foundations must be ripped and removed. • All buildings will be soundly built and will not pose a danger to personnel. • No fires are allowed outside the Construction Camp. • Adequate and well maintained fire fighting equipment according to the fire hazard strategies must be maintained on site during the construction period (at least two all purpose 12.5 kg extinguishers). • Welding, gas cutting or cutting of metal will only be permitted in a protected area inside the Construction Camp. • The Contractor shall be liable for any costs related to extinguishing fires started by the Contractor's representatives / employees. • Additional penalties for infringements will also be imposed by the HSEO or Site Manager. 	Principal contractor Contractors HSE Officers
Storm water management	<ul style="list-style-type: none"> • Hydrology and Storm water • Downstream siltation • Erosion 	<ul style="list-style-type: none"> • It is expected that storm water will be adequately managed during the construction phase. • Storm water will either be directed to the storm water drains or allowed to be absorbed into the soil through 	Principal contractor Contractors HSE Officers

		the assistance of the gravel distributed especially on the soil surface of the area where infrastructure is located.	
Natural Drainages	<ul style="list-style-type: none"> • Blocking and diversion of natural Watercourses • Downstream siltation • Erosion 	<ul style="list-style-type: none"> • Under no circumstances shall the contractor interfere with any watercourses in the vicinity of the site. • Should deviation of such watercourses be required as part of the contract design specification, the specifications shall be adhered to strictly. • The HSEO shall ensure that all watercourses are adequately protected to prevent downstream siltation due to erosion on site • Rubble from the construction process shall be removed from site and may under no circumstances be dumped into any natural drainage channels. • The normal flow of runoff water must not be impeded, as this will enhance erosion 	Principal contractor Contractors HSE Officers
Groundwater	<ul style="list-style-type: none"> • Groundwater pollution 	<ul style="list-style-type: none"> • No impacts are expected on the groundwater of the area during the operational phase as there is no groundwater sources • Containment of waste water will be put in place and to prevent runoff 	Contractors HSE Officers
Access roads to the site	<ul style="list-style-type: none"> • Impacts on traffic movement • Nuisance traffic • Congestion 	<ul style="list-style-type: none"> • Planning of access routes to the site for construction purposes shall be done in conjunction between the Developers, Contractors and the Municipality of Swakopmund. • During construction, use should be made of existing access routes to construction areas where possible. • Construct approved vehicle turning areas, avoiding selected ecological sensitive areas or species, and have turning area routes approved by the HSEO. • All agreements reached should be documented and no verbal agreements should be made. • Continual use of dirt access roads by heavy machinery and increased transport loads means they will have to be carefully monitored and regularly graded as soon as potholes or rutting occurs. 	Developers Principal contractor Contractors HSE Officers

		<ul style="list-style-type: none"> • The Contractor shall properly mark all access roads. • Roads not to be used shall be marked with a "NO ENTRY " sign • Temporary access roads must be rehabilitated after usage 	
Initial Earthworks and Platforms	<ul style="list-style-type: none"> • Erosion • Soil pollution 	<ul style="list-style-type: none"> • The construction platform for the Contractor's camp, as well as the platform for the materials storage area must be appropriately planned. • The Contractor shall take appropriate and active measures to prevent erosion resulting from his own works, operations and activities as well as stormwater control measures to the satisfaction of the HSEO or Site Manager. • Restoration costs will be for the contractor's account, should these measures not be reasonably implemented. 	Principal contractor Contractors HSE Officers
Excavations, backfilling and trenching	<ul style="list-style-type: none"> • Dust liberation • Injuries and fatalities • Damage to mobile equipment • Natural resource depletion 	<ul style="list-style-type: none"> • Where at all possible, excavations must not stand open longer than 2 days, and should preferably be opened and closed on the same day. • They should not be permitted to stand open longer than a week under any circumstances. Excavations must be marked with tape to clearly demarcate the area and warn against access. • Excavations must not be undertaken until such time that all required materials / services etc. are available on-site, to facilitate immediate laying of such services or the construction of subsurface infrastructure. • Any such excavations should ideally be undertaken within the confines of an established construction site - i.e. a site that is either protected with a peripheral fence, or a site that has a regular / continual human presence. Failing this, regular daily inspections are essential. • Removed soil is to be used to backfill areas where required (i.e. such as existing and unrehabilitated gravel pits). 	Principal contractor Contractors HSE Officers

		<ul style="list-style-type: none"> Excavated material is to be stockpiled along the trench within the working servitude, unless otherwise authorised. Deficiency of backfill material will not be made up by excavation within the protected area. Where backfill material is deficient, it must be made up by importation from an approved borrow pit area. Excess sand and soil resulting from levelling activities of the work area should be stored in low heaps either on the access road or already disturbed area. Excess topsoil is to be spread evenly over the area in a manner that blends in with the natural topography. Once heavy machinery has cleared the bulk of these material stockpiles, the disturbed areas should be levelled and cleared of any foreign material. 	
Sand mining	<ul style="list-style-type: none"> Resource depletion Visual pollution 	<ul style="list-style-type: none"> No sand mining will be allowed on the remaining extensions to be serviced All sand required for construction activities must be procured from offsite licenses companies in around Swakopmund 	HSE Officer
Vehicle Parking Area	<ul style="list-style-type: none"> Congestion Soil pollution 	<ul style="list-style-type: none"> All vehicles and plant will be allocated a dedicated parking area in the camp site. No storage of plant and vehicles will be allowed outside of the designated area. 	Contractors HSE Officers
Construction Rubble Disposal	<ul style="list-style-type: none"> Land pollution Soil pollution Compaction of soil by rubble Air pollution Injury to workers and the public 	<ul style="list-style-type: none"> The Contractor shall dispose of all excess material on site in an appropriate manner and then removal to the Municipal landfill All packaging material shall be removed from site and disposed off and not burned on site. No material shall be left on site that may harm man or animals. Broken, damaged and unused spares such as glass, nuts, bolts and washers shall be picked up and removed from site. 	Principal contractor Contractors HSE Officers

		<ul style="list-style-type: none"> • Surplus concrete may not be dumped indiscriminately on site, but shall be disposed of in designated areas as agreed with the Municipality of Swakopmund • Concrete trucks shall not be washed on site after depositing concrete into foundations. • Any spilled concrete shall be cleaned up immediately. 	
Stockpiling, handling and storage of building materials	<ul style="list-style-type: none"> • Land pollution • Visual pollution • Soil pollution 	<ul style="list-style-type: none"> • Stockpiles and storage yards will be demarcated in areas already disturbed or where they will cause minimal disturbance. • Clearly indicate which activities are to take place in which areas within the site e.g. the mixing of cement, stockpiling of materials etc. Limit these activities to single sites only. • This may not always be possible for example for heaps of topsoil, but should definitely be the case for other building materials. • Stockpiles of expensive materials such as cement bags should be such that they can easily be removed from the site over weekends or during rainy weather. • Specific sites should be allocated for construction waste e.g. empty cement bags, discarded planks, etc. • A low temporary fence may be erected around such a site in order to contain the waste and assist the effective removal thereof from the site. • Used cement bags will be placed in wind and spill proof containers as soon as they are empty. The Contractor will not allow closed, open or empty bags to lie around the site. • The Contractor will ensure that all operations that involve the use of cement and concrete are carefully controlled • Concrete mixing may only take place in the construction camp or in agreed specific areas on site. • Concrete may not be mixed directly on the ground. No mixed concrete may be deposited directly onto the ground prior to placing. A board or other suitable platform / surface is to be provided onto which the 	Principal contractor Contractors HSE Officers

		<p>mixed concrete can be deposited whilst it waits placing</p> <ul style="list-style-type: none"> All visible remains of excess concrete will be deposited in a designated area awaiting removal to the Municipal landfill site. 	
Service Area / Wash Bay and storage areas	<ul style="list-style-type: none"> Impact on soil 	<ul style="list-style-type: none"> All vehicle and plant shall be well maintained to ensure that there are no oil or fuel leakages. All maintenance and repair work will be carried out at the main construction camp within an area designated for this purpose, equipped with necessary pollution containment measures. Drip trays will be utilised during servicing The Contractor may only change oil or lubricant at agreed and designated locations, except if there is a breakdown or emergency repair, and then any accidental spillages must be cleaned up / removed immediately. Drainage from the service area will be channelled into a sump or oil-skimming tank, where it shall be treated to remove old hydrocarbons. Drainage from the wash bay platform will firstly be channelled into a skimming tank before being released by drain to a sedimentation pond. Soil contaminated by oil, fuel or chemicals shall be removed and disposed of at a registered Hazardous Waste Disposal Site in Walvisbay or rehabilitated in-situ. The Contractor shall educate workers on the appropriate methods for workshop maintenance and fuel points to prevent fuel and oil being washed out of containment areas. Toxins and oil must be recovered from the system at least once a week, and if necessitated more regularly should the HSEO require it. Toxins and oil recovered must be stored in sealed drums on a covered, bunded area and removed from 	Principal contractor Contractors HSE Officers

		<p>site either for recycling or disposal at the Walvisbay Hazardous Waste Disposal Site.</p> <ul style="list-style-type: none"> • All spillage of oil onto concrete surfaces shall be controlled by the use of an accepted absorbent material or saw dust. • Fuels required during construction must be stored in a central depot at the construction camp. This storage area should be located on a slab and be contained within a bund capable of containing at least the volume of one of the containers. • Temporary fuel storage tanks and transfer areas also need to be located on an impervious surface adequately bunded to contain accidental spills. Appropriate run-off containment measures must be in place. 	
Claims for damages	<ul style="list-style-type: none"> • Theft • Reputational damage • Negative publicity 	<ul style="list-style-type: none"> • The HSEO shall keep a photographic record of any damage to areas outside the demarcated site area. • The date, time of damage, type of damage and reason for the damage shall be recorded in full to ensure the responsible party is held liable. • All claims for compensation emanating from damage should be directed to the HSEO for appraisal. • The Contractor shall be held liable for all unnecessary damage to the environment. • A register shall be kept of all complaints from the community. • All claims shall be handled immediately to ensure timeous rectification / payment by the responsible party. 	Contractors HSE Officers
Public Safety	<ul style="list-style-type: none"> • Theft of equipment on site • Injury and fatalities 	<ul style="list-style-type: none"> • Access to the construction site should be strictly controlled by a security company. • Trespassing on private / commercial properties adjoining the site is forbidden 	Contractors HSE Officers
Dust pollution	<ul style="list-style-type: none"> • Land pollution 	<ul style="list-style-type: none"> • The Contractor shall be responsible for dust control on site to ensure no nuisance is caused to the neighbouring Communities 	Contractors HSE Officers

		<ul style="list-style-type: none"> • Watering of access roads is recommended, as access roads are normally the greatest cause of dust pollution. • Speed limits can also be installed, especially on private dirt roads leading to the site. • Any complaints or claims emanating from the lack of dust control shall be attended to immediately by the Contractor 	
Air Pollution	<ul style="list-style-type: none"> • Coughs, wheezing and shortness of breath. • Cardiovascular and respiratory diseases. • Lung cancer. • Strokes. • Exacerbation of asthma. 	<ul style="list-style-type: none"> • Reduce the unnecessary idling of diesel engine exhausts of plant and other vehicles • Wear appropriate PPE, such as the correct type of respiratory protective equipment (RPE) depending on the task. • Reduce exposure to dusts and fibres, such as silica, as well as the fumes and gases emitted by vehicles and machinery explains • Never burn waste materials. • Use low sulphur diesel to power equipment and vehicles • Improve existing equipment by using particulate filters and catalyst converters. • Use water sprays or sprinklers to control some types of dust and stop it spreading. • Use an on-tool extraction to control some types of dust. • Source local materials to avoid the need for them to be transported from far 	Contractors HSE Officers
Separation Tanks	<ul style="list-style-type: none"> • Water pollution 	<ul style="list-style-type: none"> • The Contractor shall provide grease and oil separation tanks (if required) at all areas where oil spillage or collection will occur, i.e. workshops, oil storage, vehicle wash areas and fuel points. • The Contractor shall provide a method for oil recovery. • Recovered oil shall be collected in weather-proof drums for recycling or disposed of at a registered 	Contractors HSE Officers

		<p>Waste Disposal site. These drums will be stored on site only on a covered, bunded area.</p> <ul style="list-style-type: none"> The Contractor will test effluent discharged from any oil skimming tanks for conformance with relevant effluent standards if requested to do so by the HSEO when pollution is suspected. 	
Littering	<ul style="list-style-type: none"> Land pollution Visual pollution 	<ul style="list-style-type: none"> Littering by the employees of Contractors shall not be allowed under any circumstances. The HSEO shall monitor the neatness of the work sites as well as the Contractor campsite 	Contractors HSE Officers
Solid Waste Management	<ul style="list-style-type: none"> Visual pollution Attracting scavengers 	<ul style="list-style-type: none"> An adequate number of 'scavenger proof' refuse bins must be provided at the construction sites and at the construction camps. These bins must be provided with lids and an external closing mechanism to prevent their contents blowing out and must be scavenger-proof to prevent dogs and other animals that may be attracted to the waste. The Contractor will ensure that all personnel immediately deposit waste in the waste bins provided. All refuse and solid waste generated at all work sites will be stored in appropriate scavenger proof containment vessels at the relevant site and removed to the main construction camp, where the waste will be sorted and stored within a fenced waste storage area. All waste must be transported in an appropriate manner The Contractor may not dispose of any waste and / or construction debris by burning, or by burying. Discard all construction waste at the Swakopmund Municipality/Rent-a-Drum registered waste management facility / landfill site, particularly those wastes or products that could impact on surface or groundwater quality by leaching into or coming into contact with water. 	Contractors HSE Officers

		<ul style="list-style-type: none"> The contractor will maintain 'good housekeeping' practises as to ensure that all work sites and construction camp are kept tidy and litter free. 	
Liqued Waste Management	<ul style="list-style-type: none"> Soil pollution Land pollution Health Erosion 	<ul style="list-style-type: none"> The Contractor must take reasonable precautions to prevent the pollution of the ground and / or water resources on and adjacent to the site as a result of their activities The Contractor may discharge 'clean' silt laden water overland and allow this water to filter into the ground. However, he must ensure that he does not cause erosion as a result of any overland discharge No natural watercourse is to be used for the cleaning of tools or any other apparatus. This includes for purposes of bathing, or the washing of clothes etc All washing operations will take place off-site at a location where wastewater can be disposed of in an acceptable manner. Trucks delivering concrete may not be washed on site. No spills may be hosed down into a storm water drain or sewer, or into the surrounding natural environment. Adequate ablution facilities are to be provided at each construction site, conveniently located near to work areas to avoid localised pollution from camp sewerage. All soil contaminated, for example by leaking machines, refuelling spills etc. is to be excavated to the depth of contaminant penetration, placed in 200 litre drums and removed to an appropriate landfill site. 	Contractors HSE Officers
Hazardous waste and materials	<ul style="list-style-type: none"> Soil pollution Health 	<ul style="list-style-type: none"> Compliance to local, national and international legislation and management practices with regard to the storage, transport, use and disposal of fuel, chemicals, harmful and hazardous substances and materials will be enforced. 	Contractors HSE Officers

		<ul style="list-style-type: none"> • Fuel, chemical, harmful and hazardous waste throughout the site must be stored in appropriate, well maintained containers. • Any accidental chemical / fuel spills to be cleaned up immediately. • Storage of all hazardous material is to be safe, tamper proof and under strict control. • Emergency procedures for dealing with spills or releases of solvents and fuel must be put in place. • The training and education of all personnel on site who will be handling the material about its proper use, handling and disposal must be put in place. 	
Noise Pollution	<ul style="list-style-type: none"> • Noise pollution • Local residents experience varying levels of stress, • Sleep disturbance or high blood pressure. • Workers gradual hearing loss 	<ul style="list-style-type: none"> • Use quiet power tools and equipment to manage noise pollution. • Where possible, use modern construction equipment that has been designed specifically to produce less noise. • The Contractor shall ensure that noise levels remain within acceptable limits. This applies especially after working hours and during the night • Schedule work during sociable hours rather than when residents are likely to be sleeping. For example, between 8h00 Am to 17h00 on weekdays and half days on Saturdays. • Also notify local residents of the working hours and keep them updated on the project. • Put acoustic (movable noise) barriers in place to manage the levels of noise pollution. • Machinery and vehicle silencer units are to be maintained in good working order. • Offending machinery and / or vehicles will be banned from use on site until they have been repaired. • Switch off plant when it's not in use. • Ensure employees wear the correct PPE when required to reduce the risk of hearing loss due to excessive noise. 	Contractors HSE Officers

Water pollution	<ul style="list-style-type: none"> • Spread of Infectious diseases, like cholera, typhoid fever and other diseases gastroenteritis, diarrhea, vomiting, skin and kidney problems • Clogging of water filters and contamination of drinking water. • High cost to purify drinking water 	<ul style="list-style-type: none"> • Monitor and improve your management and disposal of site waste. Make sure all waste is correctly dealt with to stop it from spreading. • Keep materials such as sand or cement secure. • Materials must be located where there isn't a risk of them being washed into waterways or drains. • Cover up all drains to prevent waste from ending up in the water. • Keep the roads and footpaths to the sites clean at all times. This will prevent silt and other pollutants from running off into any bodies of water. • Properly collect and treat any wastewater being produced. 	Contractors HSE Officers
Fire prevention	<ul style="list-style-type: none"> • Poor maintenance of firebreak might lead to fires spreading 	<ul style="list-style-type: none"> • No open fires shall be allowed on site under any circumstance or started as a result of activities on site. • Gas and liquid fuel may not be stored in the same storage area. • No open fires for heating or cooking will be permitted on site, unless otherwise agreed and then only in designated areas. • The Contractor shall have operational suitable, tested and approved fire-fighting equipment available on site at all times at site offices, kitchen areas, workshop areas, material stores and any other areas. 	Contractors HSE Officers
Erosion Control	<ul style="list-style-type: none"> • Dust liberation • Foundations subsidence • Visual pollution 	<ul style="list-style-type: none"> • The Contractor shall protect all areas susceptible to erosion and shall take measures, to the approval of the HSEO. • The Contractor shall not allow erosion to develop on a large scale before effecting repairs and all erosion damage shall be repaired as soon as possible. • Where required, cut-off trenches can be installed to divert substantial runoff • During construction, areas susceptible to erosion must be protected by installing temporary or 	Contractors HSE Officers

		permanent drainage works and energy dispersion mechanisms and prevent erosion.	
Interaction with Affected Parties	<ul style="list-style-type: none"> • Relations with next door neighbours • Health and safety of next door neighbours 	<ul style="list-style-type: none"> • The success of any project depends mainly on the good relations with the Municipality of Swakopmund and its Communities. • It is therefore required that the HSEO and the Contractor establish good relations with all the affected parties in the immediate vicinity of all construction activities. • All negotiations for any reason shall be between the HSEO, the affected parties and the Contractor. • NO verbal agreements shall be made. All agreements shall be recorded in writing and all parties shall co-sign the documentation. • The affected parties shall always be kept informed about any changes to the construction programme should they be involved. • If the HSEO is not on site the Contractor should keep the affected parties informed. • The contact numbers of the Contractor and the HSEO shall be made available to the affected parties. • This will ensure open channels of communication and prompt response to queries and claims. • All contact with the affected parties shall be courteous at all times. The rights of the affected parties shall be respected at all times 	Contractors HSE Officers
Infrastructure	<ul style="list-style-type: none"> • Nuisance to communities • Inconveniencing next door neighbours 	<ul style="list-style-type: none"> • No interruptions other than those negotiated shall be allowed to any essential services. • Damage to infrastructure shall not be tolerated and any damage shall be rectified immediately by the Contractor. • A record of any damage and remedial actions shall be kept on site. • All existing private access roads used for construction purposes, shall be maintained at all times to ensure that the local people have free access to and from 	Contractors HSE Officers

		<p>their properties. Speed limits shall be enforced in such areas and all drivers shall be sensitized to this effect.</p> <ul style="list-style-type: none"> Any possible disruptions to essential services must be kept to a minimum and should be well advertised and communicated to the Municipality of Swakopmund and surrounding Communities. 	
Traffic impacts	<ul style="list-style-type: none"> Injured or fatalities as a result of being struck by moving plant vehicles or their loads striking people, particularly when reversing vehicles striking services and obstructions manufacturers instructions for safe use being disregarded inadequate training of drivers and signallers; and unsafe loading and transportation of materials on vehicles. Obstruction of adjacent roads Increased heavy mobile equipment traffic in neighbourhood lost productivity, added project costs, and bad public relations with the surrounding communities. 	<ul style="list-style-type: none"> Drivers of the construction and operational vehicles should be in possession of valid and appropriate driving licenses Planning and managing vehicle operations on construction sites Organise construction sites so that vehicles and pedestrians using site routes can move around safely. The routes need to be suitable for the persons or vehicles using them, in suitable positions and sufficient in number and size Provision and maintenance of safe workplaces, safe vehicles, safe drivers and safe work practices. Drivers must not be allowed to operate vehicles and machinery while impaired due to medication, alcohol, drugs and medical conditions. Selecting and maintaining vehicles; and implementing safe driving and working practices. Provide car and van parking for the workforce and visitors away from the work area; Control entry to the work area; and Plan storage areas so that delivery vehicles do not have to cross the site. Employers should take steps to make sure that all workers are fit and competent to operate the vehicles, machines and attachments they use on site The need for vehicles to reverse should be avoided where possible as reversing is a major cause of fatal accidents. Install turning circles so that vehicles can turn without reversing. 	Contractors HSE Officers

		<ul style="list-style-type: none">• Safe loading, hauling and offloading zones must be identified onsite.• Make sure that all drivers and pedestrians know and understand the routes and traffic rules on site. Use standard road signs where appropriate• Provide induction training for drivers, workers and visitors and send instructions out to visitors before their visit.• Install aids for drivers, plant and vehicle marshalls, lighting and pedestrians on site should wear high-visibility clothing	
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5.3. Operational Phase EMP

In case the Municipality of Swakopmund finds that changes to the Project, the Project site or Adverse Impacts of the Project warrant revisions to this cEMP, Construction Phase EMP, or Operational Phase EMP as the case may be, then the Municipality of Swakopmund may require the Developers to prepare and submit a revised cEMP, Construction Phase EMP, or Operational Phase EMP, as the case may be to the Municipality of Swakopmund for review and approval.

The requirements for the daily management and execution of the Matutura, Extensions developments are stated in this section to ensure that;

- Work is managed with minimal disturbance and creation of nuisance to surrounding natural and human environment.
- Employees and visitors to the sites do not interfere and negatively impact on the environment and next door neighbours and must the conservation and restoration of this must be prioritised.
- A positive HSE culture must be instilled and practiced at all times by Developers, their contractors and employees when working and engaging with the surrounding communities.
- Monitoring will be done through random site inspection

Aspects and hazards	Impacts	Mitigation/Management Action (objectives and targets)	Responsible Party
Environmental Health and Safety	<ul style="list-style-type: none"> • Environmental pollution 	<ul style="list-style-type: none"> • A health & safety and environmental management training session(s) prior to commencing work on site shall be conducted for all staff members and sub-Contractors. • A follow up session(s) shall be conducted as needed to ensure all staff members and sub-Contractors have received training. 	Contractors HSEO
Covid-19	<ul style="list-style-type: none"> • Community transmissions • Absenteeism 	<ul style="list-style-type: none"> • Site entrance checks with body scanners • Anyone with an abnormally high temperature of 38°C not be allowed onsite 	Contractors HSEO

	<ul style="list-style-type: none"> • Employees isolation • Site shutdown 	<ul style="list-style-type: none"> • Provision of sanitiser onsite and at site entrances • All staff to be encouraged to mask up at all times when interacting with other employees • Any employee with COVID-19 related symptoms are to be isolated with immediate effect, removed from site and reported to the Swakopmund State Hospital Health Authority • Tracing of close contact to commence and all close contacts informed and requested to leave site and get tested. 	
Lack of enforcement	<ul style="list-style-type: none"> • Manpower support 	<ul style="list-style-type: none"> • Employ qualified and competent teams and manpower to implement all the practical environmental conservation measures as proposed in this EMP. • Manage the programme i.e. coordinating with an environmental consultant • Implement necessary prevention or best practice method in the event of poor environmental quality. 	Principal contractor Contractors HSEO
Waste generation	<ul style="list-style-type: none"> • Dumping of contaminated soil, cleared vegetation, rubble, domestic waste and stockpiles. 	<ul style="list-style-type: none"> • Stockpiles should be stored and/or disposed in accordance to the relevant policies and guidelines. • Ensure that no excavated soil, refuse or building rubble generated on site are placed, dumped or deposited on adjacent/surrounding properties or land. • Wind and animal proof bins must be provided at demarcated areas. Waste must be disposed of at a licensed waste disposal site. • Ensure that hydrocarbon contaminated soil is bio-remediated before being disposed of at appropriate sites. • No littering or dumping of solid waste of any description is permitted on the site. All litter especially plastics and other materials capable of being dispersed by the wind and constituting hazard to public livelihoods' activities should be collected daily, properly stored before disposed of at an approved dumping site. • Construction waste should be recycled whenever possible, in accordance with the waste management plan. • Domestic wastewater should be collected into appropriate sewage tanks, and treated with appropriate chemicals before discharge at licenced solid waste sites. 	Principal contractor Contractors HSEO

		<ul style="list-style-type: none"> Toilets should be provided to male and female staff members at a ratio of 1:20. No burning of refuse shall be allowed. 	
Positioning of security lights	<ul style="list-style-type: none"> Light pollution 	<ul style="list-style-type: none"> Placement of security lights should be directed to glow in a downward direction to avoid light pollution and glare onto nearby communities and properties. Perimeter lighting area should also be placed in a downward facing manner and motion activated to prevent glare at night. No flood lights should be allowed to be installed at the contractor's camps for the purposes of illuminating the sites at night. 	Principal contractor Contractors HSEO
Visual impact	<ul style="list-style-type: none"> Adjustment of terrestrial habitat 	<ul style="list-style-type: none"> Morning Take 5 talks to be made routine and all employees must be given and undergo induction. Always determine the route of activities beforehand and restrict all activities to demarcated areas. Reinstate and rehabilitate where necessary during construction activities. 	Principal contractor Contractors HSEO
Sewerage management	<ul style="list-style-type: none"> Attraction of pests Offensive odours Visual pollution Nuisance to neighbours Community complaints 	<ul style="list-style-type: none"> Only portable flush toilets equipped with French drains/septic tanks will be erected at construction sites. No foreign object may be flushed down the toilets to prevent damage and maintain integrity of the sewer system and maintain a healthy environment 	Principal contractor Contractors HSEO
Solid waste management	<ul style="list-style-type: none"> Environmental pollution Littering 	<ul style="list-style-type: none"> Implement waste segregation strategies onsite Promote positive waste management practices i.e. reduce, reuse, and recycle, and only the remaining waste must be sent to landfill. Minimise and eliminate the careless release of waste products into the receiving environment. Waste removal for offsite disposal such as to the landfill should be through licensed waste removal contractors such as Rent-a-Drum 	Principal contractor Contractors HSEO
Construction equipment	<ul style="list-style-type: none"> Visual impact Loss of aesthetic value 	<ul style="list-style-type: none"> Only key and required mobile equipment and machinery needed must be kept on site in and on the construction site in an orderly fashion. 	Principal contractor Contractors HSEO

Noise generation from construction equipment and machinery	<ul style="list-style-type: none"> Noise pollution to employees, surrounding area and next door neighbours 	<ul style="list-style-type: none"> Near source employees must be provided with appropriate personal protective clothing and equipment such as earplugs and earmuffs where required. The movement and operation of heavy mobile equipment and machines will be restricted to day time operational hours only. 	Principal contractor Contractors HSEO
Dust liberation	<ul style="list-style-type: none"> Dust generation from construction and excavation activities exposure to land and next door neighbours 	<ul style="list-style-type: none"> All personnel working in dusty areas and or around heavy mobile equipment will be provided with dust masks Dust spraying methods to be implemented for high volume or frequently used roads and surfaces to be excavated in especially those near boundaries to suppress dust liberation. 	Principal contractor Contractors HSEO
Dust liberation and storm runoff on excavated land and open trenches	<ul style="list-style-type: none"> Soil erosion Dust liberation Downstream siltation 	<ul style="list-style-type: none"> Excavation, handling and transporting of layer materials must be minimised under high wind conditions. Dust suppression measures may be required, such as sprinkling the construction site with water to suppress the dust. Dust protection masks must be provided to all staff members working in dust polluted environment. All vehicles speeds should be controlled to reduced dust production, hence appropriate road signs should be placed to control the traffic speed. Excavated and disturbed land should be contoured and landscaped after construction activities. Artificial drainage systems should be erected where natural drainage systems have been cut off, interrupted to rerouted. 	Principal contractor Contractors HSEO
Occupational Health and HIV and AIDS	<ul style="list-style-type: none"> Prevalence of HIV might increase due to the developments. The immigration of mainly single persons to the construction site presents a perfect opportunity for sex workers and for local community members to engage in unsafe, 	<ul style="list-style-type: none"> HIV/AIDS awareness and prevention, and general hygiene training programmes should be developed and implemented before any construction commences. The main target group is the staff members, but the public may also be encouraged to attend. Follow up awareness raising and education should be conducted at least every six months. 	Principal contractor Contractors HSEO

	sex-for-cash sexual relations.		
General Nuisance of the Construction Activities	<ul style="list-style-type: none"> Aesthetics and inconvenience caused to persons trying to access/exit the construction site, or other general nuisances arising from the construction activities. 	<ul style="list-style-type: none"> Contractors should maintain housekeeping and tidiness on site at all times. Site camps will be properly fenced and no domestic animals are allowed on site. Contractors must ensure that all excavations are rehabilitated at the end of construction to reduce unwanted aesthetic impacts. Contractors should at all times keep "an open door policy" towards the local community. This will encourage cooperation and strengthen relationships. 	Principal contractor Contractors HSEO
Aspects and hazards	Impacts	Mitigation/Management Action (objectives and targets)	Responsible Party
Traffic impacts	<ul style="list-style-type: none"> Disruption to traffic flow in the immediate surrounds 	<ul style="list-style-type: none"> - Set up appropriate vehicle movement signage on local roads/intersections surrounding the project site to direct traffic flow in a safe manner; - Whenever feasible, construction vehicles should avoid leaving the site at peak traffic periods (07:00 to 08:30 AM, 12:00PM to 14:00PM and (17:30PM to 18:30 PM); - Construction vehicles should not be allowed to park off site, except in dedicated parking spaces (off site) as may be agreed upon between the proponent and the local authority; - All necessary reflective and lighting signs should be placed on project and construction vehicles to maximize visibility and reduce potential accidents that may have occurred otherwise. 	Principal contractor Contractors
Noise	<ul style="list-style-type: none"> Noise pollution due to heavy-duty equipment and machinery on site. Disturbance of the residents and staff 	<ul style="list-style-type: none"> Ensure engines of construction machinery are fitted with mufflers. Equipment and machinery operators should be equipped with ear protection equipment. Operations should be strictly between 07H00 to 17H00. 	Principal contractor Contractors

	members' exposure to noise in the vicinity of the construction area will have to be taken into account during construction.		
Safety and Security	<ul style="list-style-type: none"> • Earthmoving equipment used on site may increase the possibility of injuries to both staff members and the public. • The presence of equipment and materials not securely stored may encourage theft. 	<ul style="list-style-type: none"> • The Contractor must ensure that all staff members are briefed daily about the potential risks of injuries on site. • All staff members shall receive health and safety training prior to working on any construction work. • Flammable materials (e.g. fuel for construction vehicles) should be stored as far as possible from sensitive receptors. • Storage of hazardous materials and substances shall be strictly in accordance with the appropriate risk and fire prevention standards. • Material Safety Data Sheets (MSDS's) for all chemicals and any hazardous substance used on site should be readily available on site at all times. • The Contractor is urged to ensure that adequate emergency facilities, including first aid kits, are available on site. • Adequate traffic and safety signs must be placed at the construction site to warn and inform all stakeholders about the construction and traffic conditions. • The Contractor must adhere to all relevant laws, regulations, guidelines and policies with regards to labour aspects, health and safety standards. 	Principal contractor Contractors
Protection of Biodiversity and Cultural Heritage	<ul style="list-style-type: none"> • Motorised disturbances that could threaten biodiversity, ecosystems functions and services and cultural heritage. 	<ul style="list-style-type: none"> • Site Management Plans depicting preferred site for construction camps, permanent way for materials collection and storage, etc. need to be developed by the Contractor with the assistance of the project engineer. • These plans need to be documented, reviewed, updated, and implemented prior to the commencement of work at any location. • There are no structures of cultural heritage observed during assessments. 	Principal contractor Contractors

		<ul style="list-style-type: none"> • The projects resident engineer and the Contractors should regularly communicate with relevant local authorities to identify cultural heritage sites if found during excavations and, construction should immediately be stopped and relevant authorities should be informed. • Construction works can only resume with written approval from the relevant authorities the Heritage Council. • No water should be abstracted from any source without specific written approval from relevant authorities. • To minimise land degradation, no off-road driving is allowed except on demarcated access and hauling roads. • The confines of the site, especially haul and access roads shall be clearly marked and signposted by the Contractors at the direction of the HSEO. • All necessary measures should be implemented to minimise fauna displacement and flora destruction. • No fires are allowed on site at all times. • Soils from areas infested with invasive flora should not be hauled from those specific areas. The risk of such species dispersing and displacing natural vegetation is very high, thus the HSEO should be consulted at all times to ensure that invasive plants are not accidentally dispersed. • Any person or institution or company not complying with these specifications are liable to fines and penalties as indicated in relevant contracts conditions, relevant laws, and regulations. 	
Job creation, Skills development and business opportunities	<ul style="list-style-type: none"> • Positive socio-economic impacts and spinoffs 	<ul style="list-style-type: none"> • Semi-skilled and unskilled jobs should target local community members. • Prioritise local employment and spend in local business where reasonably possible • Enhance the use of local labour and local skills as far as reasonably possible. • Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible. 	Principal contractor Contractors

5.4. Closure and rehabilitation Phase EMP

The operational phase is followed by the closure and rehabilitation phase of a project. This is also a site specific plan drawn up to ensure that appropriate environmental management practices are put in place during the finalisation of these Matutura developments and to put in place remediation measures of works.

Closure and rehabilitation phase;

- Provide site specific and fit for purpose mitigation measures to finalise construction works, site clean-up, remediation of contaminated sites, waste and construction rubble removal and restoration activities of areas not going to be built-up.
- Reduce and eradicate any long-term liability issues related to the different extensions to the developers and to the Municipality of Swakopmund.

The mitigation measures and activities should commence during the construction and operational phase and be finalised at closure and completion of construction activities.

Aspects and hazards	Impacts	Mitigation/Management Action (objectives and targets)	Responsible Party
Soil erosion	<ul style="list-style-type: none"> • Erosion of site 	<ul style="list-style-type: none"> • All topsoil removed during the land servicing and excavations of foundations must be conserved and used in the rehabilitation and close out phase. • No topsoil may be sold. This soil must be kept safe from erosion • Stockpile area will be covered with gravel during construction operations to prevent erosion. • Gravel will be removed on completion of construction. The topsoil will be used as a defensive wall for the stockpile pad and ramp, to protect the area from prevailing winds and rain water erosion. • Topsoil and vegetation from the ramp must be used to create a defensive wall along the perimeter of the ramp and 	Contractors HSEO

		<p>stockpile area. The pile should be used as windbreaks to shield the ramp and stockpile area from the prevailing winds.</p> <ul style="list-style-type: none"> • Stockpiles should be stabilised by securing with nets or other suitable sheeting material. • The stockpile pad will be re-shaped to remove any steep embankments during the final rehabilitation and closure phase. • After rehabilitation is complete, no topsoil shall be left over 	
Rehabilitation of access roads and surrounding site	<ul style="list-style-type: none"> • Visual pollution 	<ul style="list-style-type: none"> • Any access road or portions thereof, constructed by the developers shall be removed and or rehabilitated to the satisfaction of the HSEO. Gravel will be removed • Any gate or fence erected by the developers which is not required by the landowner, shall be removed and the land restored to the pre-construction state 	Contractors HSEO
Removal of construction equipment, vehicles, machinery and infrastructure	<ul style="list-style-type: none"> • Visual pollution • Nuisance Infrastructure 	<ul style="list-style-type: none"> • All construction equipment/vehicles and machinery should be removed immediately from the site at the end of defects liability period. • The removed materials should be transported and kept in safe place for use by the owners and Contractors in other works. • The area should be cleaned and all domestic wastes, debris/waste metals, grease and oils must be cleaned up and disposed of in a manner approved by competent authorities • There must be a removal of all portable toilets, bins, machinery and other equipment on site as according to relevant legislation 	Principal contractor Contractors HSEO
Monitoring	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Monthly HSEO inspections will take place during construction and during rehabilitation to ensure that objectives are being met. 	Principal contractor Contractors HSEO

6. Implementation of the EMP

All construction activities will be carried out in compliance with the relevant legal requirements. No significant impacts are anticipated for the activities that have been identified and management and mitigation measures are in place for potential risks.

This cEMP;

- Has been prepared pursuant to identified aspects and hazards involved in land servicing and housing construction activities and developers, their contractors and employees will be required to comply and will be a contractual requirement

7. Location of the Environmental Management Plan

The HSE should ensure that a copy of this cEMP is available on site at all times. This includes any EMP or other document used to guide the overall management of environmental aspects of the entire land servicing and construction developments.

The following are also examples of documents to be kept on site:

- Site Diary
- I & AP Complaints register;
- Environmental incidents register;
- Non-conformance Reports;
- Method Statements;
- Material Safety Data Sheets (MSDS);
- Written Corrective Action Instructions;
- Safe disposal certificate for all types of waste disposed of;
- Health, Safety and Environmental Training Records;
- Notification of Emergencies and Incidents.
- Copies of monthly reports
- Minutes of site meeting including discussions on environmental issues

8. Compliance Assessment

The HSEO should ensure that the requirements contained in this cEMP are complied with. Clear records of compliance issues and/or the compliance status with this cEMP should be kept for assessment either as part of any environmental audits or performance assessments conducted for the land servicing and construction developments.

Should any issues of non-compliance be identified, these should be rectified immediately or a clear action plan compiled to ensure that the issues are addressed as quickly as possible.

9. Conclusion

This cEMP has a long-term objective to ensure that:

- Environmental management considerations are implemented from the design phase of the project.
- Contractors are able to and shall include any costs of compliance with this cEMP into the tender prices.
- Precautions against environmental damage and claims arising from such damage are taken timeously.
- The completion date of the various contracts is not delayed due to environmental problems with the landowner, communities or Regulatory Authorities arising during the course of the project execution.

This cEMP is legally binding because it will form part of the contract between the Municipality of Swakopmund, developers and any contractor or staff member.

It is crucial for all recommendations made in this cEMP to be appropriately implemented on site during the land servicing, construction and operation of the Matutura extensions. Compliance monitoring by an appropriately qualified HSEO will serve as a means of verifying the degree to which the cEMP is being implemented on site.

10. BASIC RULES OF CONDUCT

The following list represents the basic Do's and Don'ts towards environmental awareness, which all participants in this developments must consider whilst carrying out their tasks.

These are not exhaustive and serve as a quick reference aid. NOTE: ALL new site personnel must attend health, safety and environmental induction training.

Induction reports, which are signed by both the Contractor and Employee to indicate that the induction has been conducted, will be maintained on site. Induction forms for all contractor employees on site will be retained on site by the Contractor.

DO:

- Wear a face mask covering your mouth and nose at all times.
- Sanitise your hands when you come to site.
- Use the toilet facilities provided and report dirty facilities
- Clear your work areas of litter and building rubbish at the end of each day
- Use the waste bins provided and ensure that litter will not blow away.
- Report all fuel or oil spills immediately and stop the spill continuing.
- Dispose of cigarettes and matches carefully. (littering is an offence.)
- Confine work and storage of equipment to within the immediate work area.
- Keep noise to an absolute minimum.
- Use all safety equipment and comply with all safety procedures.
- Prevent contamination or pollution of streams and water channels.
- Ensure a working fire extinguisher is immediately at hand if any "hot work" is undertaken e.g. welding, grinding, gas cutting etc.
- Drive on designated routes only.
- Prevent excessive dust and noise.

DO NOT:

- Remove or damage vegetation without direct instruction.
- Make any fires.
- Injure, trap, feed or harm any animals – this includes birds, frogs, snakes, lizards etc.
- Enter any fenced off or marked area.
- Allow cement or cement bags to blow around.
- Speed or drive recklessly
- Litter or leave food laying around