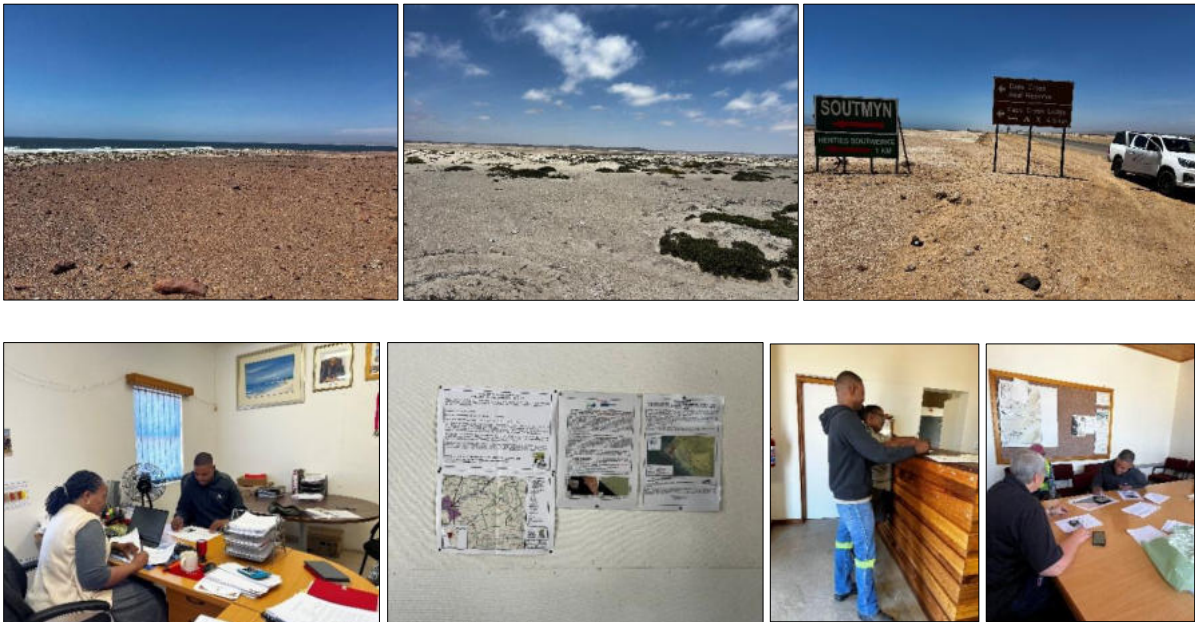


Environmental Scoping Assessment (ESA) Study Report:

The proposed salt production within ten (10) Mining Claims (MCs) No. MC75982, 75983, 75984, 75985, 75986, 75987, 75988, 75989, 75990 & 75991 (MC75982-75991) located south of Cape Cross in the Erongo Region, Namibia - Application for Environmental Clearance Certificate (ECC)



ECC Application No.:

APP-006781

Document Version:

Final for Submission

Proponent:

Telfs Investments (Pty) Ltd

P.O. Box 8912 Swakopmund, Namibia

April 2026

Declaration of authorship

APPLICATION NUMBER: 006781...

Project Title:

The Proposed Salt production within ten (10) Mining Claims (MCs) NO. MC 75982, 75983, 75984, 75985, 75986, 75987, 75988, 75989, 75990 & 75991 (MC 75982-75991) located South of Cape cross in the Erongo Region

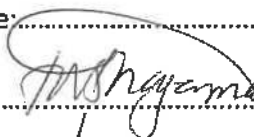
Fredrika Shagema (full name of Environmental Assessment Practitioner - EAP) understand and agree that the information I have furnished in this submission will be reviewed by the Office of the Environmental Commissioner (OEC). I accept that the Environmental Commissioner, will hold me accountable in terms of Section 43(1)(b) of the Environmental Management Act, Act No. 7 of 2007 for any inaccurate or misleading information knowingly provided in the following documentation.

Tick the box (es) applicable to your submission:

- ☐ Pro Forma Environmental Contract for Mining Claim(s)
- ☐ Environmental Questionnaire For Mining
- ☒ Scoping report
- ☐ Environmental Impact Assessment (EIA)
- ☒ Environmental Management Plan (EMP),
- ☒ Consent from Relevant Authority

I certify, and, acknowledge that the provision of such information will impede the lawful carrying out of the duties, responsibilities and functions of the Environmental Commissioner. I declare that the information submitted is my own work. All direct or indirect sources used are acknowledged as references.

Consultancy Name:

EAP Signature: 

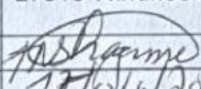
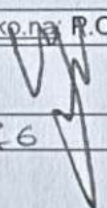
Date: 16/04/2026

NB- To be submitted jointly with Scoping Report, EIA, EMP documents to the Office of the Environmental Commissioner

DOCUMENT INFORMATION

Title: Environmental Scoping Assessment (ESA) Study Report for the proposed salt production within ten (10) Mining Claims (MCs) No. MC75982, 75983, 75984, 75985, 75986, 75987, 75988, 75989, 75990 & 75991 (MC75982-75991) located south of Cape Cross in the Erongo Region, Namibia

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Date:	16.07.2026

SERJA'S STATEMENT OF INDEPENDENCE

As the Appointed Environmental Consultant to undertake the Environmental Scoping Assessment (ESA) Study for the proposed salt production within ten (10) Mining Claims (MCs), (MC75982-75991) located south of Cape Cross in the Erongo Region, Serja Hydrogeo-Environmental Consultants declares that we:

- do not have, to our knowledge, any information or relationship with Telfs Investments (Pty) Ltd (the Proponent), the Ministry of Environment, Forestry and Tourism (MEFT)'s Department of Environmental Affairs and Forestry (DEAF) or the Competent Authority (Ministry of Industries, Mines and Energy (MIME) that may reasonably have potential of influencing the outcome of this Environmental Assessment and the subsequent Environmental Clearance Certificate (ECC) applied for.
- have knowledge of and experience in conducting environmental assessments, the Environmental Management Act (EMA) No. 7 of 2007, and its 2012 Environmental Impact Assessment (EIA) Regulation, as well as other relevant national and international legislation, guidelines, policies, and standards that govern the proposed project as presented herein.
- have performed work related to the ECC application in an objective manner, even if the results in views and findings, or some of these may not be favourable to the Proponent.
- have complied with the EMA and other relevant regulations, guidelines, and other applicable laws as listed in this document.
- declare that we do not have and will not have any involvement or financial interest in the undertaking/implementation of the proposed project, other than remuneration (professional fees) for work performed to conduct the ESA and apply for the ECC in terms of the EIA Regulations' requirement as an Environmental Assessment Practitioner (EAP).

Disclaimer: Serja Hydrogeo-Environmental Consultants will not be held responsible for any omissions and inconsistencies that may result from information that was not available at the time this document was prepared and submitted for evaluation.



.....
Signature:

Fredrika N. Shagama: Principal Environmental Assessment Practitioner & Hydrogeologist

Date: April 2026

EXECUTIVE SUMMARY

Telfs Investments (Pty) Ltd (hereinafter referred to as the Proponent) applied to the Ministry of Industries, Mines, and Energy (MIME) on the 03rd of April 2025 for the rights to mine industrial minerals (salt production) within ten (10) mining claims (MCs) located about 2km south of Cape Cross Settlement in the Arandis Constituency, Erongo Region. The MCs are MC75982, 75983, 75984, 75985, 75986, 75987, 75988, 75989, 75990 & 75991 (collectively referred to as MC75982-75991). The MCs are still under application on the Namibia MIME Portal <https://portal.mme.gov.na/page/MapPublic>. The ten MCs cover a combined area of 123.0962 hectares (ha), which is divided into 10.0233ha, 13.5702ha, 10.926ha, 14.7486ha, 14.4709ha, 17.3727ha, 2.0384ha, 7.4275ha, 24.2953ha, and 8.2233ha, for each mining claim, respectively. However, the approval of the MCs' applications with MIME and subsequent operations (salt production) is conditional on the issuance of an Environmental Clearance Certificate (ECC).

Proposed Project Activities

The project will be carried out as follows:

- Further crystalliser pond development: Some long, narrow, rectangular crystalliser ponds will be excavated in the Cape Cross Salt Pan (within the 10 Telfs' Investments mining claims). The ponds will be approximately 50m wide and will vary in length from 150m. To create crystalliser ponds, the top layer of sand and gypsum will be removed, and the underlying rock salt will be excavated to a depth of about 750mm below the surface. The overburden will be used to create crystalliser-pond embankments and to build roads and dykes around the crystallisers. This is a one-off process to prepare the ground for the creation of crystalliser ponds in the top layer of rock salt. The rock salt beneath the sandy overburden will be mined to establish the crystalliser ponds. This rock salt will be sold as is or stockpiled for later processing in the wash plant. As with the removal of the overburden, the mining of the rock salt will be a one-off process. The resulting excavations will form the crystalliser ponds in which salt will crystallise from inflowing brine (Hemming, 2018). The crystalliser pond development will also entail a wash water tailings dam and a bittern's discharge pipeline.
- Duration and Frequency of Salt Production: The site set up (construction) in preparation for the operational (production) phase is anticipated to take between 12 and 36 months. The operations are planned for ten (10) years but could continue indefinitely, depending on the availability of the source material (brine). The main factor that could hinder brine availability is sea-level rise. However, mitigations for this potential outcome could be devised to sustain the solar salt production. The frequency of salt extraction from the crystallisers will depend on the evaporation process. However, a first full harvest of salt from the crystalliser pond on the salt pan could be achieved after 3 years.

- **Salt Processing:** The initial material removed from the pan surface to create the sunken crystalliser will be processed at the Plant situated on the active Mining License (ML) No.11, located about 10km southeast of the site (MCs). Therefore, no salt processing will be carried out on-site (within the boundaries of the MCs). The offsite processing plant on ML-11 is fully equipped with crushers (i.e., primary and secondary), conveyors, a wash plant, a drying and stockpiling area, and a bagging plant. The plant has pre-fabricated offices and sanitation facilities that are regularly emptied by “honeysuckers,” and the sewage is disposed of at the Henties Bay Municipal sewage facility. According to Hemming (2018), processing the harvested salt will involve crushing, washing, and ‘drying’ to produce salt that meets market specifications. As processing intensity affects the grade of salt produced and the resultant market, the production of high-grade salt entails higher losses than washing to general food-grade salt specifications. The project will produce chemical-grade salt with sodium chloride (NaCl) >99.7%, human-consumption salt that will be iodized to market specifications, and salt with >97% NaCl for de-icing and animal feed applications.

Communication with I&APs and Means of Consultation Employed

Communication with I&APs concerning the proposed development was facilitated through the following means and in this order:

- A Background Information Document (BID) containing brief information about the proposed project was compiled and hand-delivered to the Ministry of Environment, Forestry and Tourism (MEFT), accompanying the ECC application, and uploaded on the MEFT (ECC) Portal for project registration and shared with registered Interested and Affected parties (I&APs). The list of registered stakeholders was compiled.
- Project Environmental Assessment notices were published in the New Era and Market Watch newspapers dated 5th & 12th November 2025. The consultation period ran from the 5th of November 2025 to the 16th of January 2026.
- Given the remoteness of the project site (mining claims), no consultation meeting was held on-site. However, to ensure that key stakeholders were consulted for the EIA Study, one-on-one meetings were held with key stakeholders in Swakopmund, Cape Cross Settlement, and Henties Bay from the 8th to the 9th of December 2025. In Swakopmund, the meeting was held with the Erongo Regional Council, MEFT’s Directorate of Wildlife and National Parks, MEFT’s Cape Cross Sea Reserve, and NamWater. The EIA meetings at Cape Cross and in Henties Bay were held with the Cape Cross Lodge, Henties Bay Municipality representatives, as well as the Henties Soutwerke (one of the neighbouring mineral license holders). The meetings were held in the form of interactive sessions, and comments in the form of minutes were recorded. The combined meeting register from the sessions was also signed and recorded.

- The EIA posters were placed at the Erongo Regional Council in Swakopmund and Henties Bay.
- Furthermore, written notices (letters) were also prepared and hand-delivered to the key stakeholders (Erongo Regional Council, MEFT's DWNP, NamWater Business Unit Coastal Area, Henties Bay Municipality, Cape Cross Lodge). The date-stamped and signed copies of proof of written notices (letters) submitted to the key stakeholders for the EIA Study are on file with the EAP.

Feedback and Issues raised by the Stakeholders (I&APs)

Some issues or concerns were raised by I&APs (from the one-on-one EIA meetings), and these issues have been recorded and incorporated in the final EIA Scoping Report and EMP. The summary of these few key issues is in Table 1 below.

Table 1: The summary of concerns and issues noted during the stakeholders' one-on-one engagements

Environmental Aspect	Summary of concern/issue
Impact on the Cape seal community and plant life (vegetation) in the area	The stakeholder raised a concern about the potential impact on the livelihood of the seals, as well as plant life (vegetation) in the area
The effective implementation of appropriate mitigation measures	The mitigation measures should be stringent to prevent or minimize changes in the ecosystem.
Increase in vehicular traffic.	The concern about the potentially increasing number of commercial trucks in the area.
An alarming number of salt mines in the area	The alarming increase in salt mining activities in the area.

Feedback on the Review of the Draft EIA Scoping Report by I&APs

The draft EIA Scoping Report and Environmental Management Plan (EMP) were circulated to registered stakeholders (I&APs) for review and further comments from the 9th of March 2026 to the 23rd of March 2026, i.e., for a period of fourteen (14) days. There were no comments or further issues raised on the draft documents during the provided review period, i.e., between the 9th and 23rd of March 2026.

Identified potential impacts

Positive impacts:

- Local socio-economic development through employment creation and income generation for the communities of Henties Bay, Uis, and other nearby settlements. Thus, it reduces unemployment rates in this part of the Erongo Region.
- Potential creation of opportunities for skills development and training related to salt production.

- Procurement of local supply chain (through goods and services) by local/regional businesses to generate income.
- An indirect positive impact on eco-industrial or educational tourism by incorporating the salt works site through guided tours and birdwatching at the salt ponds. This would complement the Cape Cross seal reserve.

Negative impacts:

- Physical soil disturbance owing to the movements of project vehicles
- Terrestrial habitat loss from salt production activities (creation of evaporation pans and access roads), such as loss of feeding/roosting areas for shore birds and reducing habitats for Cape fur seals, if activities are carried out near colonies.
- Impact on local desert biodiversity (fauna and flora) through disturbance and barriers during salt production activities.
- Aquatic habitat declines or loss (Cape Cross Lagoons)
- Change in lagoon water volume and reduction in groundwater/lagoon water level (accelerated evaporation). The pans, embankments, and channels can alter groundwater-surface water interactions and sediment transport, leading to erosion.
- Potential increase in salinity and brine leakage, due to concentrated brine released accidentally or via seepage, can raise salinity in soils, groundwater, and adjacent lagoon/nearshore waters, posing a threat to vegetation and altering benthic communities.
- The potential impact of illegal hunting/poaching of wildlife in the area
- Visual impacts due to the presence of mining equipment near tourism sites (within tourist sight).
- Potential occupational health and safety risks
- Noise generated by project vehicles and machinery may disturb or interfere with faunal activities (breeding/pupping, resting, and feeding behaviour) near the site.
- Vehicular traffic safety and impact on local roads
- Environmental pollution (littering) through improper handling, storage, and disposal of waste
- Impact on archaeological & cultural heritage resources.

Impact Assessment: The key negative impacts as well as cumulative impacts were described and assessed. The potential negative impacts indicated a medium rating of significance. To minimize the significance, appropriate management and mitigation measures are made for implementation by the Proponent, their contractors, and workers to avoid and/or minimize their significance on the environmental and social components. The effective implementation of the recommended management and mitigation measures, accompanied by monitoring, will particularly see a reduction in the significance of adverse impacts that cannot be avoided completely (from medium rating to low).

Conclusions

The ESA Study for the proposed salt production activities on 10 mining claims (MC75982-75991) was undertaken as per the EMA and its 2012 EIA Regulations. Some key potential positive and negative impacts were identified. The key negative impacts were described, assessed, and appropriate management and mitigation measures are required for implementation by the Proponent, their contractors, and workers. The public was notified as required by Sections 21 to 24 of the EIA Regulations by placing adverts in two different newspapers, dated 5th & 12th November 2025 (in the *New Era newspaper* and *Market Watch*).

Given the remoteness of the project site (mining claims), no consultation meeting was held on-site. However, to ensure that key stakeholders are consulted for the EIA Study, one-on-one engagements were done with key stakeholders in Swakopmund, Cape Cross Settlement, and Henties Bay from the 08th to the 09th of December 2025. In Swakopmund, the engagement was held with the Erongo Regional Council, MEFT's Directorate of Wildlife and National Parks, MEFT's Cape Cross Sea Reserve, and NamWater. The EIA engagements in Cape Cross and Henties Bay were done with the Cape Cross Lodge and Henties Bay Municipality representatives. The engagements were done in the form of interactive sessions, and comments in the form of minutes were recorded. The combined engagement registers from the sessions were also signed and recorded. The consultation period ran from the 5th of November 2025 to the 16th of January 2026.

Impact Assessment: The key negative impacts as well as cumulative impacts were described and assessed. The potential negative impacts indicated a medium rating of significance. To minimize the significance, appropriate management and mitigation measures are required for implementation by the Proponent, their contractors, and workers to avoid and/or minimize their significance on the environmental and social components. The effective implementation of the recommended management and mitigation measures, accompanied by monitoring, will reduce the significance of adverse impacts from medium rating to low.

Apart from the recently conducted Archaeological and Heritage Impact Assessment (AHIA), and data ecological assessment information from the previously conducted EIA Study for existing mineral licenses near the project site, no other or further detailed assessments are required for this EIA Study. Therefore, the EIA Study and applicable incorporated specialist studies (inputs) were deemed sufficient and concluded that no further assessments are required for the ECC application for the proposed project activities.

Serja Consultants are confident that the potential negative impacts associated with the proposed project activities can be managed and mitigated by the effective implementation of the recommended management and mitigation measures, and with more effort and commitment put into monitoring the implemented measures. It is therefore recommended that the proposed salt production activities be granted an Environmental Clearance Certificate, and provided that:

- All the management and mitigation measures provided herein are effectively and progressively implemented. All required permits, licenses, and approvals for the proposed activities should be obtained as required. These include permits and licenses for land use agreements, service provision agreements (water provision), and mining, and ensuring compliance with these specific legal requirements, which are renewed as stipulated by the issuing authorities.
- As a key mitigation measure towards the continued conservation and protection of biodiversity (fauna) in the host environment, the crystallisers should be constructed in such a way that allows the movement of mammals. The natural brine ponds nearer the sea should not be affected, and thus, Telfs Investments should leave a buffer area between the crystallisers and the natural brine ponds. In other words, salt excavation works **are restricted to areas within the mining claims that leave a larger buffer area between the beach and the crystallisers.**
- **Salt excavation activities are scheduled outside critical breeding periods** where possible (avoiding the critical breeding season between November and March), while monitoring the presence of sensitive species, and halting work if necessary.
- No-go zones are respected, and avoiding salt production within buffer zones and very sensitive site areas should be effectively implemented.
- The Proponent commits to holding engagement feedback meetings with stakeholders when needed and required, either before the project commences or during its implementation.
- Transparency in communication and continued engagement with key stakeholders before and during the project are maintained throughout the project.
- The Proponent, their workers, and contractors comply with the legal requirements governing their project and its associated activities.
- Site areas are rehabilitated, as far as practicable, to their pre-project state. This includes progressive levelling of stockpiled materials and the closing/capping of trenches.

To maintain the desirable rating and ensure that the potential impacts are under control, the implementation of management and mitigation measures should be monitored by the Environmental Control Officer (ECO) and audited by an Independent Environmental Consultant on a bi-annual basis. The monitoring of this implementation will not only be done to maintain the reduced impacts rating or maintain a low rating, but also to ensure that all potential impacts that might arise during implementation are properly identified in time and addressed immediately.

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
AHIA	Archaeological & Heritage Impact Assessment
BID	Background Information Document
CCSR	Cape Cross Seal Reserve
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CSR	Corporate Social Responsibility

Abbreviation	Meaning
DEAF	Department of Environmental Affairs and Forestry
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
ESA	Environmental Scoping Assessment
GG, GN	Government Gazette, Government Notice
I&APs	Interested and Affected Parties
IFC	International Finance Corporation
MAFWLR	Ministry of Agriculture, Fisheries, Water, and Land Reform
MC	Mining Claim
MEFT	Ministry of Environment, Forestry and Tourism
MIME	Ministry of Industries, Mines, and Energy
ML	Mining License
NaCl	Sodium Chloride
NHC	National Heritage Council (NHC) of Namibia
NSA	Namibia Statistics Agency
PPE	Personal Protective Equipment
Reg, S	Regulation, Section

GLOSSARY (KEY TERMS)

Term	Definition
Alternative	A possible course of action, in place of another that would meet the same purpose and need of the proposal. Baseline - Work done to collect and interpret information on the condition/trends of the existing environment.
Biophysical	The part of the environment that does not originate with human activities (e.g., biological, physical, and chemical processes).

Term	Definition
Cape Cross Seal Reserve (CCSR)	The reserve is a sanctuary for the world's largest breeding colony of Cape fur seals, with up to 210,000 seals present during the breeding season in November and December. Sustainable seal harvesting takes place in the reserve annually under the auspices of the Ministry of Fisheries and Marine Resources (now as the Department of Fisheries under the MAFWLR), which also sets the quota of seals to be harvested (MEFT, 2026).
Cumulative Impacts/Effects Assessment	In relation to an activity, it means the impact of an activity that, in itself, may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
Decision-maker	The person(s) entrusted with the responsibility for allocating resources or granting approval to a proposal
Ecological Processes	Processes that play an essential part in maintaining ecosystem integrity. Four fundamental ecological processes are the cycling of water, the cycling of nutrients, the flow of energy, and biological diversity (as an expression of evolution).
Environment	As defined in Environmental Management Act - the complex of natural and anthropogenic factors and elements that are mutually interrelated and affect the ecological equilibrium and the quality of life, including – (a) the natural environment that is land, water, and air; all organic and inorganic matter and living organisms and (b) the human environment that is the landscape and natural, cultural, historical, aesthetic, economic and social heritage and values.
Environmental Management Plan (Draft EMP)	As defined in the EIA Regulations (Section 8(j)), a plan that describes how activities that may have significant environmental effects are to be mitigated, controlled, and monitored.
Interested and Affected Party (I&AP)	In relation to the assessment of a listed activity, it includes - (a) any person, group of persons, or organization interested in or affected by an activity; and (b) any organ of state that may have jurisdiction over any aspect of the activity. Mitigate - practical measures to reduce adverse impacts. Proponent – as defined in the Environmental Management Act, a person who proposes to undertake a listed activity. Significant impact - means an impact that by its magnitude, duration, intensity, or probability of occurrence may have a notable effect on one or more aspects of the environment.
Fauna and Flora	The animals and plants found in an area.
Mining Claim (MC)	According to the Minerals (Prospecting and Mining) Act No. 13 of 1992, a claim registered under section 36 includes the renewal of the registration of any such claim. MCs are granted to Namibian citizens or companies owned by Namibian citizens. However, an MC holder may choose to contract a foreigner or a company owned by foreigners to prospect and mine. An individual or a company can only be awarded a maximum of ten (10) MCs at a time. The registration of an MC is subject to an Environmental Clearance Certificate, issued by MEFT (MME, 2010). Moreover, mining claims are only available to Namibian citizens for the development of small-scale mining. MCs are valid for 3 years, and 2-year extension periods are possible, provided that the claim is being developed or worked on.

Term	Definition
Mitigation	The purposeful implementation of decisions or activities that are designed to reduce the undesirable impacts of a proposed action on the affected environment
Monitoring	Activity involving repeated observation, according to a pre-determined schedule, of one or more elements of the environment to detect their characteristics (status and trends).
Proponent	Organization (private or public sector) or individual intending to implement a development proposal.
Public Consultation/Involvement	A range of techniques can be used to inform, consult, or interact with stakeholders affected by the proposed activities.
Protected Area	Refers to a protected area that is proclaimed in the Government Gazette according to the Nature Conservation Ordinance number 4 of 1975, as amended.
Scoping	An early and open activity to identify the impacts that are most likely to be significant and require specialized investigation during the EIA work. It can also be used to identify alternative project designs/sites to be assessed, obtain local knowledge of the site and surroundings, and prepare a plan for public involvement. The results of scoping are frequently used to prepare a Terms of Reference for the specialized input into a full EIA.

1 INTRODUCTION

1.1 Project Background and Location

Telfs Investments (Pty) Ltd (hereinafter referred to as the Proponent) applied to the Ministry of Industries, Mines, and Energy (MIME) on the 3rd of April 2025 for the rights to mine industrial minerals (salt production) within ten (10) mining claims (MCs) located about 2km south of Cape Cross Settlement (Figure 1-1) and borders the Dorob National Park in the Arandis Constituency of the Erongo Region (refer to Figure 1-2). The MCs are MC75982, 75983, 75984, 75985, 75986, 75987, 75988, 75989, 75990 & 75991 (collectively referred to as MC75982-75991). The MCs are still under application on the Namibia MIME Portal <https://portal.mme.gov.na/page/MapPublic>. The ten MCs cover a combined area of 123.0962 hectares (ha), which constitutes 10.0233ha, 13.5702ha, 10.926ha, 14.7486ha, 14.4709ha, 17.3727ha, 2.0384ha, 7.4275ha, 24.2953ha, and 8.2233ha, for each mining claim, respectively. However, the approval of the MCs' applications with MIME and subsequent operations (salt production) is conditional on the issuance of an Environmental Clearance Certificate (ECC).

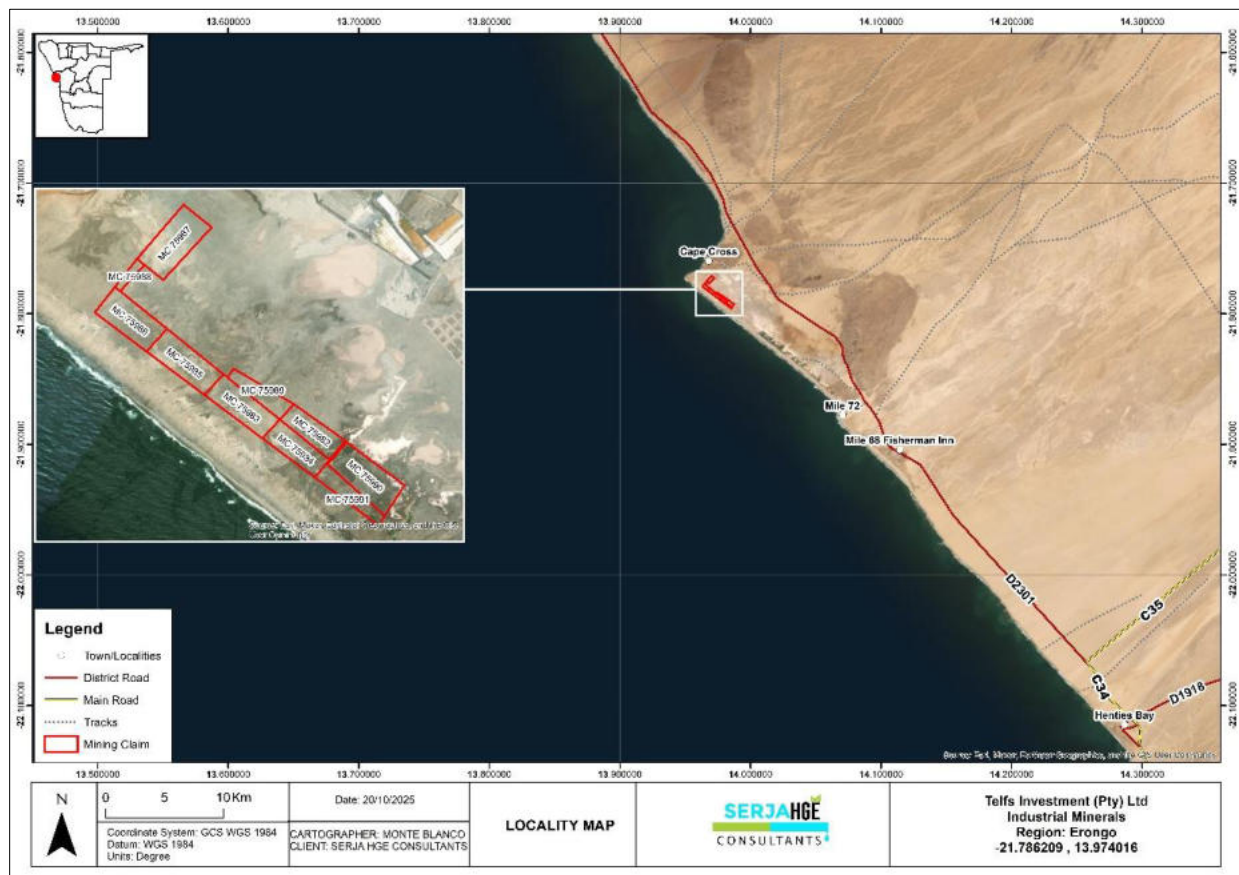


Figure 1-1: Locality map of the MC75982-75991 near Cape Cross in the Erongo Region

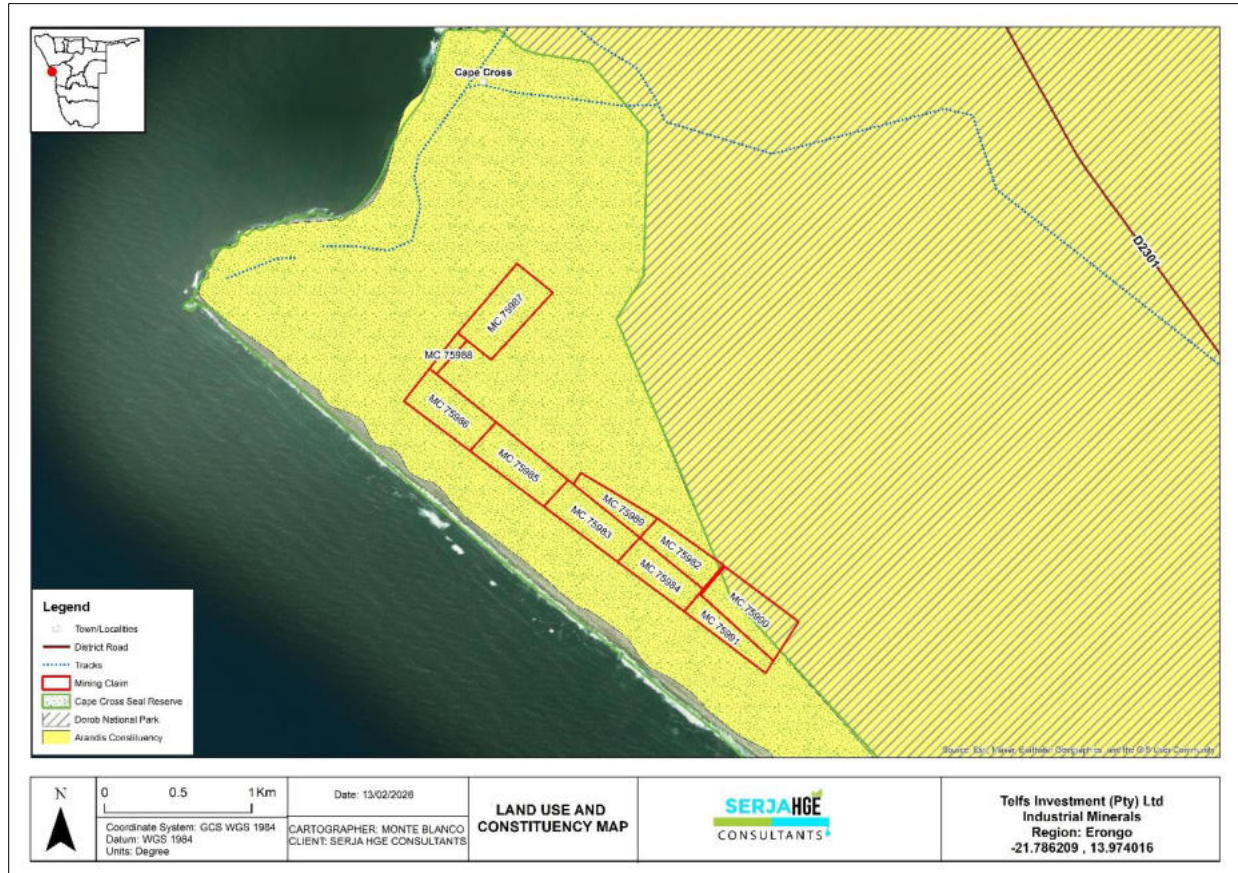


Figure 1-2: Locality map with the significant land use and constituency overlain by MC75982-75991

1.2 The Need and Desirability of the Proposed Project

The Proponent is committed to contributing to Namibia's socio-economic development across various industrial sectors, including mining. According to the Chamber of Mines of Namibia (2024), the mining industry's contribution to gross domestic product (GDP) increased to 14.4% in 2023, from 9% in 2021 and 11.9 % in 2022. The proposed salt production activities on MC75982-75991 have the potential to enhance and contribute to the development of other sectors, and their activities provide employment, income generation through the procurement of goods and services, payment of taxes and levies, and social responsibilities. Thus, the salt mining project will contribute towards achieving the goals of the national development plans, such as the National Development Plan 5 (NDP5) and Harambee Prosperity Plans (HPPs) I and II. Mining is therefore essential to the development goals of Namibia in contributing to meeting the ever-increasing global demand for minerals and for national prosperity.

1.3 The Need for an ESA and Environmental Clearance Certificate (ECC)

Mining of mineral resources is one of the listed activities in the Environmental Impact Assessment (EIA) Regulations (2012) of the Environmental Management Act (EMA) No. 7 of 2007 that may not be undertaken without an Environmental Clearance Certificate (ECC). The activities that are relevant to the proposed project are as follows:

- *Listed Activity 3.1 The construction of facilities for any process or activities which require a license, right of other forms of authorization, and the renewal of a license, right, or other form of authorization, in terms of the Minerals (Prospecting and Mining Act, 1992).*
- *Listed Activity 3.2 Other forms of mining or extraction of any natural resources, whether regulated by law or not.*
- *Listed Activity 3.3 Resource extraction, manipulation, conservation, and related activities.*

The purpose of the ESA and subsequent issuance of the ECC is therefore to ensure that the proposed project activities are undertaken in an environmentally & socially friendly and sustainable manner, through the effective implementation of recommended environmental management measures to minimize the adverse identified impacts while maximizing the positive impacts.

1.4 Appointed Independent Environmental Consultant

To comply with the EMA and its Regulations and ensure environmental management, protection, and sustainability, the Proponent appointed Serja Hydrogeo-Environmental Consultants CC, Independent Environmental Consultants, to apply for the ECC and conduct the required Environmental Assessment Process, which includes Public Consultation and prepare the Scoping Report and EMP (Appendix A).

The EIA process (stakeholder/public consultation and engagement, including consultation meeting facilitation) and environmental mapping were conducted by Mr. Stefanus Johannes, respectively. Mr. Johannes is an experienced Environmental Assessment Practitioner (EAP) and qualified and experienced GIS Specialist/Cartographer with over 4 years of experience in Natural Resources Management Consulting and Mapping (Geospatial Analysis). The EIA Scoping, EMP, and associated documents were compiled by Ms. Fredrika Shagama. Ms. Shagama is a qualified and experienced Hydrogeologist and Environmental Assessment Practitioner by training, with over 10 years of experience in Groundwater and Environmental Management Consulting. The CVs of the two Environmental Assessment Practitioners are attached to this Report as Appendix B.

1.5 Application for the Environmental Clearance Certificate

The application for the ECC process was done as follows:

- Preparation of the Background Information Document (BID) for the proposed project,
- Launching of the ECC application on the ECC Portal of the Ministry of Environment, Forestry and Tourism (MEFT) with the Proponent details (accompanied by the BID) for project registration purposes and obtaining a MEFT application/reference number (APP-006781),
- Completion of Form 1 (Section 32) of the EIA Regulations with the required project and Proponent information,
- Submission of the printed hard copy of the ECC application (with affixed NAD300 revenue stamps as application fees). The MEFT's date-stamped copy of the ECC application (Appendix B) was uploaded on the ECC Portal as proof of application and payment.

The next component of the ECC application was to undertake an Environmental Scoping Assessment (ESA) process, which entails a Baseline Assessment of the Biophysical and Social environments, as well as Public Consultation & Engagement. The findings of the ESA process are then incorporated into an ESA Report, and a Draft EMP is also developed for the mitigation of potential adverse impacts anticipated from the proposed project activities. The two documents and associated documents (appendices) are then submitted to the Environmental Commissioner at MEFT's Department of Environmental Affairs and Forestry (DEAF) for evaluation and consideration of the ECC.

1.6 Scope of Work and Report Contents

This Study has been conducted according to the EMA No. 7 of 2007, and its 2012 EIA Regulations, as mentioned in the preceding subsections, i.e., the proposed project may not be undertaken without an ECC. Therefore, the process has been undertaken as required and guided by the Regulations. Furthermore, the ECC is required by the MIME for the consideration of issuing the certificate for the mining claims.

This Report has been compiled as a required output of an environmental assessment process. The ESA Report, together with the EMP and all its appendices, will be submitted to the DEAF.

The document (Report) covers the following chapters or sections, in addition to the introductory chapter:

- Project description and associated activities - (Chapter 2).
- Project alternatives considered (that were found to be environmentally friendly and technically feasible) - Chapter 3.
- The Legal requirements governing the proposed project and its related activities, i.e., the legislation that the proposed project must comply with (Chapter 4).
- The Environmental and Social Baseline of the project area - Chapter 5.

- The Public Consultation & Engagement Process undertaken to inform, invite, and engage the public (stakeholders and interested & affected parties) on the proposed project- Chapter 6.
- The Assessment of identified potential impacts associated with the proposed project (Chapter 7) - This chapter presents both the positive and negative (adverse) as well as cumulative impacts, assessment methodology, and the assessment of the negative impacts. The mitigation measures in the form of management action plans, with a timeframe and implementation responsibilities, are given in the Draft Environmental Management Plan (EMP) under Appendix C.
- The recommendations and conclusions of the environmental assessment are presented in Chapter 8. The data sources (literature/references) consulted for the assessment are listed under Chapter 9.

Based on the information provided by the Proponent and the EAP's experience, a description of the project activities is presented in the next chapter.

2 DESCRIPTION OF THE PROPOSED PROJECT ACTIVITIES

The proposed project activities will entail the mining of industrial minerals (salt production) within crystallisers enclosed within the boundaries of ten (10) Mining Claims (MCs), MC75982-75991. The brine infiltrates the constructed crystallisers from the existing brine resource within the salt pan. The conceptual crystallizer layout map of the site is shown in Figure 2-1.



Figure 2-1: The conceptual layouts of the crystallisers within the mining claims, MC75982-75991

As a mitigation measure to the continued conservation and protection of biodiversity (fauna) in the host environment, the crystallisers will be constructed in such a way that allows the movement of mammals. The natural brine ponds nearer the sea will not be affected because the Proponent will leave a buffer area between the crystallisers and the natural brine ponds.

The information on the project activities has been sourced from the 2018 EIA Report for the proposed Cape Cross Salt Project by Matthew Hemming of SLR Environmental Consulting, and these are presented as follows:

2.1 Crystalliser Pond Development

Some long, narrow, rectangular crystalliser ponds will be excavated in the Cape Cross Salt Pan (within the 10 Telfs' Investments mining claims). The ponds will be approximately 50m wide and will vary in length from 150m. To create crystalliser ponds, the top layer of sand and gypsum will be removed, and the underlying rock salt will be excavated to a depth of about 750mm below the surface. The overburden will be used to create crystalliser-pond embankments and build roads and dykes around the crystallisers. This is a one-off process to prepare the ground for the creation of crystalliser ponds in the top layer of rock salt.

The rock salt present under the sandy overburden will be mined out to establish the crystalliser ponds. This rock salt will be sold as is or stockpiled for later processing in the wash plant. As with the removal of the overburden, the mining of the rock salt will be a one-off process. The resulting excavations will form the crystalliser ponds in which salt will crystallise from inflowing brine (Hemming, 2018).

2.1.1 Wash water tailings dam

A 'tailings' storage facility for the insoluble matter, which will be washed from the raw salt, will utilise the constructed wash plant in Mining Licence No.11 (hereafter referred to as ML-11). The total volume of the facility will eventually be approximately 21,350m³. The wash water is recycled in a dam within the salt pan. As the wash water will consist of only brine and suspended salt and silt material, the floor of this reservoir will not be lined, as any brine lost through the floor will re-enter the brine resource. Any settled fines may be dredged from time to time and stored on the side of the wash water dam. The cyclones extract much of the fines that come out of the washer, and this mineral waste likewise is stored at the sides of the reservoir and used in the maintenance of roads, crystalliser walls, etc.

The majority of the mineral waste material stems from the initial processing of the rock salt, which contains sand, silt, and clay when the salt is removed from the pan to create the crystallisers. This waste is disposed of in the same way as the wash water, dam, and cyclone fines.

2.1.2 Bitterns discharge pipeline

During solar salt production, "bitterns" (water high in magnesium salts) can be generated. Once the magnesium salt levels in the wash brine reach threshold levels, the bitterns would require discharge to the sea. A pipeline will eventually be constructed from the wash water tailings dam, across the beach to the sea. The pipe infrastructure will be above ground.

The discharge will be onto the beach at the high-water mark, as in the case of the salt works at Walvis Bay and Swakopmund. A maximum diameter of 30cm will be used for the pipeline for discharging the bitterns onto the beach at the high-water mark.

2.2 Evaporation Area

Due to the solar evaporation of water from the crystalliser ponds, there will be a natural draw of water from the lagoons' brine pits and or lagoons towards the crystalliser ponds (and similarly from the ocean to the brine pits or lagoon). The water that is drawn towards the crystalliser ponds will be of lower salinity, i.e., this water is less salty than the brine filtering into the ponds through the underlying rock salt. This “fresher” water will dissolve the salts in the rock salt on route to the crystalliser ponds and ensure that concentrated brine is entering the crystalliser ponds.

Thus, an ‘evaporation area’ is required between the crystalliser ponds and the lagoons. The water through the evaporation area will create natural channels of movement (dissolution channels) towards the ponds through the dissolving of underlying rock salt, creating minor “sinkhole” channels. The exposure of these channels to air will serve to increase evaporation of the inflowing water, thereby increasing its salinity prior to entering the crystalliser ponds. No construction activities will take place in this area between the crystallisers and the beach berm. Potentially, the planned crystallisers on the seaside of the MCs may be shortened to increase the evaporation area.

2.3 Salt Processing

The initial material removed from the pan surface to create the sunken crystalliser will be processed at the Plant situated on the active ML-11, located about 10km southeast of the site (MCs). Therefore, no salt processing will be carried out on-site (within the boundaries of the MCs). The offsite processing plant on ML-11 is fully equipped with crushers (i.e., primary and secondary), conveyors, a wash plant, a drying and stockpiling area, and a bagging plant. The plant has pre-fabricated offices and sanitation facilities that are regularly emptied by “honeysuckers,” and the sewage is disposed of at the Henties Bay Municipal sewage facility.

According to Hemming (2018), the processing of the harvested salt will involve crushing, washing, and ‘drying’ to produce salt that meets the market specifications. As the processing intensity affects the grade of salt produced and the resultant market, the production of high-grade salt corresponds with higher losses than the washing to general food-grade salt specifications. The project will produce chemical-grade salt with sodium chloride (NaCl) >99.7%, human consumption salt, which will be iodized to market specifications, and salt with >97% NaCl for de-icing and animal feed applications.

2.4 Duration and Frequency of Salt Production

Should the ECC be issued by the MEFT, the site set up (construction) in preparation for the operational (production) phase is anticipated to take between 12 and 36 months. The operations are planned for ten (10) years but could potentially continue indefinitely, which is dependent on the availability of the source materials (brine). The main factor that could hinder or impact the brine availability is sea level rise. However, mitigations for this potential outcome could be devised to sustain the solar salt production.

The frequency of extraction of salt from the crystallisers will depend on the evaporation process. However, a first full harvest of salt from the crystalliser pond on the salt pan could be achieved after three years have passed.

2.5 Key Project Activities and Facilities

The construction of the salt works and associated facilities (i.e., site offices, sanitation, etc.) involved and will involve various combinations of the following:

- Earthworks: Ground clearing activities, soil excavation, cut and fill
- Rock salt mining
- Civil works: Foundation excavations
- Building activities
- Storage and handling of material: sand, rock, cement, chemicals, additives in cement
- Water utilisation
- Mixing of concrete
- Operation and movement of construction vehicles and machinery
- Refuelling of equipment
- Painting, grinding, and welding
- Handling, storage, and disposal of hazardous waste: Hydrocarbon wastes, empty paint containers, cement bags, chemical additives for cement, containers, contaminated PPE and other wastes, redundant concrete, and transportation of hazardous waste to the Walvis Bay facility.
- Handling, storage, and disposal of non-hazardous waste: Domestic waste, steel, wood, other construction wastes, transportation of non-hazardous waste to the Henties Bay solid waste management facility.
- Provision and operation of sanitation facilities

- Diesel generator and diesel tanks.

Equipment and vehicles will be stored at a designated area near the accommodation site (campsite) or a storage site established within the project site area (boundaries).

2.6 Project Resources and Services Infrastructure

The following services and infrastructure, as provided below, will be required for the project activities.

2.6.1 Human resources

The anticipated staff (project workers) for the site will entail a general manager, site/operations or production manager, foreman, Harvest & Haul Crew (drivers, operators, and labourers), mechanic, electrician, operators, cooks, security, etc. The current range of operational staff complement for the operations across the partnered companies operating in collaboration with one another is between fifteen (15) and twenty-five (25). Cumulatively, these numbers represent the maximum staff complements that would exist for the collaborative operations across multiple mineral licences (MCs and MLs).

2.6.2 Project Crew Accommodation

Some of the project staff who are required to be on-site will be accommodated in a prefabricated campsite that is already in existence at Cape Cross. The rest of the staff (particularly those from Henties Bay) reside in Henties Bay and commute to the site by bus (3 bus trips per day) or private vehicle daily, as necessary. The camp has a kitchen that provides food for the resident (camp) staff. Furthermore, the camp will be equipped with a French drain system to manage sewage.

2.6.3 Water Supply

The water for the project will be used for domestic use (drinking, cooking, and washing). It is anticipated that this water will be purchased from NamWater directly or the Henties Bay Municipality and tanked to the site from Henties Bay (upon reaching a water supply agreement with the Municipality/NamWater).

2.6.4 Fuel Supply (machinery and equipment)

Diesel will be used for machinery and equipment, and a fuel generator. A trailer-mounted and bunded fuel tank of about 10,000 litres will be on-site to ensure an uninterrupted fuel supply to the project.

2.6.5 Fuel supply (for personnel use to cook)

The Proponent will provide firewood or fuel to be used for food preparation by resident staff (at the camp). No firewood will be collected onsite or in the surrounding general area.

2.6.6 Accessibility (roads)

The nearest proclaimed road to the mining claims' site is the C34 from Mile 72/Henties Bay towards Cape Cross. Therefore, the C34 will be used to access the area and then turn off to the left to the salt pans using the existing single dirt track (used by existing operators neighbouring Telfs Investments' MCs).

The information board to Cape Cross and the access (dirt) road to the project site in the Cape Cross Seal Reserve are as shown in Figure 2-2.



Figure 2-2: The access road to the MC75982-75991 site (saltpan site)

Added to that, there will be an internal haulage road from the crystallisers (at the mining claims), i.e., across the salt pan to the processing plant in ML-11 (Figure 2-3). The flood protection levee will serve a dual purpose of being both the haulage road route and a flood protection levee.

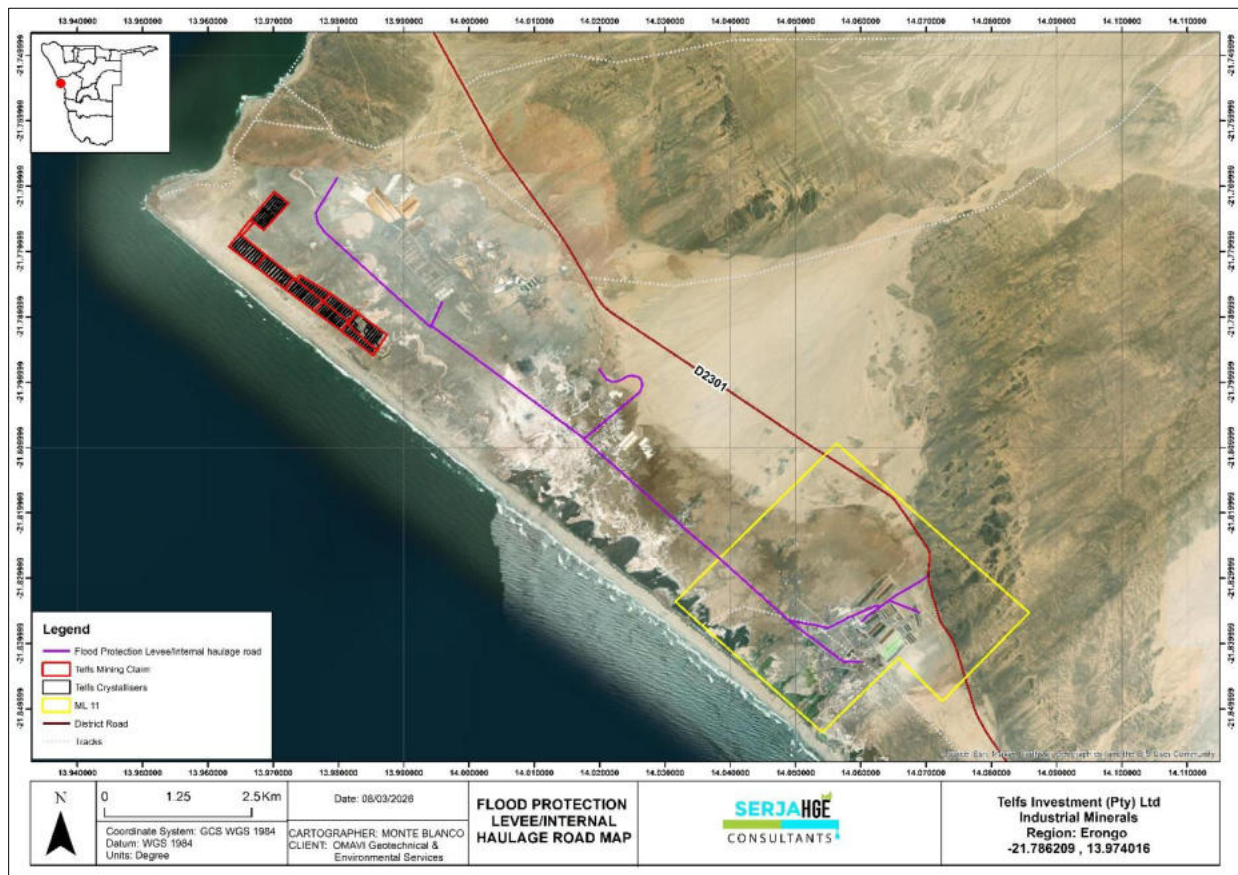


Figure 2-3: The map of the dual-purpose purple line (flood protection levee/internal haulage road) connecting the Telfs/project crystallisers to the processing plant in the ML-11

2.6.7 Waste management

The onsite waste types will be managed as follows:

- Sewage: Two portable ablution facilities with septic tanks will be provided on site and emptied according to manufacturers' instructions.
- General and domestic waste: Solid waste containers will be made available at both production sites and the campsite for waste storage, sorting, and later disposal at the Henties Bay dumpsite.
- Hazardous waste: All vehicles, machinery, and fuel-consuming equipment will be provided with drip trays to capture potential fuel spills and waste oils.

The waste fuel/oils will be carefully stored in a standardized container to be disposed of at the nearest approved hazardous waste management facility in Walvis Bay, which is the nearest to the site area.

2.6.8 Occupational Health and Safety

The following measures will be implemented onsite to ensure safety and security:

- Adequate and appropriate Personal Protective Equipment (PPE) will be provided to all project personnel while on and working at the site, including site visitors. A fully-equipped first aid kit will be readily available on-site.
- First aid: A first aid kit will be readily available on-site to attend to potential minor injuries, while major injuries will need to be attended to further by transporting the injured to the nearest health centre for treatment (in Henties Bay and, if necessary, to Swakopmund). At least 2 personnel will be trained to administer first aid.
- Potential Accidental Fire Outbreaks: A minimum of two well-serviced fire extinguishers will be readily available on the site throughout the project operations.

2.7 Decommissioning and Rehabilitation of Disturbed Sites

The Proponent will need to put site rehabilitation measures in place. Decommissioning and rehabilitation are primarily reinforced through a decommissioning and rehabilitation plan, which consists of safety, health, environmental, and contingency aspects. Therefore, it is best practice for the Proponent to ensure the project activities are ceased in an environmentally friendly manner, and the site is rehabilitated by:

- Dismantling and removal of campsites and associated infrastructures from the project site and area,
- Carrying away all project equipment and vehicles, and
- Cleaning up of site working areas and transporting the recently generated waste to the nearby approved waste management facility (as per agreement with the facility operator/owner),

Further decommissioning and rehabilitation practice onsite will include:

- Backfilling of trenches used for the project, if any, to ensure that they do not pose a risk to both people and wild animals in the area, and
- Levelling of stockpiled materials. This will be done to ensure that the disturbed land sites are left as close to their original state as possible.

The next chapter presents different and relevant alternatives considered for the project activities.

3 PROJECT ALTERNATIVES

Alternatives are defined as the “different means of meeting the general purpose and requirements of the activity” (EMA, 2007). This section will highlight the different ways in which the project can be undertaken and identify the alternative that will be the most practical, but least damaging to the environment.

Once the alternatives have been established, these are examined by asking the following three questions:

- *What alternatives are technically and economically feasible?*
- *What are the environmental effects associated with the feasible alternatives?*
- *What is the rationale for selecting the preferred alternative?*

The alternatives considered for the proposed project are discussed below.

3.1 The "No-Go" Alternative

The “no action” alternative implies that the status quo remains, and nothing happens. Should the proposal of salt production activities within the mining claims be discontinued, none of the potential impacts (positive and negative) identified would occur. If the proposed project is to be discontinued, the current land use for the proposed site will remain unchanged. This option was considered, and a comparative assessment of the environmental and socio-economic impacts of the “no action” alternative was undertaken to establish what benefits might be lost if the project is not implemented.

Considering the above losses, the “no-action/go” alternative was not considered a viable option for this project.

3.2 Salt Production Location

The salt production location is dependent on the occurrence setting (regional and local) of the area. Therefore, finding an alternative location for these planned project activities for the specific commodities in the area is not possible. This means that the mineralization of the target commodities is area-specific, which is near the sea and the salt crystal-forming mechanism. The location of the 10 mining claims also depends on the availability of license areas that the different applicants and Proponents applied for and are interested in (specific minerals, i.e., industrial minerals in this case).

Furthermore, the national mineral resources' potential locations are also mapped and categorized by the MIME in mining claims, exclusive prospecting licenses, mining licenses, mineral deposit retention licenses, reconnaissance licenses, and exclusive reconnaissance licenses. Available information on the 10 mining claims and other licenses is available on the Namibia Mines and Energy Mining Cadastral Map here <https://portal.mme.gov.na/page/MapPublic>.

3.3 Salt Production Methods

The production method selected for the project is as indicated under the project description chapter. The salt production method is considered appropriate and reliable for the type of commodities extracted/mined, and to achieve the purpose more effectively and/or efficiently without aggravating (significantly affecting) the environment.

3.4 Services Infrastructure

Alternatives were considered for different supporting infrastructures to ensure that the most feasible options were selected. The technological, economic, and environmental limitations were considered to select the most feasible option. The alternative considered in this regard is presented in Table 3-1 below.

Table 3-1: The presentation of service infrastructure alternatives considered for the project activities

Category of Infrastructure	Alternatives Considered	Justification for the selected option
Ablution facilities	-Install a fixed facility with a septic tank -Portable facilities with a septic tank. -A French drain system to manage sewage.	To minimize rehabilitation costs, the project camp will be equipped with a French drain system to manage sewage.
Water supply	-Bring water from elsewhere -Abstract from the site	It is anticipated that this water will be purchased from NamWater directly or the Henties Bay Municipality and tanked to the site from Henties Bay (upon reaching a water supply agreement with the Municipality/NamWater). No potable water can be extracted from the boreholes on site.
Fuel storage	-Trailer-mounted diesel tank -Fixed bundled fuel tank	-A fixed bunded fuel tank of about 10,000 litres is currently on-site ML-11 to ensure an uninterrupted fuel supply to the project
Power supply	-Diesel generator set -Powerline (grid) supply -Renewable energy supply options (Concentrated Solar Power (CSP) tower and mirrors tracking option producing up to 1MW, and Wind (1 turbine producing 1MW)) are under consideration for implementation for the project supply.	Diesel will be used for machinery and equipment, and a fuel generator. Renewable energy supply options will be considered for implementation for the project supply.
Offices, accommodation	-Erect disassemblable prefabricated units -Fixed structures	Disassemblable prefabricated units are favoured due to ease of installation, low installation costs, and ease of dismantling, as well as moving post-project activities.

Category of Infrastructure	Alternatives Considered	Justification for the selected option
Accommodation site	-Setting up campsites, a tented campsite within the boundaries of the MCs. -Workers are housed in nearby areas. -Commuting from Henties Bay, which is 60km away from the project site (MCs).	Some of the project staff who are required to be on-site will be accommodated in a prefabricated campsite that is already in existence. The rest of the staff (particularly those from Henties Bay) reside in Henties Bay and commute to the site by bus (3 bus trips per day) or private vehicle daily, as necessary. The camp has a kitchen that provides food for the resident (camp) staff.

The following chapter presents the national and international legal requirements that are applicable and relevant to the project.

4 APPLICABLE LEGAL FRAMEWORK

The project's activities, or some of them, may be regulated and governed by certain legal policies. Therefore, it is necessary to review and consider this legislation and the legal requirements. These legal requirements are either on a local (institutional), national (Namibian), or international legislation, policies, guidelines, etc. This review serves to inform the project Proponent, Interested and Affected Parties, and the decision-makers at the DEAF of the requirements and expectations, as laid out in terms of these instruments, to be fulfilled to establish the proposed salt production activities.

4.1 Environmental Management Act No. 7 of 2007

The Environmental Management Act No.7 of 2007 and its 2012 EIA Regulations aim to ensure that the potential impacts of the development on the environment are considered carefully and in good time; that all interested and affected parties have a chance to participate in the environmental assessments and that the findings of the environmental assessments are fully considered before any decisions are made about activities which might affect the environment.

The Act aims at promoting sustainable management of the environment and the use of natural resources. The Environmental Management Act (EMA) is broad; it regulates land use development through environmental clearance certification and/or Environmental Impact Assessments. The Act provides for the clearance certification for “ *mining and quarrying activities*”.

4.2 Minerals (Mining & Prospecting) Act No. 33 of 1992

The most applicable Sections to the project are as follows:

- Section 54 requires a written notice to be submitted to the Mining Commissioner if the holder of a mineral license intends to abandon the mineral license area.
- Section 68 stipulates that an application for a mineral license shall contain the particulars of the condition of, and any existing damage to, the environment in the area to which the application relates and an estimate of the effect which the proposed prospecting (mining) operations may have on the environment and the proposed steps to be taken to prevent or minimize any such effect.
- Section 91 requires that rehabilitation measures be included in an application for a mineral license.

Implication for the proposed project: The Proponent should assess the impact on the receiving environment. The Proponent should include as part of their application for the MCs' measures by which they will rehabilitate the areas where they intend to carry out salt production (mining) activities.

Other applicable legal frameworks and policies relevant to the proposed project are presented in Table 4-1.

Table 4-1: List of applicable legislation for the proposed salt production activities on the MCs

Legislation / Policy / Guideline	Relevant Provisions	Implications for the project activities
The Constitution of the Republic of Namibia, 1990, as amended	The Constitution of the Republic of Namibia (1990 as amended) addresses matters relating to environmental protection and sustainable development. Article 91(c) 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...” Article 95(l) commits the state to actively promoting and maintaining the welfare of the people by adopting policies aimed at: “...Natural resources situated in the soil and on the subsoil, the internal waters, in the sea, in the continental shelf, and in the exclusive economic zone are property of the State.”	By implementing the environmental management plan, the establishment will comply with the constitution in terms of environmental management and sustainability. Ecological sustainability will be the main priority for the proposed development.
Nature Conservation Amendment Act, No. 3 of 2017	National Parks are established and gazetted per the Nature Conservation Ordinance, 1975 (4 of 1975), as amended. The Ordinance provides a legal framework with regard to the permission to enter a state-protected area, as well as requirements for individuals damaging objects (geological, ethnological, archaeological, and historical) within a protected area. Though the Ordinance does not specifically refer to mining as an activity within a protected area (PA) or recreational area (RA), it does restrict access to PAs and prohibit certain acts therein, as well as the purposes for which permission to enter game parks and nature reserves may be granted.	The Proponent will be required to enhance the conservation of biodiversity and the maintenance of the ecological integrity of protected areas and other State land. The mining claims are within the Cape Cross Seal Reserve (CCSR). Therefore, the MEFT's Directorate of Wildlife and National Parks (DNWP), with the focus on the CCSR unit, should be engaged before and throughout the project implementation. The consent should be obtained from the DWNP management, and land use agreements should be entered into before salt production activities start. Agreements and conditions set by the CCSR management should be complied with throughout the project cycle.
The Parks and Wildlife Management Bill of 2008	Aims to provide a regulatory framework for the protection, conservation, and rehabilitation of species and ecosystems, the sustainable use and sustainable management of indigenous biological resources, and the management of protected areas, to conserve biodiversity and to contribute to national development.	

Legislation / Policy / Guideline	Relevant Provisions	Implications for the project activities
Mine Health & Safety Regulations, 10 th Draft	Makes provision for the health and safety of persons employed or otherwise present in the mineral license area. These deal with, among other matters, clothing and devices; design, use, operation, supervision, and control of machinery; fencing and guards; and safety measures during repairs and maintenance.	The Proponent should comply with all these regulations with respect to their employees.
Petroleum Products and Energy Act (No. 13 of 1990) Regulations (2001)	Regulation 3(2)(b) states that “No person shall possess [sic] or store any fuel except under authority of a licence or a certificate, excluding a person who possesses or stores such fuel in a quantity of 600 litres or less in any container kept at a place outside a local authority area.”	The Proponent should obtain the necessary authorisation from the MIME for the storage of fuel on-site.
The Regional Councils Act (No. 22 of 1992)	This Act sets out the conditions under which Regional Councils must be elected and administer each delineated region. From a land use and project planning point of view, their duties include, as described in section 28 “to undertake the planning of the development of the region for which it has been established with a view to physical, social and economic characteristics, urbanisation patterns, natural resources, economic development potential, infrastructure, land utilisation pattern and sensitivity of the natural environment.	The relevant Regional Councils are I&APs and must be consulted during the Environmental Assessment (EA) process. The project site falls under the Erongo Regional Council; therefore, they should be consulted and updated throughout the project implementation.
Water Resources Management Act (No 11 of 2013) and its 2023 Water Regulations	The Act provides for the management, protection, development, use, and conservation of water resources; provides for the regulation and monitoring of water services; and provides for incidental matters. The objects of this Act are to: Ensure that the water resources of Namibia are managed, developed, used, conserved, and protected in a manner consistent with, or conducive to, the fundamental principles set out in Section 66 - protection of aquifers, Subsection 1 (d) (iii) provides for preventing the contamination of the aquifer and water pollution control (Section 68).	The protection (both quality and quantity/abstraction) of water resources should be a priority. Relevant permits and or agreements to abstract and use water should be applied for and obtained.
National Heritage Act No. 27 of 2004	To provide for the protection and conservation of places and objects of heritage significance and the registration of such places and objects; to establish a National Heritage Council; to establish a National Heritage Register; and to provide for incidental matters.	

Legislation / Policy / Guideline	Relevant Provisions	Implications for the project activities
The National Monuments Act (No. 28 of 1969)	The Act enables the proclamation of national monuments and protects archaeological sites.	The Proponent should ensure compliance with these Acts' requirements. The necessary management measures and related permitting requirements must be taken. This is done by consulting with the National Heritage Council of Namibia. A Chance Finds Procedure provided to the Draft EMP should be implemented upon discovery of archaeological and heritage resources.
Soil Conservation Act (No 76 of 1969)	The Act makes provision for the prevention and control of soil erosion and the protection, improvement, and conservation of soil, vegetation, and water supply sources and resources, through directives declared by the Minister.	Duty of care must be applied to soil conservation, and management measures must be included in the EMP.
Forestry Act (Act No. 12 of 2001)	The Act provides for the management and use of forests and forest products. Section 22. (1) provides: "Unless otherwise authorised by this Act, or by a licence issued under subsection (3), no person shall on any land which is not part of a surveyed erven of a local authority area as defined in section 1 of the Local Authorities Act, 1992 (Act No. 23 of 1992) cut, destroy or remove – (a) vegetation which is on a sand dune or drifting sand or on a gully unless the cutting, destruction or removal is done for the purpose of stabilising the sand or gully; or (b) any living tree, bush or shrub growing within 100m of a river, stream or watercourse."	The proponent will apply for the relevant permit under this Act if it becomes necessary.
Public Health Act (No. 36 of 1919)	Section 119 states that "no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health."	The Proponent and all its employees should ensure compliance with the provisions of these legal instruments.
Public and Environmental Health Act No. 1 of 2015	The Act serves to protect the public from nuisance and states that no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.	

Legislation / Policy / Guideline	Relevant Provisions	Implications for the project activities
Health and Safety Regulations GN 156/1997 (GG 1617)	Details various requirements regarding the health and safety of labourers.	
Atmospheric Pollution Prevention Ordinance (1976)	This ordinance provides for the prevention of air pollution and is affected by the Health Act 21 of 1988. Under this ordinance, the entire area of Namibia, apart from East Caprivi, is proclaimed as a controlled area for section 4(1) (a) of the ordinance.	The proposed project and related activities should be undertaken in such a way that they do not pollute or compromise the surrounding air quality. Mitigation measures should be put in place and implemented.
Hazardous Substance Ordinance, No. 14 of 1974	The ordinance provides for the control of toxic substances. It covers manufacture, sale, use, disposal, and dumping, as well as import and export. Although the environmental aspects are not explicitly stated, the ordinance provides for the importing, storage, and handling.	The Proponent should handle and manage the storage and use of hazardous substances on site so that they do not harm or compromise the site environment.
Road Traffic and Transport Act, No. 22 of 1999	The Act provides for the establishment of the Transportation Commission of Namibia; for the control of traffic on public roads, the licensing of drivers, the registration and licensing of vehicles, the control and regulation of road transport across Namibia's borders; and for matters incidental thereto.	Mitigation measures should be provided for; if the roads and traffic impact cannot be avoided, the relevant permits must be applied for.
Labour Act (No. 6 of 1992)	The Ministry of Justice and Labour Relations is aimed at ensuring harmonious labour relations through promoting social justice, occupational health and safety, and enhanced labour market services for the benefit of all Namibians. This ministry ensures the effective implementation of the Labour Act No. 6 of 1992.	The Proponent should ensure that the salt production activities do not compromise the safety and welfare of workers.

4.3 International Policies, Principles, Standards, Treaties, and Conventions

4.3.1 International Finance Corporation (IFC) Standards

The International Finance Corporation's (IFC) Sustainability Framework articulates the Corporation's strategic commitment to sustainable development and is an integral part of IFC's approach to risk management. The Sustainability Framework comprises IFC's Policy and Performance Standards on Environmental and Social Sustainability and IFC's Access to Information Policy.

Added to that, the Policy on Environmental and Social Sustainability describes IFC's commitments, roles, and responsibilities related to environmental and social sustainability. As of 28 October 2018, there are ten (10) Performance Standards (Performance Standards on Environmental and Social Sustainability) that the IFC requires project Proponents to meet throughout the life of an investment.

Given the fact that the proposed project is likely to be funded by international investors, the financing requires the project to comply with certain requirements, particularly the International Finance Corporation (IFC) Performance Standards (PSs). Therefore, it is crucial to analyze the ESA Study process against these IFC's PSs, and these are listed in Table 4-2.

Table 4-2: The IFC Performance Standards (PSs) analysis against the EIA Study for the mining claims

IFC PS	Relevant Provisions of the IFC PS	Implications for the Project / Actions Taken
PS1	Assessment and Management of Environmental and Social Risks and Impacts:	The potential impacts associated with the proposed salt production activities have been identified, described, and assessed. Measures to manage and mitigate environmental and social impacts are provided in the EMP for the project.
PS2	Labour and Working Conditions	The ESA Study assessed the potential impacts of salt production activities on the project workers' health and safety per the Labour Act (No. 6 of 1992) and fair labour working conditions, including compensation, i.e., no compromising of the labour and working welfare of workers as required in the EMP.
PS3	Resource Efficiency and Pollution Prevention and Management	The Study assessed the usage of resources such as water, soil, and power resources required for salt production during that duration. The appropriate measures to manage and mitigate the impacts associated with the project activities have been provided under the EMP for implementation.
PS4	Community Health and Safety	The potential impacts of the salt production activities on the project crew's health and safety per the Labour Act (No. 6 of 1992) have been assessed, and mitigation measures have been provided accordingly in the EMP, i.e., ensuring that the project activities do not compromise the safety and welfare of workers and site visitors alike.
PS5	Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	The proposed site area is on state land. The project activities will be limited to the 10 MCs. Thus, no relocation or resettlement will be done. Therefore, PS5 is not considered applicable to the project.
PS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	The EIA Scoping Study has considered the baseline assessment of the fauna and flora in the project area. The relevant management and mitigation measures have been provided in the EMP for implementation.

IFC PS	Relevant Provisions of the IFC PS	Implications for the Project / Actions Taken
PS7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	The MCs fall within the Cape Cross Seal Reserve, and there was no confirmation of the presence of indigenous people (Himba communities) within the site boundaries. Therefore, PS7 is not applicable.
PS8	Cultural Heritage	An Archaeological & Cultural Heritage Impact Assessment (AHIA) has been undertaken by TARO Archaeological & Heritage Consultants (TARO Consultants). The baseline, impact assessment, and mitigation measures have been done and compiled by Roland Mushi of TARO Consultants. Two AHIA Reports (for MC75982-75986 and MC75987-75991) have been compiled for submission to the National Heritage Council of Namibia per the National Heritage Act No. 27 of 2004 and the National Monuments Act (No. 28 of 1969) to obtain Heritage Consent Letters for the salt production activities before commencing with activities on the MCs.

4.3.2 Other Application International Statutes (Treaties and Conventions) and Policies

Other international statutes, such as policies, standards, and conventions that may govern the project activities, are provided under Table 4-3.

Table 4-3: Other international treaties and conventions governing the proposed activities of the MCs

Statue	Relevant Provisions	Implications for the Project / Requirements
The United Nations Convention to Combat Desertification (UNCCD) 1992	Address land degradation in arid regions to contribute to the conservation and sustainable use of biodiversity and the mitigation of climate change. The objective of the convention is to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas to support poverty reduction and environmental sustainability.	The project activities should not be undertaken in such a way that they contribute to desertification.
Convention on Biological Diversity 1992	Regulate or manage biological resources important for the conservation of biological diversity, whether within or outside protected areas, to ensure their conservation and sustainable use. Promote the protection of ecosystems, natural habitats, and the maintenance of viable populations of species in their natural surroundings.	The removal of vegetation cover and destruction of natural habitats should be avoided and, where not possible, minimized.

Statue	Relevant Provisions	Implications for the Project / Requirements
Stockholm Declaration on the Human Environment, Stockholm (1972)	It recognizes the need for “a common outlook and common principles to inspire and guide the people of the world in the preservation and enhancement of the human environment.	Protection of natural resources and prevention of any form of pollution.
Equator Principles	A financial industry benchmark for determining, assessing, and managing environmental and social risk in projects (August 2013). The Equator Principles have been developed in conjunction with the International Finance Corporation (IFC) to establish an International Standard with which companies must comply to apply for approved funding by Equator Principles Financial Institutions (EPFIs). The principles apply to all new project financings globally across all sectors.	These principles are an attempt to: ‘...encourage the development of socially responsible projects, which subscribe to appropriately responsible environmental management practices with a minimum negative impact on project-affected ecosystems and community-based upliftment and empowering interactions.’

Other relevant international Treaties and Protocols ratified by the Namibian Government are: the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1973, as well as the Convention on Biological Diversity, 1992, and the World Heritage Convention, 1972.

In addition to the project description, alternatives, and legal framework, it is also important to note that the proposed project activities will be undertaken in a specific environment, in terms of biophysical and social conditions. Therefore, understanding these existing environmental features before the project activities is crucial for the assessment of the potential impacts stemming from the project activities on the features.

5 BIOPHYSICAL AND SOCIAL BASELINE

The proposed salt production activities will be undertaken in specific environmental and social conditions. Therefore, understanding the pre-project conditions of the environment will aid in describing the status quo versus future projections of environmental conditions once the project is implemented. The baseline information also aids in identifying the sensitive environmental features and how the best suitable management and mitigation measures can be recommended for implementation. The summary of selected biophysical and social baseline information about the project area is given below.

The baseline information presented below is sourced from site visits, online sources ranging from old reports, books, and publications, as well as other relevant research information in the broader area. A site visit was done on the 8th and 9th of December 2025. The project baseline that is deemed necessary for the project activities is as follows.

5.1 Biological Environment

The faunal and floral environment of the project site area is provided in the subsections below.

5.1.1 Fauna

The major wildlife in the Cape Cross area is Brown hyaena, Cape fur seal, Black-backed Jackal at the Guano platforms, Greater and Lesser Flamingo, Grey Phalarope, Damara Tern, Cape Teal, Caspian Tern, Black-necked Grebe, and African Black Oystercatcher (MEFT, 2026). During the site visit, some wild animals' footprints or spoor could be observed, as shown in Figure 5-1.



Figure 5-1: Wild animal foot prints or spoor within the MC site area

The Cape Cross Seal Reserve is a sanctuary for the world's largest breeding colony of Cape fur seals (*Arctocephalus pusillus*), with up to 210,000 seals present during the breeding season in November and December. Refer in Figure 5-2 for photos of seals taken on the 9th of December 2025 near the project site.



Figure 5-2: Some Cape fur seals near the MC site area

5.1.2 Flora

The vegetation structure of the project site area is characterized by the Namib grassland, as shown on the vegetation map in Figure 5-3. The vegetation of the project site (in the CCSR) is characterized by the Namib Desert Biome, whereby the vegetation is sparsely distributed, with dollar (*Zygophyllum stapfii*) and pencil bushes (*Arthroa leubnitziae*) dominating. A variety of lichens occur in the Reserve (MEFT, 2026).



Figure 5-3: Dominant vegetation map within and around the mining claims

Although the project site is in a desert environment, with sparsely distributed vegetation, the general area is dominated by species like the protected *Euphorbia giessii*, *Euphorbia lignosa*, *Jamesbrittenia maxii*, *Kleinia longiflora*, *Heliotropium oliveranum*, *Eberlanzia sedoides*, *Pelargonium otaviense*, and *Sarcocaulon marlothii*, *Brownanthus kuntzei*, *Zygophyllum stapffii*, *Tetragonia reduplicata*, *Drosanthemum luederitzii*, and *Arthraerua leubnitziae*. It is important to note that not all of these plant species were observed or encountered during the site visits. However, some of these species could occur on the rock outcrops within and outside the planned mining claims site area.

Added to that, the commonly encountered sparse vegetation are bleeding fingers or bloodfinger icefig (*Mesembryanthemum cryptanthum*), *Mesembryanthemum schlichtianum*, *Nolana divaricata*, and *Lycium tetrandrum*, etc. Some observed sparsely shrubs near the project are shown in Figure 5-4.

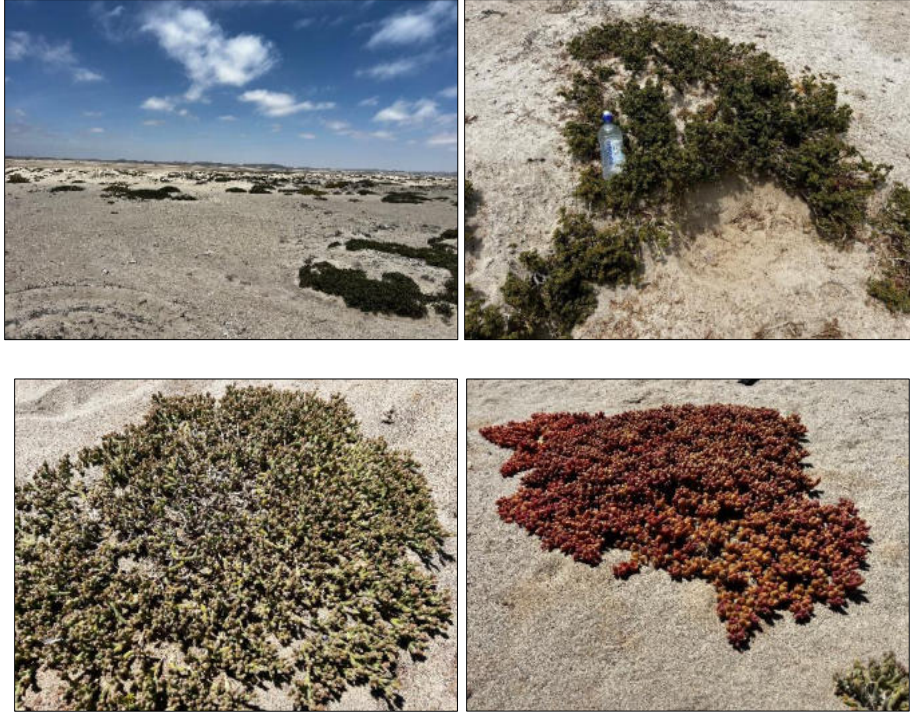


Figure 5-4: Some observed vegetation shrubs in the wider area of the project site

5.1.2.1 *Floral habitats*

According to the study carried out by Wassenaar in 2018 for the Cape Cross Salt Mine Project, the study described six (6) plant habitats in the area, and these are summarised below. These habitats correspond to the six (6) faunal macrohabitats identified in the study carried out by Irish in 2015 for the Cape Cross Salt Mine Project.

- Mountains and foothills: This habitat harbours one endemic and two other plant species of high conservation concern that may be affected by cumulative damage to their limited habitat. Dense and extensive lichen populations, some regarded as rare or very rare, with concomitant expected high diversity and endemism of lichen-feeding invertebrates. According to Mannheimer (2015), the Dark, undulating hills and boulder outcrops, and the Mountains and koppies habitats carry dense lichen cover in places. Thus, the sensitivity of lichen habitat on salt pans was rated low by Mannheimer (2015), as shown in Figure 5-5.

Table 4: Habitat sensitivity ratings.

Habitat	Vegetation sensitivity	Lichen sensitivity	Combined plant and lichen sensitivity
Saline pan	Low	Low	Low
Coastal hummock belt	High	Low	High
Sandy-gravelly plains	Low	Medium	Medium
Washes	Low	Low	Low
Dark undulating hills and boulder outcrops	Low	High	High
Mountains and koppies	Medium	Very high	Very high

Figure 5-5: Lichen habitat sensitivity ratings (Mannheimer, 2015)

- Dark undulating hill and boulder outcrops: Dense and extensive lichen populations, some regarded as rare or very rare, with concomitant expected high diversity and endemism of lichen-feeding invertebrates. The brown hyena is a species of concern here, as well as in the saline pan habitat. It feeds on the Cape Fur Seal colony at the Cape, and its access routes run across the saline pans. *Pachydactylus maraisi*, a gecko, is a range-restricted endemic that is only known from the Cape Cross and Wlotzkasbaken areas. *Uroplectes pilosus*, a scorpion, possibly occurs only at Cape Cross.
- Washes: Shallow drainage lines from the Orawab River and surrounding mountains run across the alluvial fan onto the sandy gravel plain. They carry surface water after episodic flood events and may indicate preferential flow paths where groundwater can infiltrate and then discharge at the foot of the fan.
In addition to the above, the washes habitat supports sparsely scattered perennial plants, and annuals and grasses can be expected after rainfall events. Some of the plant species are endemic or near-endemic, but none are of conservation concern. However, the plants provide resources such as food and shelter, and stabilise the soil, allowing animals to burrow.
- Sandy gravel plain: This is part of the more extensive central Namib gravel plains, which are known to support high levels of range-restricted endemism. Thus, generally, the gravel plains should be considered as a sensitive habitat, borne out by the fact that at least two range-restricted Central Namib endemic toktokkies, *Cauricara eburnea* and *Zophosis damarina*, have been recorded in the area (Wassenaar, 2018).

- Coastal hummocks: This hummock belt is a highly restricted habitat in Namibia because it is very narrow and occurs only intermittently along the coastline. The belt's total area is probably less than 100km². Therefore, since the habitat has already been affected by mining, infrastructure, vehicle tracks, and tourism, cumulative damage may endanger endemic and near-endemic species that are restricted to this habitat, as expressed by both the consulting zoologist and botanist in 2018. It is particularly vulnerable to sand-harvesting and vehicle damage that could contribute to cumulative losses of one range-restricted near-endemic plant species. A photo of a coastal hummock is shown in Figure 5-6.



Figure 5-6: A view of some coastal hummock habitats in the area near the MCs' site

It should be noted that this habitat is a highly sensitive habitat for reptiles and invertebrates. *Palpomodes halophila*, a toktokkie, is known only from the Cape Cross hummocks. Some breeding birds may collect nest material from this habitat (Wassenaar, 2018).

- Saline pan: This habitat comprises three sub-habitats: the lagoons, brine pools, and rock salt covered by and interspersed with silt sediment. These are distinct habitats, with major differences in the species assemblages that they support, but they are linked functionally and therefore are considered to be part of the saline pan habitat. One of the few species of conservation concern that could be found across the saline pans is the brown hyena (Irish, 2015).

5.2 Physical Environment

5.2.1 Climate

The climatic conditions of the project site area have been sourced from Mendelsohn *et al* (2002) and World Weather Online (2026). According to Mendelsohn *et al*. (2002), the Cape Cross area is arid, with the average annual rainfall ranging between 50 and 100mm (Figure 5-7). The average rainfall for the area is 12mm in March, World Weather Online (2026).

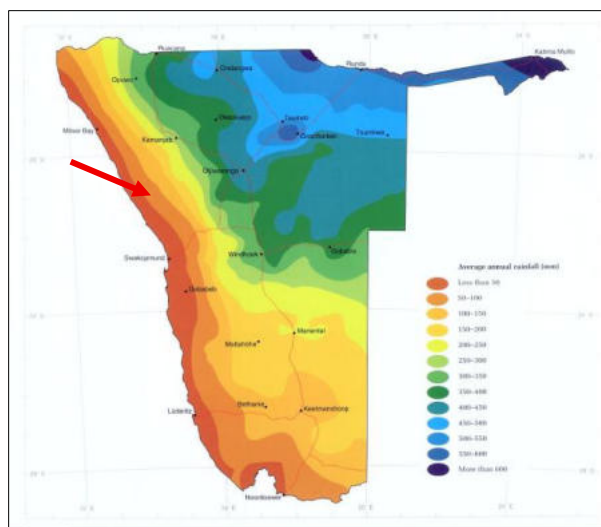


Figure 5-7: The annual rainfall for the project area (Mendelsohn *et al.*, 2002)

5.2.1.1 Temperatures

The annual temperatures of the project site area range between 16 and 18°C (Figure 5-8).

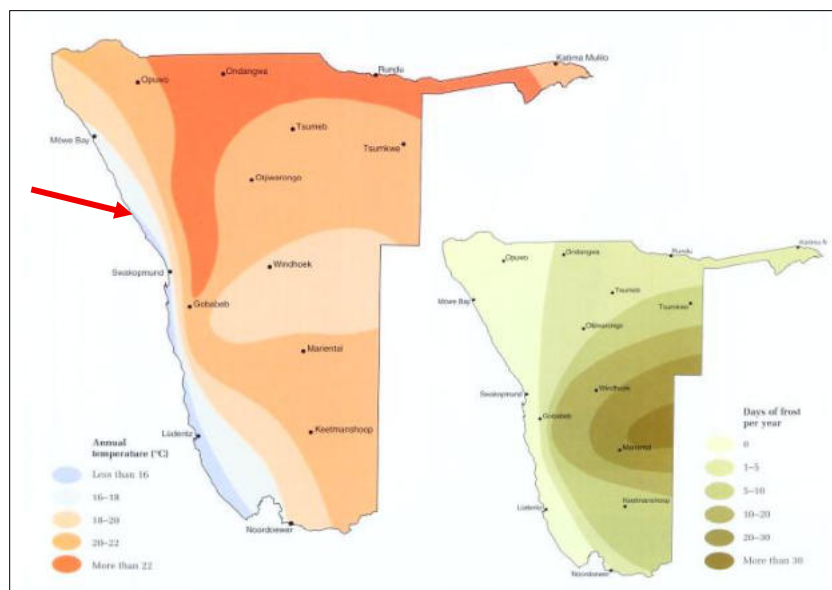


Figure 5-8: The annual temperatures for the project area (Mendelsohn *et al.*, 2002)

The minimum temperature ranges between 8°C and 13°C, and the maximum temperature range from 34 to 36°C (Figure 5-9). According to the World Weather Online (2026), the average low temperature is 13°C around August/September, and the average high temperature is 22°C around January.

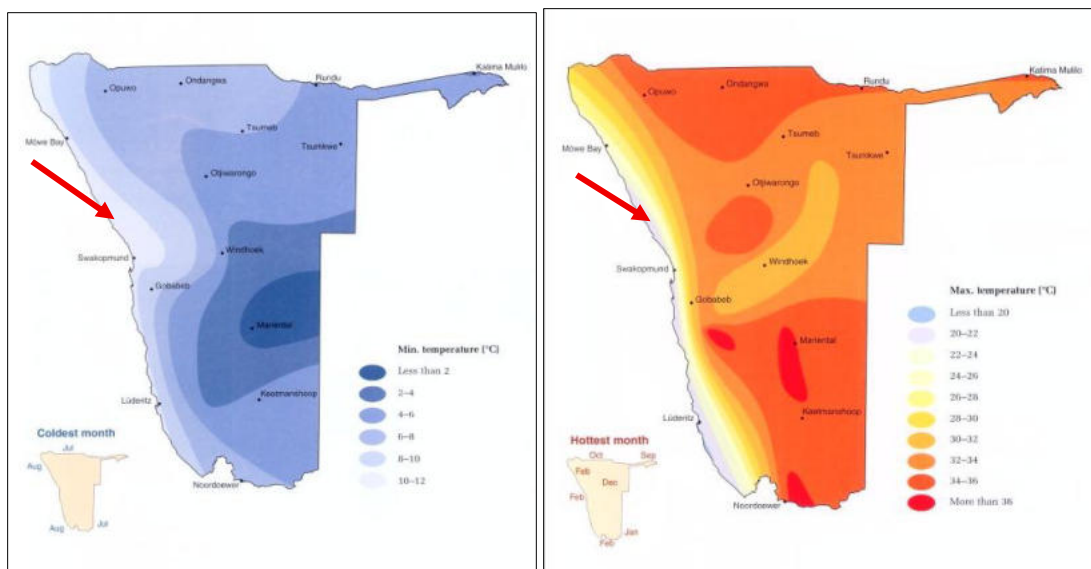


Figure 5-9: The minimum and maximum temperatures for the project area (Mendelsohn *et al.*, 2002)

5.2.2 Landscape and Topography

The mining claims mainly fall within the Coastal Plans - Figure 5-10. According to the Atlas of Namibia Team (2022), the broad Coastal Plain forms an apron along the entire length of Namibia's coast except where it is covered by dunes of the Namib Sand Sea. Away from those dune fields, the surface is underlain largely by gravel and thin layers of sand, granite outcrops, and dolerite dykes and sills. These and other rocks have been planed off to form an even surface, possibly by the Atlantic when sea levels were much higher than they are at present. Rain seldom falls, and the only regular precipitation comes in small quantities of fog. As a result, vegetation is extremely sparse, being limited to scattered tufts of grasses and shrubs with special adaptations to conserve, collect, and/or absorb moisture. Almost everyone on the Coastal Plain is urban, living in one of the four towns of Lüderitz, Walvis Bay, Swakopmund, and Henties Bay (Atlas of Namibia Team, 2022).

The site area is relatively flat with elevations ranging between 0 and 547 meters above sea level (masl), as shown on the topographic map in Figure 5-10.



Figure 5-10: The topography and landscape of the mining claims' area

Some photos of the topographic view of the site area are shown in the photos in Figure 5-11, showing a relatively flat area around the mining claims.



Figure 5-11: The topographic view of the area around the project site

5.2.3 Geology and Soils

The mining claims area is overlain by coastal salt pans and underlain by the bedrocks of granite and subordinate syenite rock units (as seen on the geology map of the site and the surrounding area in Figure 5-12).



Figure 5-12: The geology of the project site and the surrounding area

In terms of soil, the project site is mainly overlain by petric gypsisols, as shown on the dominant soil map in Figure 5-13. According to Mendelsohn et al. (2002), petric soils have a solid layer at a shallow depth that remains hard even when wet.

According to the Atlas of Namibia Team (2022), gypsisols occur where there is a source of sulphate and calcium to form gypsum – a soft mineral consisting of calcium sulphate – and where evaporation is much higher than precipitation. This is the case downwind of the largest upwelling cells off the Namibian coast, where the rising seawater brings organic sulphates to the surface, and south-westerly winds blow them onshore. Gypsisols form where these sulphates are deposited on the calcium-rich soils of the central and northern Namib.



Figure 5-13: The dominant soil types found within the mining claims

The site soils are mainly overlain by sand and gravel that are influenced by some salt crystals, given the proximity of the site to the sea (Figure 5-14).



Figure 5-14: Site soils overlain by sand and gravel influenced by salt crystals

5.2.4 Water Resources: Surface Water (Hydrology) and Groundwater (Hydrogeology)

5.2.4.1 Surface Water

In terms of surface water near the project site, ephemeral rivers originate in the highlands to the east of the project area, where mean annual precipitation is significantly higher. There are thirteen large west-flowing ephemeral rivers in the Namibian west coast that flow to the Atlantic Ocean and include the Swakop, Ugab, and Omaruru Rivers, which are important water sources for coastal populations and ecosystems (Hemming, 2018). A smaller west-flowing ephemeral river, the Orawab (Figure 5-15), is located between the Omaruru and Ugab Rivers. Orawab originates in the Brandberg – Uis area and flows to the project area, where it drains into the Cape Cross salt pan. The river is approximately 105km long with a catchment area of 1,735km².

The Orawab flows west-southwest over exposed granite and metasedimentary rocks in the upper part of the catchment. A few tributaries drain in from the south-eastern part of the Brandberg. In the downflow direction, the catchment is covered by Quaternary sand, gravel, and calcrete. Vegetation cover is thin, limited to grass in the upper catchment. The overall catchment slope is gentle (0.8%). The main channel is wide and braided with numerous parallel-flowing tributaries. These are characteristic features of rivers in the arid region. The Orawab cuts through a ridge of exposed Cretaceous age Etendeka Basalt and Damara Supergroup rocks, some 9km east of the coastline, where it passes through a narrow gorge. An alluvial fan is developed west of the ridge with indistinct distributaries (washes) that flow into the salt pan. The alluvial fan extends for approximately 5km, terminating at the inland boundary of the salt pan. To the north of the Orawab, there are two smaller ephemeral streams flows through narrow valleys in the bedrock (Hemming, 2018).

Furthermore, as cited by Wassenaar (2018), Namib HydroSearch (2015) stated that the Orawab River fan sediments deposited by the ephemeral river comprise a poorly sorted mix of gravel, sand, and finer material, densely cemented at varying depths by gypcrete. Surface flow on the fan is concentrated along active channels where infiltration will occur through the streambed, although gypcrete layers could probably inhibit or at least limit infiltration due to their lower hydraulic conductivity. Groundwater that would infiltrate will ultimately discharge at the foot of the fan at the point where the surface drainage meets the pan (Namib Hydrosearch, 2015). Theoretically, it could also flow underground into the pan sediments and thus contribute to the inflow of the crystallisers (Namib Hydrosearch, 2015, as cited by Wassenaar, 2018).

5.2.4.2 Groundwater (Hydrogeology)

With regards to groundwater (hydrogeology), the site overlain by the mining claims is underlain by rock bodies with little groundwater potential, as shown on the map in Figure 5-15. The low/little groundwater potential is attributed to the low rainfall (influenced by the arid climate of the area), the type of rock units underlying the MCs, and their non-fractured/faulted nature that limits the storage, transmission, and flow of groundwater, which is typical for desert environments.



Figure 5-15: The surface and groundwater map of the mining claims area

5.3 Social and Economic Environment

5.3.1 Demography

Based on the 2023 Population and Housing Census, the Erongo Region has a population of 240,206 (122,322 males and 117,884 females) and a population density of 3.8 people per square kilometre (persons/km²) (Namibia Statistics Agency, 2024a). The MCs fall within the Arandis Constituency, which has a population of 13,542, with a population density of 1.0 persons/km². The household population for the Constituency is 12,852, and 4,153 households (an average household size is 3.1 people) (NSA, 2024b).

5.3.2 Education and Economic Activities

The Erongo Region has a literacy rate of 95.4%. The early childhood development (age 0 to 5) stands at 32.2%, while for the population of 15+ years of age, 4.4% have never attended school, 15.6% is the population that is currently in school, and 78.1% have left school (NSA, 2024a).

According to the NSA (2024a), the main source of income in households in the Erongo Region is farming (0.7%), wages and salaries (68.7%), old age pension (7.7%), and business (non-farming) at 7.5%.

According to the Erongo Regional Council (2015), the economy of the Erongo Region mainly depends on mining, fishing, agriculture, and tourism. The fishing industry is the third largest economic sector, contributing about 6.6% to the Gross Domestic Product (GDP). The Region's whole eastern part and certain western parts are characterized by livestock farming on commercial farms in the districts of Karibib, Usakos, and Omaruru, and in the communal areas (Erongo Regional Council, 2021).

5.3.2.1 Agriculture and Farming

According to 2000 statistics, the Erongo Region was home to more than 110,000 goats, nearly 36,000 head of cattle, and approximately 50,000 sheep. Cattle from commercial and communal farmers can be marketed to the national abattoir and processing facility, Meatco (Erongo Regional Council, 2021).

5.3.2.2 Tourism

The Erongo Region offers some of the most spectacular and popular tourist destinations as well as a variety of eco-, wildlife, cultural, and adventure tourism opportunities (camping, trophy hunting, and semi-precious stone markets). The nearby Cape Cross Lodge and camping facilities contribute to tourism by offering stays, meals, and local guided experiences, providing jobs and business opportunities. Other accommodation facilities, such as camping, are available at Mile 72 and Mile 108. The Cape Cross area is a gateway to the Messum Crater and the Brandberg Mountain to the east and Skeleton Coast Park to the north. Bird platforms in the south of the park are closed to the public. No angling is allowed (MEFT, 2026).

From the local perspective, the project site is within the Cape Cross Seal Reserve that attracts visitors from around the world who come to see one of the largest Cape fur seal colonies on the planet, along with significant birdlife and dramatic coastal landscapes.

Furthermore, other economic activities in the area include wildlife viewing (the massive seal colony), particularly during breeding season when tens of thousands of seals are gathering. There are also historical sites like the Portuguese padrão (cross) – see Figure 5-16, and remnants of early guano and seal harvesting history -Figure 5-17 provide cultural value (MEFT, 2026). The project area also offers eco-tourism and nature walks, whereby visitors enjoy boardwalks, birdwatching, and photographic opportunities along the Skeleton Coast.



Figure 5-16: The Portuguese padrão (cross) near Cape Cross (credit: Grobler du Preez)



Figure 5-17: The history of early guano and seal harvesting activities at Cape Cross old graves (old graves and guano harvesting works in the 1920s (Mushi, 2026a & 2026b))

5.3.2.3 Exploration and Mining

The mining activities are undertaken near mining towns of Arandis and settlements such as Uis, Omatjete, where commonalities such as nuclear fuels (Uranium), Dimension Stone (marble and granite), Base & Rare Metals (Copper), Precious Metals (Gold), and Industrial Minerals (salt works at Cape Cross), etc., are mined. There are other active mining claims and mining licenses, as well as exploration licenses around MC75982-75991, whereby mining and exploration works may or may not be undertaken currently.

Around the proposed project site, there are ongoing saltworks. The salt production is conducted on salt pans near the MCs and in the broader Cape Cross area by different salt miners, including the Henties Soutwerke. Salt extraction and processing have been ongoing activities, providing raw material for both local use and export markets.

Historically, in the Cape Cross area, guano mining was significant in the 1800s, and while guano production has declined, areas around the salt pans are still of interest for mining claims and exploration.

5.3.3 Infrastructure and Services

The Erongo Region has good coverage of services and infrastructure. This includes a good road network from the central areas of the country and many access roads, tarred and untarred. The power is supplied either through ErongoRed in the coastal and central western areas of the Region.

There is also a good water reticulation system in both towns/villages/settlements and rural (farm) areas. The water is mainly supplied through water supply schemes operated by NamWater, either through boreholes (direct borehole or treated water), such as the Omaruru Delta Aquifer Scheme for the Towns, or private boreholes on farms.

The summary of the current services infrastructure in and around Cape Cross and the MCs includes:

- Water supply: Water is supplied from moderate and high-yielding NamWater boreholes at the OMDEL Aquifer in the Omaruru River Delta that supplies most of the coastal towns, including Swakopmund, except for Walvis Bay, which is supplied by the Kuseb Aquifer.
- Power supply: The broader areas, such as towns (Henties Bay, Swakopmund, etc.) and settlements, are supplied by ErongoRed, the regional electricity provider. Some areas (including some farms) depend on solar energy and generators for power supply.
- Road network: The nearest proclaimed road to the project site is the C34 from Mile 72/Henties Bay towards Cape Cross. Therefore, the C34 provides access to the area and then turns off to the left to the salt pans using the existing single dirt track (used by existing operators neighbouring Telfs Investments' MCs).

5.4 Archaeology and Heritage Aspect

An Archaeological & Heritage Impact Assessment (AHIA) was carried out for the mining claims by a qualified and experienced TARO Archaeology Consultant (Mr. Roland Mushi) in December 2025. The baseline information and assessment are presented herein, while mitigation measures are presented in the EMP.

Given the fact that the NHC guidelines for the application of mineral licenses' single AHIA report and heritage consent require a maximum of five (5) mineral licenses (EPLs, mining licenses, and mining claims), two separate AHIA reports were prepared for the 10 mining claims, i.e., one AHIA report carries MC-75982-75986 and the second report carries MC-75987-75991 (Appendix I). Similarly, two heritage consent applications have been submitted to the NHC for evaluation and decision-making.

5.4.1 On-site findings: MC-75982-75986

The MCs No. 75982-75986 are found in the saline pan, which lies within the Dorob National Park along the central coastline north of the town of Henties Bay in the Erongo Region. The mining claims are located on a flat area adjacent to the sea. The features observed and recorded included the outcrops and surface scatter, sea-shells, faunal remains, especially the seals due to the presence of brown hyenas, and the graves outside the mining claims. The archaeological and cultural significance within these claims is low (Mushi, 2026a and Mushi, 2026b). The landscape archaeological map of the site area covered by all 10 mining claims is shown in Figure 5-18 with three known and recorded regional archaeological and heritage resources within a distance of 50km from the project site.

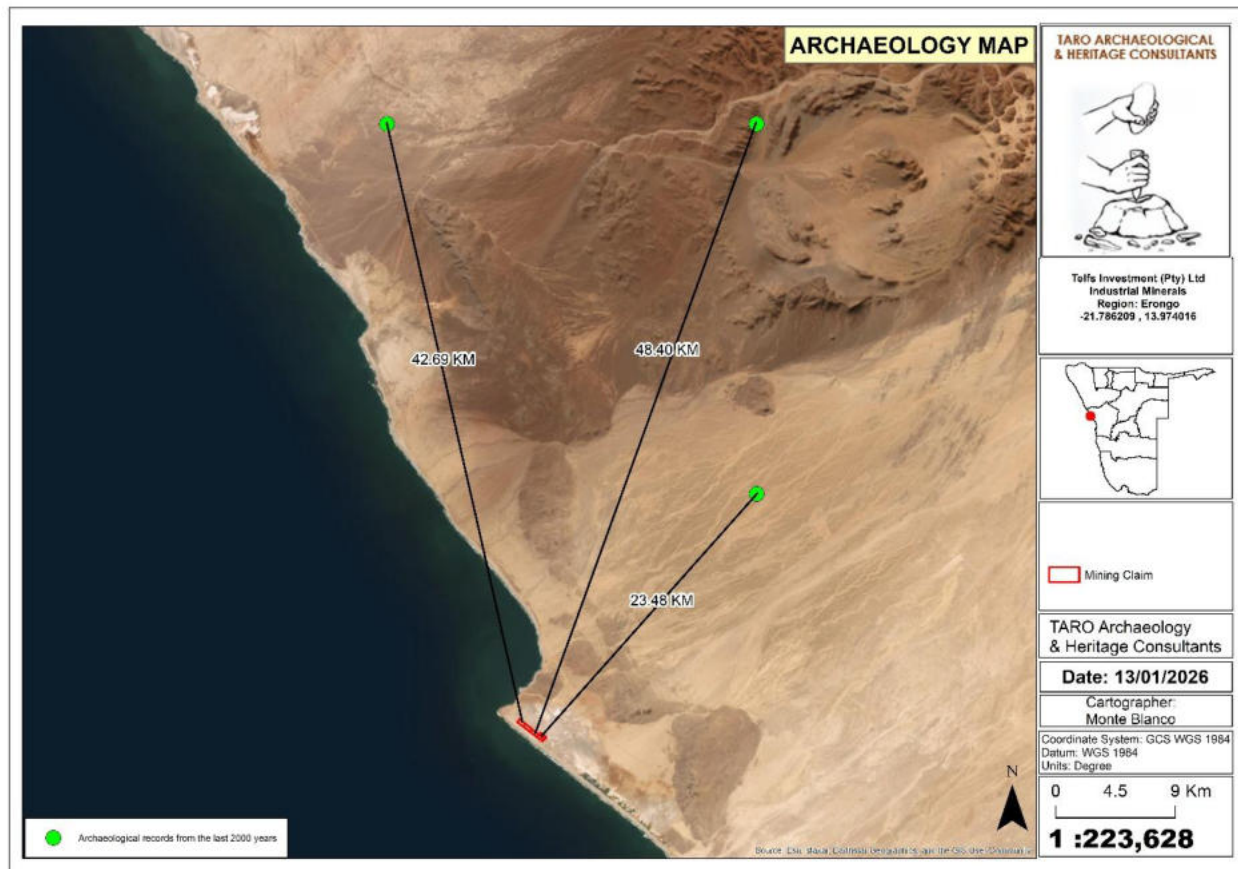


Figure 5-18: The Landscape Archaeological Map (Mushi, 2026a)

5.4.1.1 Identification of the Archaeological and Heritage Sensitivity Map

The purpose of the topographic map below is to indicate whether any sensitive archaeological or cultural heritage sites were identified during the surface survey (over MC75982-MC7598).

Graves were identified and recorded at Cape Cross; these are historic graves associated with the founders of Cape Cross (Figure 5-19). However, these cultural heritage features are located at a considerable distance from the proposed project area. As a result, no archaeological or cultural heritage impacts are anticipated. Regardless, the Chance Find Procedure is still mandatory during the salt production phases.



Figure 5-19: Archaeological findings map for MC-75982-75986 (Mushi, 2026a)

5.4.1.2 Sensitivity Analysis Summary Statement

The field survey conducted has revealed that the majority of the areas within the mining claims are of very low sensitivity. The only recorded site of high sensitivity was the graves of the late guano workers at Cape Cross. These graves are located near the sea and far from the proposed project, which is about 2km north of the mining claims (see Figure 5-19). There is also a remnant of guano harvesting activities, as shown in Figure 5-20.



Figure 5-20: A - Remnant of guano railway track with outcrop island seabird breeding site in the background (Kinahan and Kinahan, 2015), and B & C - The history of early guano and seal harvesting activities at Cape Cross (old graves and guano harvesting works in the 1920s) (Mushi, 2026a)

Archaeologically, it is evident that the majority of the areas within the claims are of low sensitivity, and that the remainder of the study area, outside the immediate claims' boundaries are of low sensitivity except where the historical graves were recorded, which is of high sensitivity. However, this does not mean that no archaeological or heritage resources will be present within the mining claim, but the probability of resources of high cultural significance being found there is considered to be very low (Mushi, 2026a).

5.4.2 On-site findings: MC-75987-75991

The MCs No. 75982-75986 are found in the saline pan, which lies within the Dorob National Park along the central coastline north of the town of Henties Bay in the Erongo Region. The mining claims are located on a flat area adjacent to the sea. The features observed and recorded included the outcrops and surface scatter, sea-shells, faunal remains, especially the seals due to the presence of brown hyenas, and the graves, outside the mining claims. The archaeological and cultural significance within these claims is low (Mushi, 2026a and Mushi, 2026b). The landscape archaeological map of the site area covered by all 10 mining claims is shown in Figure 5-18, above.

5.4.2.1 Identification of the Archaeological and Heritage Sensitivity Map

The purpose of the topographic map below is to indicate whether any sensitive archaeological or cultural heritage sites were identified during the surface survey (over MC75987-MC75991). Graves were identified and recorded at Cape Cross; these are historic graves associated with the founders of Cape Cross (Figure 5-21). However, these cultural heritage features are located at a considerable distance from the proposed project area. As a result, no archaeological or cultural heritage impacts are anticipated. Regardless, the Chance Find Procedure is still mandatory during the salt production phases.



Figure 5-21: Archaeological findings map for MC-75987-75991 (Mushi, 2026b)

5.4.2.2 Sensitivity Analysis Summary Statement

The field survey conducted has revealed that the majority of the areas within the mining claims are actually of very low sensitivity. The only recorded site of high sensitivity was the graves of the late guano workers at Cape Cross. These graves are located near the sea and far from the proposed project, which is about 1,700m (1.7km) northwest of the mining claims (see Figure 5-21).

Archaeologically, it is evident that the majority of the areas within the mining claims are of low sensitivity, and that the remainder of the study area, outside the immediate claims' boundaries, is of low sensitivity except where the historical graves were recorded, which is of high sensitivity. However, this does not mean that no archaeological or heritage resources will be present within the mining claims, but the probability of resources of high cultural significance being found there is considered to be very low (Mushi, 2026b).

The public consultation and engagement process and means employed for the EIA Study are presented in Chapter 6.

6 PUBLIC CONSULTATION AND PARTICIPATION PROCESS

Public consultation and participation form an important component of an EIA process. It provides potential Interested and Affected Parties (I&APs) and stakeholders with an opportunity to comment on and raise any issues relevant to the project for consideration as part of the assessment process. This greatly assists the EAP (Environmental Consultant) in thoroughly identifying and recording potential impacts and to what extent further investigations are necessary. Public consultation can also aid in the process of identifying possible mitigation measures. The consultation for this project has been done under the EMA and its EIA Regulations, and as per the following subsections.

6.1 Pre-identified and Registered Interested and Affected Parties (I&APs)

Relevant and applicable national, regional, and local authorities, and other interested members of the public were identified. Pre-identified I&APs were contacted directly, while other parties who contacted the Consultant after the advertised notices appeared in the newspapers were registered as I&APs upon their request.

6.2 Communication with I&APs and Means of Consultation Employed

Regulation 21 of the EIA Regulations details the steps to be taken during a public consultation process, and these have been used in guiding this process. Communication with I&APs about the proposed development was facilitated through the following means and in this order:

- A Background Information Document (BID) containing brief information about the proposed project was compiled and hand-delivered to the Ministry of Environment, Forestry and Tourism (MEFT), accompanying the ECC application, and uploaded on the MEFT (ECC) Portal for project registration and shared with registered Interested and Affected parties (I&APs). The list of registered stakeholders is attached hereto as Appendix C.
- Project Environmental Assessment notices were published in the New Era and Market Watch newspapers dated 5th & 12th November 2025 (Appendix D). The consultation period ran from the 5th of November 2025 to the 16th of January 2026.
- Given the remoteness of the project site (mining claims), no consultation meeting was held on-site. However, to ensure that key stakeholders were consulted for the EIA Study, one-on-one meetings were held with key stakeholders in Swakopmund, Cape Cross Settlement, and Henties Bay from the 8th to the 9th of December 2025. In Swakopmund, a meeting was held with the Erongo Regional Council, MEFT's Directorate of Wildlife and National Parks, MEFT's Cape Cross Sea Reserve, and NamWater (refer to Figure 6-1). The EIA meetings in Cape Cross and Henties Bay were held with the Cape Cross Lodge, Henties Bay Municipality representatives, as well as the Henties Soutwerke (neighbouring mineral license holder). The meetings were held in the form of interactive sessions,

and comments in the form of minutes were recorded. The combined meetings register from the sessions was signed and is attached hereto alongside the minutes in Appendix E.



Figure 6-1: EIA one-on-one meetings in Swakopmund on the 8th of December 2025

- The EIA posters were placed at the Erongo Regional Council in Swakopmund and Henties Bay– Figure 6-2. The copy of the poster is attached to the Report as Appendix F.



Figure 6-2: The EIA posters notice boards in Swakopmund (at the Erongo Regional Council and MEFT offices) and in Henties Bay at the Municipality

- Furthermore, written notices (letters) were also prepared and hand-delivered to the key stakeholders (Erongo Regional Council, MEFT's DWNP, NamWater Business Unit Coastal Area, Henties Bay Municipality, Cape Cross Lodge). The date-stamped and signed copies of proof of

written notices (letters) submitted to the key stakeholders for the EIA Study are appended hereto in Appendix G.

To fulfill the EIA Study documents requested by the MEFT and following consultations/engagements, a response to the consent request for the project has been provided by the land custodian (MEFT's DWNP), as appended hereto in Appendix H.

6.3 Feedback and Issues raised by the Stakeholders (I&APs)

Some issues or concerns were raised by I&APs (from the one-on-one EIA engagements), and these issues have been recorded and incorporated in the final EIA Scoping Report and EMP. The summary of these few key issues is in Table 6-1.

Table 6-1: The summary of concerns and issues noted during the stakeholders' one-on-one meetings

Environmental Aspect	Summary of concern/issue
Impact on the Cape seal community and plant life (vegetation) in the area	The stakeholder raised a concern about the potential impact on the livelihood of the seals, as well as plant life (vegetation) in the area
The effective implementation of appropriate mitigation measures	The mitigation measures should be stringent to prevent or minimize changes in the ecosystem.
Increase in vehicular traffic.	The concern about the potentially increasing number of commercial trucks in the area.
An alarming number of salt mines in the area	The alarming increase in salt mining activities in the area.

6.4 Feedback on the Review of the Draft EIA Scoping Report by I&APs

The draft EIA Scoping Report and Environmental Management Plan (EMP) were circulated to registered stakeholders (I&APs) for review and further comments from the 9th of March 2026 to the 23rd of March 2026, i.e., for a period of fourteen (14) days (see proof of circulation in Figure 6-3).

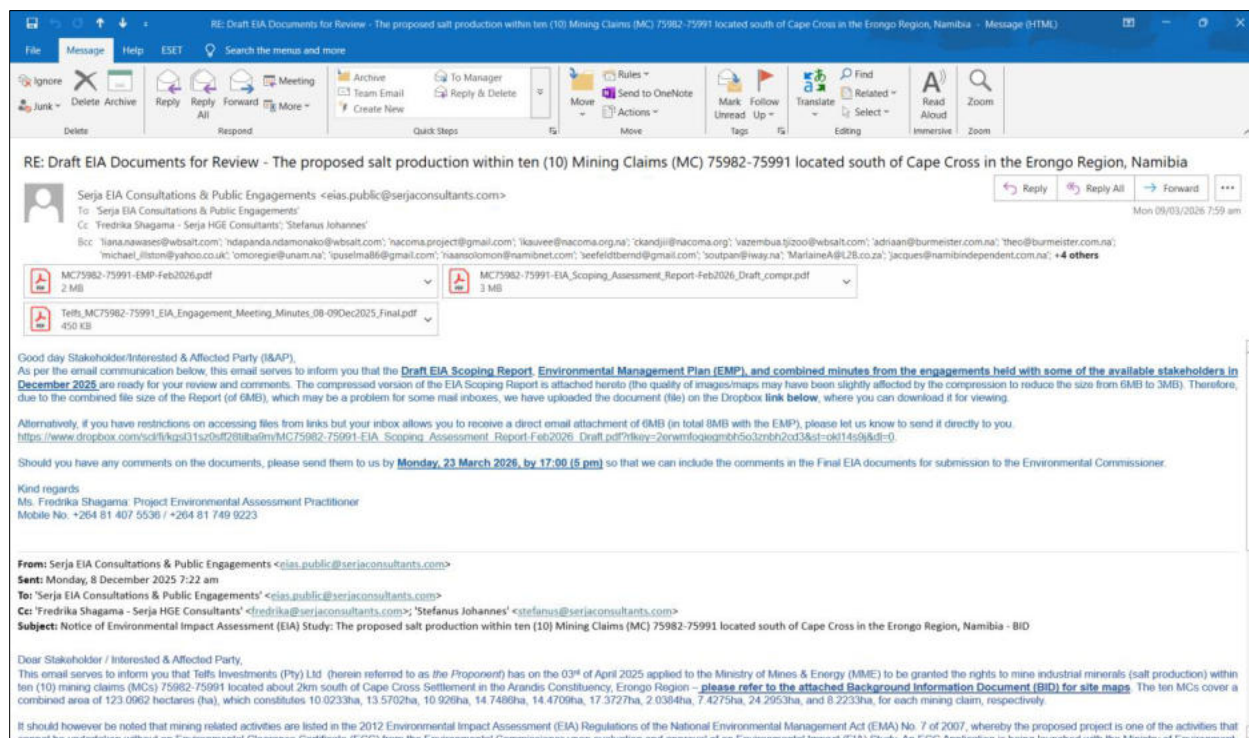


Figure 6-3: The email proof of the circulation of the draft EIA Scoping Report, EMP, and minutes to I&APs on the 9th of March 2026

There were no comments or further issues raised on the draft documents during the provided review period, i.e., between the 9th and 23rd of March 2026.

The next chapter is the presentation of potential impacts identified, the assessment methodology, impact description, and their assessment.

7 IMPACTS IDENTIFICATION, ASSESSMENT, AND MEASURES

7.1 Identification of Potential Impacts

The proposed project and its associated activities are usually associated with different potential positive and negative impacts. For an environmental assessment, the focus is placed mainly on the negative impacts that are likely to affect the host environment and social features. The assessment is done to ensure that these impacts are sufficiently addressed, and adequate mitigation measures are recommended thereto for implementation so that the impact's significance is brought under control, while maximizing the positive impacts. The potential positive and negative impacts that have been identified from the salt production activities are listed as follows:

Positive impacts:

- Local socio-economic development through employment creation and income generation for the communities of Henties Bay, Uis, and other nearby settlements. Thus, it reduces unemployment rates in this part of the Erongo Region.
- Potential creation of opportunities for skills development and training related to salt production.
- Procurement of local supply chain (through goods and services) by local/regional businesses to generate income.
- An indirect positive impact on eco-industrial or educational tourism by incorporating the salt works site through guided tours and birdwatching at the salt ponds. This would complement the Cape Cross Seal Reserve.

Negative:

- Physical soil disturbance owing to the movements of project vehicles
- Terrestrial habitat loss from salt production activities (creation of evaporation pans and access roads), such as loss of feeding/roosting areas for shore birds and reducing habitats for Cape fur seals, if activities are carried out near colonies.
- Impact on local desert biodiversity (fauna and flora) through disturbance and barriers during salt production activities.
- Aquatic habitat declines or loss (Cape Cross Lagoons)
- Change in lagoon water volume and reduction in groundwater/lagoon water level (accelerated evaporation). The pans, embankments, and channels can alter groundwater-surface water interactions and sediment transport, leading to erosion.
- Potential increase in salinity and brine leakage, due to concentrated brine released accidentally or via seepage, can raise salinity in soils, groundwater, and adjacent lagoon/nearshore waters, posing a threat to vegetation and altering benthic communities.

- The potential impact of illegal hunting/poaching of wildlife in the area
- Visual impacts due to the presence of mining equipment near tourism sites (within tourist sight).
- Potential occupational health and safety risks
- Noise generated by project vehicles and machinery may disturb or interfere with faunal activities (breeding/pupping, resting, and feeding behaviour) near the site.
- Vehicular traffic safety and impact on local roads
- Environmental pollution (littering) through improper handling, storage, and disposal of waste
- Impact on archaeological & cultural heritage resources.

7.2 Impact Assessment Methodology

The Environmental Assessment process primarily ensures that potential impacts that may occur from project activity are identified and addressed with environmentally cautious approaches and legal compliance. The impact assessment method used for this project is under Namibia's Environmental Management Act (No. 7 of 2007) and its Regulations of 2012, as well as the International Finance Corporation (IFC) Performance Standards.

The identified impacts were assessed in terms of scale/extent (spatial scale), duration (temporal scale), magnitude (severity), and probability (likelihood of occurring), as presented in Table 7-1.

To enable a scientific approach to the determination of the environmental significance, a numerical value is linked to each rating scale. This methodology ensures uniformity and that potential impacts can be addressed in a standard manner so that a wide range of impacts are comparable. It is assumed that an assessment of the significance of a potential impact is a good indicator of the risk associated with such an impact. The following process will be applied to each potential impact:

- Provision of a brief explanation of the impact,
- Assessment of the pre-mitigation significance of the impact; and
- Description of recommended mitigation measures.

The recommended mitigation measures prescribed for each of the potential impacts contribute towards the attainment of environmentally sustainable operational conditions of the project for various features of the biophysical and social environment. The following criteria (in Table 7-1) were applied in this impact assessment:

Table 7-1: Criteria used for impact assessment (extent, duration, intensity, and probability)

The Criteria used to assess the potential negative impacts.				
Extent or (spatial scale) - extent is an indication of the physical and spatial scale of the impact.				
Low (1)	Low/Medium (2)	Medium (3)	Medium/High (4)	High (5)

The Criteria used to assess the potential negative impacts.				
Impact is localized within the site boundary: Site only	Impact is beyond the site boundary: Local	Impacts felt within adjacent biophysical and social environments: Regional	Impact widespread far beyond the site boundary: Regional	Impact extends beyond National or international boundaries
Duration- Duration refers to the timeframe over which the impact is expected to occur, measured in terms of the lifetime of the project				
Low (1)	Low/Medium (2)	Medium (3)	Medium/High (4)	High (5)
Immediate mitigating measures, immediate progress	Impact is quickly reversible, short-term impacts (0-5 years)	Reversible over time; medium term (5-15 years)	Impact is long-term	Long term, beyond closure, permanent, irreplaceable, or irretrievable commitment of resources
Intensity, Magnitude/severity - Intensity refers to the degree or magnitude to which the impact alters the functioning of an element of the environment. This is a qualitative type of criterion.				
H-(10)	M/H-(8)	M-(6)	M/L-(4)	L-(2)
Very high deterioration, high quantity of deaths, injury or illness / total loss of habitat, total alteration of ecological processes, extinction of rare species	Substantial deterioration, death, illness, or injury, loss of habitat/diversity or resource, severe alteration, or disturbance of important processes	Moderate deterioration, discomfort, partial loss of habitat/biodiversity or resource, moderate alteration	Low deterioration, slight noticeable alteration in habitat and biodiversity. Little loss in species numbers	Minor deterioration, nuisance or irritation, minor change in species/habitat/diversity or resource, no or very little quality deterioration.
Probability of occurrence - Probability describes the likelihood of the impacts occurring. This determination is based on previous experience with similar projects and/or based on professional judgment.				
Low (1)	Medium/Low (2)	Medium (3)	Medium/High (4)	High (5)
Improbable; low likelihood; seldom. No known risk or vulnerability to natural or induced hazards.	Likely to occur from time to time. Low risk or vulnerability to natural or induced hazards	Possible, distinct possibility, frequent. Low to medium risk or vulnerability to natural or induced hazards.	Probable if mitigating measures are not implemented. Medium risk of vulnerability to natural or induced hazards.	Definite (regardless of preventative measures), highly likely, continuous. High risk or vulnerability to natural or induced hazards.

7.3 Impact Significance

Impact significance is determined through a synthesis of the above impact characteristics. The significance of the impact “without mitigation” is the main determinant of the nature and degree of mitigation required. As stated in the introduction to this chapter, for this assessment, the significance of the impact without prescribed mitigation actions was measured.

Once the above factors (Table 7-1) have been ranked for each potential impact, the impact significance of each is assessed using the following formula:

SP = (magnitude + duration + scale) x probability

The maximum value per potential impact is 100 significance points (SP). Potential impacts were rated as high, moderate, or low significance, based on the following significance rating scale (Table 7-2).

Table 7-2: Impact significance rating scale

Significance	Environmental Significance Points	Colour Code
High (positive)	>60	H
Medium (positive)	30 to 60	M
Low (positive)	<30	L
Neutral	0	N
Low (negative)	>-30	L
Medium (negative)	-30 to -60	M
High (negative)	>-60	H

For an impact with a significance rating of high, mitigation measures are recommended to reduce the impact to a low or medium significance rating, provided that the impact with a medium significance rating can be sufficiently controlled with the recommended mitigation measures. To maintain a low or medium significance rating, monitoring is recommended for a period to enable the confirmation of the significance of the impact as low or medium and under control.

The assessment of the project phases is done for both pre-mitigation (before implementing any mitigation) and post-mitigation (after mitigation is implemented). The objective of the mitigation measures is to firstly avoid the risk, and if the risk cannot be avoided, mitigation measures to minimize the impact are recommended. Once the mitigation measures have been applied, the identified risk will be of low significance.

7.4 Description and Assessment of Potential Impacts

The potential impacts of the proposed project activities are described and assessed in Table 7-3 (positive impacts), Table 7-4 (adverse/negative impacts), and Table 7-5 (cumulative negative impacts). The recommended management and mitigation measures to improve (for positive impacts) and reduce the significance of negative impacts are provided in the Draft EMP (Appendix A).

Table 7-3: The Description and Assessment of the positive impacts of Salt Production on the biophysical and social environment

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
Positive Impacts											
Employment creation	Local socio-economic development through employment creation and income generation for the communities of Henties Bay, Uis, and other nearby settlements. Thus, it reduces unemployment rates in this part of the Erongo Region.	L / M- 2	L / M - 2	L / M - 4	L - 1	L - 8	M / H - 4	H - 5	M - 6	H - 5	H - 75
Skills development and transfer	Potential creation of opportunities for skills development and training related to salt production.	L / M- 2	L / M - 2	L / M - 4	L - 1	L - 8	M / H - 4	H - 5	M - 6	H - 5	H - 75
Empowerment of local and regional businesses	Procurement of local supply chain (through goods and services) by local/regional small and medium businesses will promote local entrepreneurship, empowerment, and local economic development (income generation).	L / M- 2	L / M - 2	L / M - 4	L - 1	L - 8	M / H - 4	H - 5	M - 6	H - 5	H - 75
Eco-industrial and education tourism	Indirect positive impact on eco-industrial or educational tourism by incorporating the salt works site through guided	L / M- 2	L / M - 2	L / M - 4	L / M - 2	L - 16	M - 3	M / H - 4	L / M - 4	M / H - 4	M - 44

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	tours, and birdwatching at the salt ponds. This would complement the Cape Cross seal reserve.										

Table 7-4: The Description and Assessment of the negative impacts of Salt Production on the biophysical and social environment

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
Negative (Adverse) Impacts											
Physical disturbance to the site soils	The excavations and land clearing to enable the siting of project structures and equipment, as well as clearing of tracks, trenching, and preparation, will potentially result in soil disturbance through target site establishment and unnecessary off-road driving. These would leave the site soils exposed to erosion (areas with no to little vegetation cover on the soils in place). This is a concern because desert soils are sensitive to disturbance, and the prints may take a hundred years to fade. The movement of heavy vehicles and equipment may lead to	M - 3	M / H - 4	L / M - 4	M / H - 4	M – 44	L / M - 2	L / M - 2	L / M - 4	L / M - 2	L - 16

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	compaction of the soils during project activities.										
Impact on the sensitive Biodiversity: Wild Fauna and Flora	There is a potential faunal and flora impact through disturbance and barriers established during salt production activities. <u>Fauna:</u> The MCs fall within an ecologically sensitive area. Therefore, if activities such as trenching are not carefully conducted, this would result in land degradation. The degradation would lead to habitat loss for a diversity of flora and fauna on-site. Moreover, noise, dust from trenching in dry areas, and human presence can drive away wildlife or alter their movement patterns. This is because wildlife is crucial to tourism and trophy hunting income; thus, any uncontrolled disturbance would have socio-economic and ecological ramifications. However, project activities will be limited to	M: -3	M: -3	M: -8	M / H: 4	M: -56	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	specific target areas only within the MC boundaries. The presence and movement of the workforce and the operation of project equipment and heavy vehicles would disturb wildlife at the mined sites of the MCs. There is also a potential for illegal hunting (poaching) of local wildlife by project-related workers. This could lead to a loss or reduction of specific faunal species, which also impacts tourism in the area. <u>Flora:</u> The already scarce flora (vegetation) in the area would be impacted through land clearing to create project access roads, set up project equipment, and infrastructure. The clearing of vegetation, where deemed necessary, will be limited to the specific route, if necessary and minimal; therefore, the impact will be localized, site-specific, and therefore manageable.										

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	The project activities also have a potential negative effect on vegetation and animals in the drainage lines. Not only that, but also associated with the loss of vegetation in both the major and minor drainage lines, and together, the loss of vegetation affects all organisms that depend on them as resources (Wassenaar, 2018). As a key mitigation measure to continue conservation and protection of biodiversity (fauna) in the host environment, the crystallisers will be constructed in such a way that allows the movement of mammals. The natural brine ponds nearer the sea will not be affected as the Proponent will leave a buffer area between the crystallisers and the natural brine ponds. Therefore, the impact will be minimal.										
Terrestrial habitat loss from salt	The creation of evaporation pans and access roads, such as loss of feeding/roosting	M: -3	M: -3	M / L: -4	M / H: 4	M: -40	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
production activities	areas for shore birds and reducing habitats for Cape fur seals, may occur if activities are carried out near colonies. Not only that, but there is also a potential impact on the highly sensitive coastal hummock habitat. Added to that, the clearing of land, laying down of materials, and construction of crystallisers destroy most sandy gravel plain habitat										
Aquatic habitat declines or loss (Cape Cross Lagoons)	The proposed salt mining production activities can lead to hydrological alteration, direct habitat loss, changed water quality/salinity, and physical disturbance. These could all contribute to declines or loss of aquatic habitat and the biodiversity that depends on it	M - 3	M - 3	M - 6	M / H - 4	M - 48	L / M: - 2	L / M: -2	L / M: -4	L / M: 2	L: -16
Change in lagoon water volume and reduction in groundwater/lagoon water level	The pans, embankments, and channels can change groundwater-surface water interactions and sediment transport, resulting in erosion.	M: -3	M: -3	M / L: -4	M / H: 4	M: -40	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
(accelerated evaporation)											
Potential increase in salinity and brine leakage	The impact is due to the concentrated brine released accidentally or via seepage, which can raise salinity in soils, groundwater, and adjacent lagoon/nearshore waters, posing a threat to vegetation and altering marine benthic communities in the various tidal zones on the beach berm.	M: -3	M: -3	M: -6	M / H: 4	M: -48	L / M: -2	L / M: -2	L / M: -4	L / M: 2	L: -16
Visual impact: Scenic view of the area for Tourism	The project's visual impacts can arise from the presence of mining equipment near tourism sites (within tourist sights, or lingering evidence of trenches. This is bound to happen when production sites are located close to or along roads, and these scars may contrast with the surrounding landscape and may potentially become a visual nuisance to tourists.	M - 3	M - 3	M - 6	M / H - 4	M - 48	L / M: -2	L / M: -2	L / M: -4	L / M: 2	L: -16
Waste Generation (Environmental pollution)	Waste types such as solid and wastewater will be generated onsite, and possibly hazardous materials will be handled onsite during salt production. If the	M: -3	M: -3	M / L: -4	M / H: 4	M: -40	L - 1	L - 1	L - 2	L / M - 2	L - 8

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	generated waste is not disposed of responsibly, land pollution may occur within the MCs or around the site. If solid waste, such as papers and plastics, is not properly stored or just thrown into the environment (littering), it may be consumed by wild animals, which could be detrimental to their health. Improper handling, storage, and disposal of hydrocarbon products and hazardous materials at the site may lead to soil and groundwater contamination in the case of spills and leakages. Therefore, the project needs to have appropriate waste management for the site. To prevent these issues, biodegradable and non-biodegradable wastes will be stored in separate containers and collected regularly for disposal at the nearest recognized waste management facilities.										

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
Occupational Health and Safety Risks	Project personnel (workers) involved in the project activities may be exposed to health and safety risks. The heavy vehicle, equipment, and fuel storage area will be properly secured to prevent any harm or injury to the Proponent's personnel, locals, and animals. Another potential risk to both people and wildlife on-site are unsecured project trenches or trenches that are not backfilled. The use of heavy equipment, especially during trenching and the presence of hydrocarbons on sites, may result in accidental fire outbreaks. This could pose a safety risk to the project personnel and wildlife.	M - 3	M - 3	M - 6	M / H - 4	M - 48	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12
Vehicular Traffic Safety	The local roads, such as the C34 from Mile 72/Henties Bay towards Cape Cross, the existing single dirt track (used by existing operators neighbouring Telfs Investments' MCs), and local access roads, are the main transportation routes for all	M - 3	M / H - 4	L / M - 4	M / H - 4	M - 44	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	vehicular movement in the project area. There would be a potential increase in traffic flow due to the delivery of supplies, goods, and services, and the commuting workforce to the site. Depending on the project needs, trucks, medium, and small vehicles will be frequenting the area to and from the site. This would potentially increase slow-moving heavy vehicular traffic along these roads. Furthermore, according to the Traffic Study conducted in 2016 for the project area, the existing road network has sufficient capacity to accommodate the additional development traffic, because the overall traffic volumes generated are very low and within the capacity of the immediate road infrastructure, the C34 and D2301. The impact significance would continue to be low, provided that no external road upgrade										

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	is required to accommodate the project traffic (Du Toit, 2016).										
Noise	The noise generated by project vehicles and machinery may disturb or interfere with faunal activities (breeding/pupping, resting, and feeding behaviour) near the site. Thus, this can be a wildlife nuisance. Moreover, excessive noise without any protective measures in place can also be a health risk to workers on-site. The noise level is bound to be limited to the site only; therefore, the impact likelihood is minimal.	M - 3	M - 3	M - 6	M / H - 4	M - 48	L - 1	L / M - 2	L - 2	L / M - 2	L - 10
Archaeological and Heritage resources	According to the AHIA Reports by Mushi (2026a & 2026b), no significant archaeological or cultural heritage resources were noted within the project area, and no adverse impact on heritage resources is expected, especially within the boundaries of surveyed MCs. Any additional effects on subsurface heritage resources can be successfully mitigated by implementing a chance find	M: -3	M: -3	M / L: -4	M / H: 4	M: -40	L - 1	L / M - 2	L - 2	L / M - 2	L - 10

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	procedure. Mitigation measures as recommended in this report should be implemented during all phases of the project. Impacts of the project on heritage resources are expected to be low during mining activities as assessed in the AHIA Report (Mushi, 2026a & 2026b). The only visible graves noted during the surveys were the graves of the late founders of Cape Cross, which is about 2km away from the proposed site; no impacts whatsoever are expected during the salt mining activities. Thus, direct or indirect impacts or risks of impact on archaeological sites located near or in the vicinity of the proposed mining project can be reduced to acceptable levels by the adoption of appropriate recommended mitigation measures, including integration of the archaeological heritage record and Chance Finds procedure in the project EMP.										

7.5 Description and Assessment of Cumulative Impacts

According to the International Finance Corporation (2013), cumulative impacts are defined as “those that result from the successive, incremental, and/or combined effects of an action, project, or activity (collectively referred to in this document as ‘developments’) when added to other existing, planned, and/or reasonably anticipated future ones”. Similarly, to many other mining-related projects, some of the cumulative impacts to which the proposed project and associated activities potentially contribute are described and assessed in Table 7-5.

The recommended management and mitigation measures to reduce the significance of these impacts are similar to the project impacts provided in the Draft EMP (Appendix A). Therefore, the Proponent will need to effectively and commit to implementing mitigation measures for each project impact and its associated cumulative impact.

Table 7-5: The Description and Assessment of cumulative impacts of salt production activities on the biophysical and social environment

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
Land and Soil Disturbance	The repeated mining activities in the same area may cumulatively disturb soils, vegetation, and natural landscapes. Multiple mining claims and other mineral licenses are operating in the Region; movement of vehicles and equipment across fragile terrain could result in progressive soil erosion, loss of topsoil, and visible scarring of the landscape over time. This would happen if appropriate measures are not properly and effectively implemented to minimize the impact.	M - 3	M / H - 4	L / M - 4	M / H - 4	M - 44	L / M - 2	L / M - 2	L / M - 4	L / M - 2	L - 16

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
Poaching (illegal hunting of wildlife):	The Erongo Region, among other regions with wildlife, is prone to poaching. As such, this could have been ongoing in the area (before the proposed project), and some of which could be linked to people from outside the area or other existing projects. Therefore, this impact is likely to continue with the introduction of additional people (related to the project). Regardless, mitigation measures will need to be implemented to mitigate these impacts.	M: -3	M: -3	M: -6	M / H: 4	M: -48	L / M: -2	L / M: -2	L / M: -4	L / M: 2	L: -16
Aquatic habitat declines or loss (Cape Cross Lagoons) during salt production at Cape Cross	Many years of salt production by different mining companies at Cape Cross could contribute cumulatively to altered water regimes, direct removal, and or modification of lagoon-associated habitats. Not only these, but also the long-term ecological shifts that reduce the extent and quality of natural aquatic habitats.	M - 3	M - 3	M - 6	M / H - 4	M - 48	L / M: -2	L / M: -2	L / M: -4	L / M: 2	L: -16

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
Impact on road infrastructure	The proposed project activities will contribute cumulatively to various existing activities, such as travelling associated with tourism, and existing mineral licenses and other projects in the area. The contribution of the proposed project to this cumulative impact is, however, not considered significant given the local extent (site-specific) of the intended salt production within the 10 MCs.	M: -3	M: -3	M / L: -4	M / H: 4	M: -40	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12
Water Resources	Although individual project activities use minimal water (for cooking, washing, and drinking), cumulative abstraction (from the water source) and possible contamination from several other mineral licenses in the area and the Region at large could impact water resources in this part of the Erongo Region. Furthermore, the prolonged use of water for the project could lead to regional water scarcity. This could result in reduced water availability for communities and ecosystems, and the risk of aquifer contamination. Therefore, the	M - 3	M - 3	M - 6	M / H - 4	M - 48	L / M: - 2	L / M: -2	L / M: -4	L / M: 2	L: -16

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	respective impact mitigations recommended in the EMP should be implemented.										
Biodiversity and Habitat (Terrestrial habitat loss from salt production activities)	The combined effects of several active mineral licenses, roads, and human activities can lead to habitat fragmentation (particularly the highly sensitive coastal hummock habitat) and disturbance to wildlife. The contributing factors would be noise, movement of vehicles, and vegetation clearance within the CCSR. This would result in the displacement of fauna, reduced biodiversity, and long-term ecological imbalance. Therefore, the impact significance can be minimized by implementing the respective impact mitigations recommended in the EMP.	M - 3	M - 3	M - 6	M / H - 4	M - 48	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12
Archaeological and Cultural Heritage	Although each project may have a limited heritage impact, multiple mining and development activities in the area may collectively increase the risks of disturbance to undiscovered heritage sites.	M - 3	M / H - 4	L / M - 4	M / H - 4	M - 44	L / M - 2	L / M - 2	L / M - 4	L / M - 2	L - 16

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	This would stem from ground disturbance from trenching and vehicular access. The results would be the loss or damage of archaeological sites if they are not timely identified and protected. Similarly, the focus of mitigation measures in the AHIA Report is to recommend the layout of the project to avoid all known significant heritage or cultural sites, and will thus make a negligible contribution to cumulative impacts.										
Visual and Landscape Impacts	Cumulative visual impacts would be from multiple footprints of exploration or mining in the surrounding area. This is caused by clearing areas for project equipment and infrastructure, campsite, trenches, and unrehabilitated disturbed sites. This would result in the degradation of scenic value, thus affecting tourism aesthetics. Therefore, to reduce the impact significance, the effective implementation of respective impact mitigations	M - 3	M - 3	M - 6	M / H - 4	M - 48	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	recommended in the EMP is crucial.										
Vehicle Traffic	There is potential for high vehicle counts (trucks/staff vehicles) over extended operation periods. This would also result in the deterioration of local roads due to heavy trucks from different mining operators and public road users (local traffic and tourism).	M - 3	M - 3	M - 6	M / H - 4	M - 48	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12
Cumulative Regional Development Pressure	Continuous mining-related projects (exploration and mining) in the region could strain local infrastructure and services (roads, water supply, spaces at waste disposal sites/facilities). These are attributed to the increased traffic and resource demand across multiple projects. The main issues will be road deterioration.	M - 3	M - 3	M - 6	M / H - 4	M - 48	L - 1	L / M - 2	L - 2	L / M - 2	L - 10

8 CONCLUSIONS

The ESA Study for the proposed salt production activities on 10 mining claims (MC75982-75991) was undertaken per the EMA and its 2012 EIA Regulations. Some key potential positive and negative impacts were identified. The key negative impacts were described, assessed, and appropriate management and mitigation measures were made for implementation by the Proponent, their contractors, and workers.

The public was notified as required by Sections 21 to 24 of the EIA Regulations by placing adverts in two different newspapers, dated 5th & 12th November 2025 (in the *New Era newspaper* and *Market Watch*).

Given the remoteness of the project site (mining claims), no consultation meeting was held on-site. However, to ensure that key stakeholders are consulted for the EIA Study, one-on-one meetings were held with key stakeholders in Swakopmund, Cape Cross Settlement, and Henties Bay from the 8th to the 9th of December 2025. In Swakopmund, the meeting was held with the Erongo Regional Council, MEFT's Directorate of Wildlife and National Parks, MEFT's Cape Cross Sea Reserve, and NamWater. The EIA public meetings in Cape Cross and Henties Bay were held with the Cape Cross Lodge and Henties Bay Municipality representatives. The meetings were held in the form of interactive sessions, and comments in the form of minutes were recorded. The combined engagement register from the sessions was also signed and recorded. The consultation period ran from the 5th of November 2025 to the 16th of January 2026.

Feedback on the Review of the Draft EIA Scoping Report by I&APs: The draft EIA Scoping Report and Environmental Management Plan (EMP) were circulated to registered stakeholders (I&APs) for review and further comments from the 9th of March 2026 to the 23rd of March 2026, i.e., for a period of fourteen (14) days. There were no comments or further issues raised on the draft documents during the provided review period, i.e., between the 9th and 23rd of March 2026.

Impact Assessment: The key negative impacts as well as cumulative impacts were described and assessed. The potential negative impacts indicated a medium rating of significance. To minimize the significance, appropriate management and mitigation measures are made for implementation by the Proponent, their contractors, and workers to avoid and/or minimize their significance on the environmental and social components. The effective implementation of the recommended management and mitigation measures, accompanied by monitoring, will particularly see a reduction in the significance of adverse impacts that cannot be avoided completely (from medium rating to low).

Apart from the recently conducted Archaeological and Heritage Impact Assessment (AHIA), and data ecological assessment information from the previously conducted EIA Study for existing mineral licenses near the project site, no other or further detailed assessments are required for this EIA Study. Therefore, the EIA Study and applicable incorporated specialist studies (inputs) were deemed sufficient and concluded that no further assessments are required for the ECC application for the proposed project activities.

Serja Consultants are confident that the potential negative impacts associated with the proposed project activities can be managed and mitigated by the effective implementation of the recommended management and mitigation measures, and with more effort and commitment put into monitoring the implementation of these measures. It is recommended that the proposed project be granted an ECC, and provided that:

- All the management and mitigation measures provided herein are effectively and progressively implemented. All required permits, licenses, and approvals for the proposed activities should be obtained as required. These include permits and licenses for land use agreements, service provision agreements (water provision), and mining, and ensuring compliance with these specific legal requirements, which are renewed as stipulated by the issuing authorities.
- As a key mitigation measure towards the continued conservation and protection of biodiversity (fauna) in the host environment, the crystallisers should be constructed in such a way that allows the movement of mammals. The natural brine ponds nearer the sea should not be affected, and thus, Telfs Investments should leave a buffer area between the crystallisers and the natural brine ponds. In other words, salt excavation works **are restricted to areas within the mining claims that leave a larger buffer area between the beach and the crystallisers.**
- **Salt excavation activities are scheduled outside critical breeding periods** where possible (avoiding the critical breeding season between November and March), while monitoring the presence of sensitive species, and halting work if necessary.
- No-go zones should be respected, and avoiding salt production within buffer zones and very sensitive site areas should be effectively implemented.
- The Proponent commits to holding engagement feedback meetings with stakeholders when needed and required, either before the project commences or during its implementation.
- Transparency in communication and continued engagement with key stakeholders before and during the project is maintained throughout the project.
- The Proponent, their workers, and contractors comply with the legal requirements governing their project and its associated activities.
- Site areas are rehabilitated, as far as practicable, to their pre-project state. This includes progressive levelling of stockpiled materials and the closing/capping of trenches.

To maintain the desirable rating and ensure that the potential impacts are under control, the implementation of management and mitigation measures should be monitored by the Environmental Control Officer (ECO) and audited by an Independent Environmental Consultant on a bi-annual basis. The monitoring of this implementation will not only be done to maintain the reduced impacts rating or maintain a low rating, but also to ensure that all potential impacts that might arise during implementation are properly identified in time and addressed immediately.

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**Appendix I: Archaeological & Heritage
Impact Assessment (AHIA) Reports for
MC-75982-75986 & MC-75987-75991**

ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT REPORT

FOR THE PROPOSED SALT PRODUCTION WITHIN MINING CLAIMS No. 75982, 75983, 75984, 75985 & 75986,
LOCATED SOUTH OF CAPE CROSS IN THE ERONGO REGION, Namibia



Prepared by: Roland Mushi



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Prepared for: Telfs Investments (Pty) Ltd

**As required under Section 53 (7) and Section 54 (7) of the National Heritage Act (No. 27 of
2004).**

Document Information/Project Details

Item	Description
Report Title	Archaeological and Heritage Impact Assessment Report for the Salt Production in the Erongo Region
Project Location & Site Name	The Proposed Project is located about 2 km south of Cape Cross in the Erongo Region.
Granted Date	<i>Pending ECC</i>
Expiry Date	<i>Pending ECC</i>
Target Commodities & Minerals	The Proposed Project intends to mine salt.
Approximately Coordinates	<i>Refer to Table 1</i>
Purpose of the Archaeological & Heritage Assessment	The purpose of the study is to identify, record, and recommend measures for mitigation in areas of archaeological and cultural heritage significance, which includes rock art sites, artefacts, graves or burial grounds features, paleontological, structures, buildings, landscapes, etc., that might be impacted by the proposed project.
Address & Contacts of the Project Proponent/Developer	<i>Telfs Investments (Pty) Ltd P.O. Box 8912 Swakopmund</i>
Total size of the application areas (MCs)	60.1921 (ha)
Author Identification	Prepared by TARO Archaeological & Heritage Consultants Cell: +264 81 3332373 Email: rolandmushi@gmail.com
Site Survey and Report Writing	<i>Mr. Roland Mushi (Archaeologist & Cultural Heritage Specialist)</i>
Heritage Research Permit	Permit No. 11/2025 <i>Issued under section 52(1) of the National Heritage Council Act (Act 27 of 2004).</i>
Competent Authority	National Heritage Council of Namibia
Report Date	21/01/2026
Cite this document as:	<i>Mushi, R. 2026. (AHIA) Archaeological and Heritage Impact Assessment for Salt Production on Mining Claims No. 75982-75986 located south of Cape Cross in the Erongo Region.</i>

Copyright & Disclaimer

Authorship: This Archaeological and Heritage Impact Assessment Report has been prepared by TARO Archaeological & Heritage Consultants. This report is for the review of the National Heritage Council of Namibia in accordance with the National Heritage Act No. 27 of 2004.

Copyright: Copyright of all documents, images, drawings, and records – whether manually or electronically produced – that form part of this submission, and any subsequent reports or project documents, is the property of TARO Archaeological & Heritage Consultants. None of the documents, drawings, or records may be used or applied in any manner, nor may they be reproduced or transmitted in any form or by any means whatsoever for or to any other person, without the prior written consent of TARO AHC. However, this report may be reproduced by TARO AHC as the Author of the report and the National Heritage Council of Namibia for the Archaeological and Heritage Management in accordance with the National Heritage Act, 27 of 2004.

Geographic Co-ordinate Information: Geographic coordinates in this report were obtained using a hand-held Garmin Global Positioning System device, *GPSmap 60CSx*. The accuracy device, as stated by the manufacturer, states that these devices are accurate to within 11 feet, which is equivalent to ± 3 meters. Maps: Maps included in this report use data extracted from the GIS Database, Spatial datasets, Google Earth Pro, and Coordinates.

Disclaimer: Although all possible care is taken to identify sites of cultural importance during the investigation of study areas, it is always possible that hidden or sub-surface sites could be overlooked during the study. TARO Archaeological & Heritage Consultants and its personnel will not be held liable for such oversights, and inconsistencies that may result from information that may not be available at the time this report was prepared, or for costs incurred as a result of such oversights. The client is advised to seek clarification on any elements that may be indistinct. Information and recommendations in this document should only be relied upon in the context of this document; any documents referenced explicitly herein should only be used within the context of the appointment.

Declaration of Independence

Specialist Name/Archaeologist who prepared this report	Mr. Roland Mushi Contacts: +264 85 3332373 Email: rolandmushi@gmail.com
Declaration of Independence	I/we, TARO Archaeological & Heritage Consultants, hereby confirm my/our independence as an Archaeologist/Heritage specialist and declare that I/we have no interest in the business of our client, other than fair remuneration for work performed on this project/contract as well as the execution of archaeological sound fieldwork and the submission of a professional report to our client and Body of Authority (National Heritage Council of Namibia). This Archaeological & Heritage Assessment Report has been prepared according to the provisions of Section 51 (3) of the National Heritage Act, No 27 of 2004, and National Heritage Guidelines for Heritage Impact Assessment of 2021, Environmental Management Act, No 7 of 2007, and other relevant legislation.
Signature & Stamp	
Date	21/01/2026

The expertise of the Specialist

Roland Mushi is a skilled professional with many years of experience in the heritage sector. He has several years of experience working in desert environments, more specifically in Namib Naukluft National Park as a Researcher, and currently, he has been working as a full-time archaeologist since 2021. Academically, he obtained an MSc in Natural Resources Assessment and Management and B. A (Hons) in History and Archaeology with a special focus and interest in Lithic and Fauna Analysis in Archaeology, both degrees were obtained from the University of Dar Es Salaam. Roland is an accredited member of the following;

- **ASAPA** - Association of Southern African Professional Archaeologists # **480**
- **SAfA** - Society of Africanist Archaeologists
- **SAMA** - South African Museums Association # **NCM 008**
- **MAN** - Museums Association of Namibia # **1311556**
- **EAPAN** - Environmental Assessment Professionals Association of Namibia # **179**
- **ICOM** – International Council of Museums # **177513**

SUBMISSION OF REPORT

Please note that the National Heritage Council of Namibia needs to comment on and review this report. The Project Proponent/Client is advised not to proceed with any action before receiving the necessary consent/comments from NHCN.

Executive Summary

TARO Archaeological & Heritage Consultants (TARO AHC) was appointed by Serja Hydrogeo-Environmental Consultants CC, on behalf of Telfs Investments (Pty) Ltd (hereafter referred to as the Proponent), to undertake an Archaeological and Heritage Impact Assessment (AHIA) for the proposed salt mining activities at Mining Claims No. 75982, 75983, 75984, 75985, and 75086. The targeted mineral commodity for this proposed project is salt production. The combined total footprint areas of the proposed salt mining project are about 60.1921 (ha). Topographically, the claims are situated within the saline pan. Archaeologically, the findings from the surface survey conducted are of **LOW** significance.

The area around the saline pan has been disturbed to varying degrees over many decades. This includes multiple roads and vehicle tracks for access to the saline pan for mining and to the beach for fishing. Originally, the area formed part of the Cape Cross Farm 143. The gravel plains and washes around the pan fell prey to various types of disturbance, namely, the clearing of areas for the construction of buildings utilised for mining and later for tourism.

Findings and observations made

Identification, mapping, classification, and assessment of the significance of the archaeological, historical, and cultural heritage resources in the area were conducted according to the National Heritage Guidelines of 2021. The site surveys were undertaken on the 08th and 09 of December 2025. Key findings of this AHIA assessment include:

Burial site: A burial site comprising graves has previously been recorded at Cape Cross, in proximity to the existing office facilities. The site holds cultural heritage significance, particularly in terms of its contribution to the historical landscape of the area. The burial site is located approximately 2 km from the boundaries of the proposed salt mining claims and falls outside the anticipated impact zone of the salt mining operations.

No additional burial sites were identified within the proposed mining claim areas during the field survey. Based on current observations, the proposed development is unlikely to directly or indirectly impact known heritage resources. A chance-find procedure should, however, be implemented during mining operations to safeguard against the potential discovery of previously unidentified subsurface heritage materials.

Conclusion and Recommendations

The Archaeological and Heritage Impact Assessment (AHIA) has identified no significant impacts expected at the proposed mining site. It should be noted that the areas in which the mining claims are located have been disturbed by previous salt mining and other activities, including tourism. The surface-level assessment has shown that the proposed mining claim areas are not archaeologically sensitive. Consequently, the overall impact of the proposed project has been assessed as **LOW**.

It is strongly recommended that project activities focus exclusively on the identified target sites. Strict compliance with the mitigation measures outlined in Section 16.2 is essential. Additionally, the adoption and implementation of Chance Find Procedures as part of the Environmental Management Plan (EMP) is required, pending approval from the relevant authority.

While the recommended mitigations pertain specifically to archaeological and heritage considerations, it is important to note that project authorization is still subject to approval. The proposed salt production activities may only proceed upon review and approval by the National Heritage Council of Namibia.

Document information

The contents of this Heritage Assessment Report are in accordance with the National Heritage Act, No. 27 of 2004, and the Guidelines for Heritage Impact Assessment 2021 of Namibia.

[illegible]

proposed project, and those identified must be subsequently outlined and quoted;	
H. Methodology - A description of the methodology used in undertaking a field survey including site investigation, and preparation of the report	Section 4, 4.1, 4.2 & 4.3
I. Consultation and Stakeholder Engagement - A description of the result of consultation undertaken during the site visit (Relevant to heritage resources only)	Section 4.4 & 4.4.1
J. Site Investigation	Section 4.5
K. Detailed Assessments - Site investigation details	Section 5, Table 6
L. Site Significance Rating	Section 6
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(ii) Physical and Environmental Context of the area - Vegetation and Landscape - Site context	Sections 9, 9.1 & 9.2
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Glossary list used in this report

Abbreviation	Description
AHIA	Archaeological and Heritage Impact Assessment
AMP	Archaeological Management Plan
AD	Anno Domini
ASAPA	Association of Southern African Professional Archaeologists
CFP	Chance Find Procedure
EAPAN	Environmental Assessment Professionals Association of Namibia
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment*
EMP	Environmental Management Plan
ESA	Early Stone Age
GIS	Geographical Information System
NHC	National Heritage Council
MAN	Museum Association of Namibia
MSA	Middle Stone Age
LSA	Late Stone Age
PM	Project Manager
SM/I	Site Manager/Inspector
SAfA	Society of Africanist Archaeologists
SAMA	South African Museums Association

Definitions of Key Concepts and Terms

Archaeological	In relation to a place or an object, means (a) any remains of human habitation or occupation that are 50 or more years old found on or beneath the surface of the land or in the sea; (b) rock art, being any form of painting, engraving or other representation on a fixed rock surface or loose rock or stone which is 50 or more years old;
Archaeological Site	This means an area in which archaeological objects are situated. Archaeological remains can be defined as any features or objects resulting from human activities, which have been deposited on or in the ground, reflecting past ways of life, and are either 50 years old or older than that.
An artefact or artifact	A general term for an item made or given shape by human culture, such as a tool or a work of art, especially an object of archaeological interest
Isolated finds	Occurrences of artefacts or other remains that are not in situ or are located apart from archaeological sites. Although these are noted and recorded but do not usually constitute the core of an impact assessment, unless they have intrinsic cultural significance and value
In-situ	Refers to material culture and surrounding deposits in their original location and context, for example, an archaeological site that has not been disturbed by farming.
Built environment	The built environment includes an array of historic buildings, structures, and objects, from missions, forts, and rock walls to entire town sites and settlements.
Monuments	Architectural works, works of monumental sculpture and paintings, elements or structures of an archaeological nature, inscriptions, cave dwellings, and combinations of features, which are of outstanding universal value from the point of view of history, art, or science;
Heritage significance	Means aesthetic, archaeological, architectural, cultural, historical, scientific, or social significance;
Cultural Heritage	Encompasses the range of tangible material reflecting past and present human culture (e.g., archaeology), as well as cultural practices, performance, indigenous knowledge, and oral traditions (intangible) that are bequeathed from one generation to the next, and which each subsequent generation molds and adapts to suit the changing conditions of its time.
Heritage, Intangible	Aspects of culture that cannot be touched, including song, dance, oral traditions, indigenous knowledge, etc. However, most sites of material or tangible heritage are imbued with intangible elements – thus, a site where a famous battle took place is

	<i>inextricably linked to the oral traditions and history surrounding the site and any material remains related to the battle itself.</i>
Heritage, Tangible	<i>Physical heritage material or sites that include buildings, graves, sacred pools, rock art, and other sites, e.g., stone age pottery, tools, iron smelting sites, etc</i>
A grave	<i>A place of interment (variably referred to as burial) includes the contents, headstone, or other markers of such a place, and any other structure on or associated with such place. A grave may occur in isolation or in association with others, where it is referred to as being situated in a cemetery (contemporary) or burial ground (historic).</i>
Boulder	<i>A large fragment of bedrock that has detached from the mountainside.</i>
Historic building	<i>Refers to a structure or building that is over 50 years old.</i>
Chance Finds	<i>This means archaeological artefacts, features, structures, or historical cultural remains such as human burials that are found accidentally in the context previously not identified during cultural heritage scoping, screening, and assessment studies. Such finds are usually found during earth-moving activities.</i>
Study area or 'proposed project area'	<i>Refers to the area where the Proponent/developer wants to focus its development activities.</i>
Periodization	<i>Archaeologists divide the different cultural epochs according to the dominant material finds for the different periods. This periodization is usually region-specific, such that the same label can have different dates for different areas. This makes it important to clarify and declare the periodization of the area one is studying. These periods are nothing more than convenient time brackets because their termini and commencement are not absolute, and there are several instances of overlap.</i>
Pleistocene	<i>Is a basis for the Quaternary period, which started around 2.58 million years ago to 11.7 thousand years ago</i>
Mid-Pleistocene	<i>A period known as the Mid-Pleistocene Transition (MPT) or the Mid-Pleistocene Revolution (MPR) was the transition that happened approximately 1.25–0.7 million years ago, in the Pleistocene epoch. In other words, this middle Pleistocene transition (MPT) began 1250 kya and was completed by 700 kya.</i>
Later Pleistocene	<i>The Late Pleistocene is an unofficial age in the international geologic timescale in chronostratigraphy; it is currently defined as the time between c. 129,000 and c. 11,700 years ago.</i>
Holocene	<i>Started from 11.7/ 10 Kya to the present</i>
ESA	<i>>2 600 000 years ago – 250 000/200 000 years ago</i>
MSA	<i>250 000/200 000 years ago – 40/25 000 years ago</i>
LSA	<i>25 000 years ago – AD 200 (up to historic times in certain areas)</i>
Iron Age Period	<i>AD 200 – AD 1840</i>
Historic Period	<i>AD 1840 - 1950</i>

1. Introduction

TARO Archaeological & Heritage Consultants (TARO AHC) was appointed by Serja Hydrogeo-Environmental Consultants CC, on behalf of *Telfs Investments (Pty) Ltd* (hereafter referred to as the Proponent), to undertake an Archaeological and Heritage Impact Assessment (AHIA) for the proposed salt mining activities at Mining Claims No. 75982, 75983, 75984, 75985, and 75086. The targeted mineral commodity is salt.

Telfs Investments (Pty) Ltd applied to the Ministry of Industries, Mines, and Energy (MIME) on 03 April 2025 for rights to mine industrial minerals (salt production). The company intends to do mining in the area to produce salt on the saline pan. In total, the Proponent holds ten interconnected mining claims (MCs). However, in accordance with the 2021 National Heritage Council (NHC) Guidelines, only five mining claims are addressed in this report, while the remaining five mining claims are presented in a separate report. The planned project is located along the northern-central Namibian coast within the Dorob National Park, some 25km north of Henties Bay, specifically 2 km south of the Cape Cross settlement within Arandis Constituency of the Erongo Region. Figure 1 renders a topographic image of the project's location.

This report, compiled by TARO AHC, draws extensively on data collected during the surface survey, as well as archaeological and historical records obtained from various sources, site reconnaissance, and other relevant documentation. The findings and conclusions presented herein are subject to the defined scope of work, the assumptions made during the assessment, and the limitations outlined in the respective sections of this report.

The primary objective of this study is to provide specialist input into the screening process for the Environmental Application, which is necessary for the issuance of the Environmental Clearance Certificate (ECC). This input will inform the Environmental Scoping Assessment (ESA) Report and the Environmental Management Plan (EMP). Heritage Impact Assessments in Namibia are required under the National Heritage Act (No. 27 of 2004) and the Environmental Management Act (No. 27 of 2007).



Figure 1: Locality map of the area of interest.

1.1. Mining Claims Coverage

The five surveyed mining claims cover a combined total area of 60.1921 ha hectares (ha), which constitutes 10.0233 ha, 10.0233 ha, 10.926 ha, 14.7486 ha & 14.4709 ha, for each mining claim, respectively. However, the approval of the MCs' applications with MIME and subsequent operations (salt production) is conditional on the issuance of an Environmental Clearance Certificate (ECC) and a Consent letter from NHC.

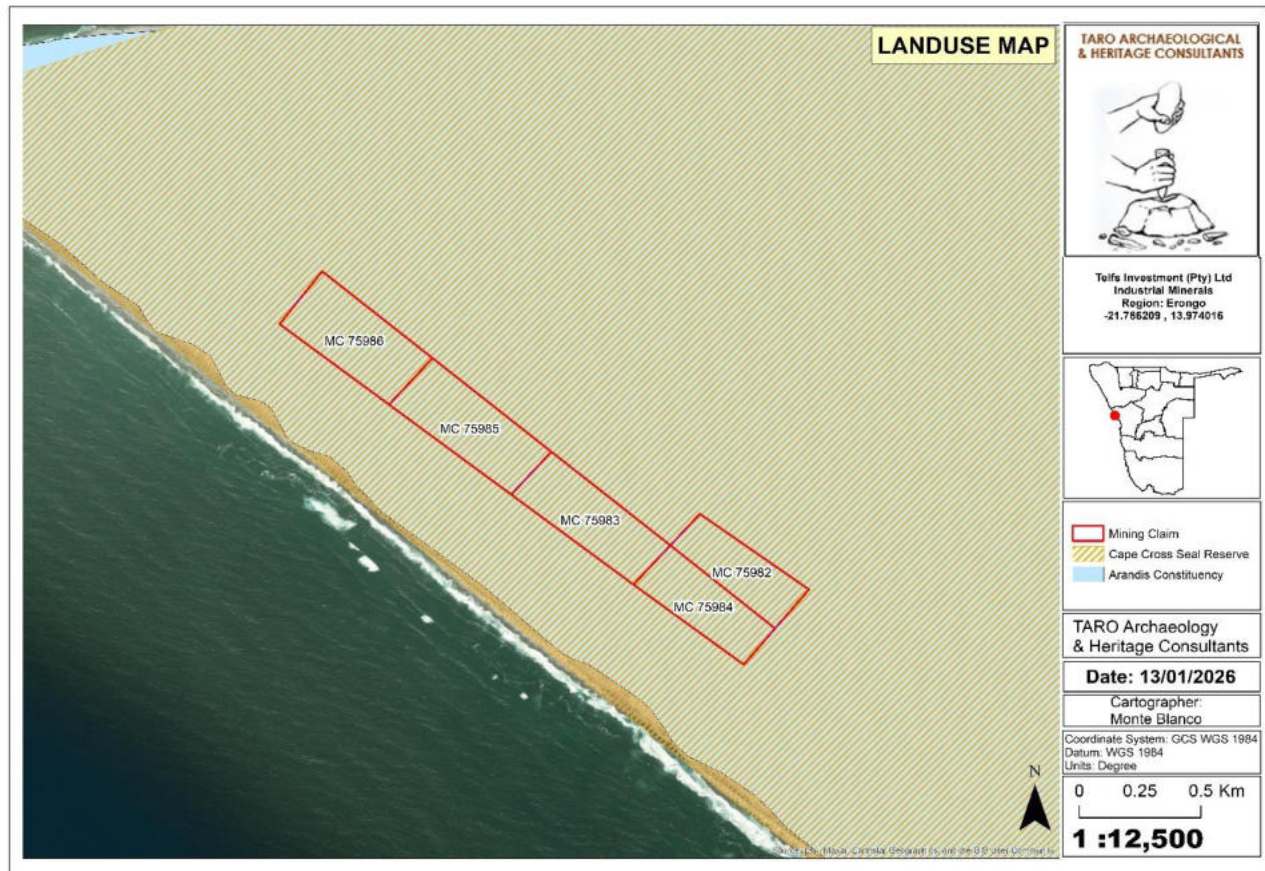


Figure 2: Land-use map of the proposed project.

1.1.1. Accessibility, Location, and Landscape

The extent of the mining claims is strongly influenced by the high accessibility of the area, which is characterized by a broad, flat expanse of ground covered with salt minerals and a vast, open landscape with very sparse vegetation, as illustrated in Figure 2. The claims are located approximately 2 km south of Cape Cross. The generally level terrain, absence of significant physical obstacles, and low vegetation density facilitated easy access across the study area, allowing most of the mining claims to be surveyed thoroughly and efficiently.

However, the ground conditions posed notable challenges. The surface was very soft in some places, and some areas were waterlogged due to seawater seepage. As a result, walking across the terrain was potentially hazardous, requiring constant caution throughout the survey activities.

Table 1: Approximate GPS Centre Coordinates of the Proposed Project Site

Geographic Positioning System Points in degrees, minutes & seconds			Total Area of the Mining Claims No. 75982, 75983, 75984, 75985 & 75986 is 60.1921 ha
Centre Coordinates for MC No. 75982	21° 47' 10" S	13° 58' 29" E	
Centre Coordinates for MC No. 75983	21° 47' 17" S	13° 58' 48" E	
Centre Coordinates for MC No. 75984	21° 47' 22" S	13° 58' 45" E	
Centre Coordinates for MC No. 75985	21° 46' 58" S	13° 58' 13" E	
Centre Coordinates for MC No. 75986	21° 46' 47" S	13° 57' 58" E	

1.2. Terms of Reference

Terms of reference for this archaeological and heritage impact assessment study were to;

- Locate, identify all objects, record, photograph, and describe sites of archaeological, historical, or cultural interest located in the area of the proposed development,
- Record coordinate points (GPS) of identified areas as significant and photographing,
- Determine the levels of significance of the various types of heritage resources that might be affected by the proposed project, and
- Suggest or propose appropriate management and mitigation measures for the archaeological and cultural heritage resources that might occur in the area proposed for exploration or mining activities, which can be potentially destroyed in the course of salt production and other related development.
- Review applicable legislative requirements.

2. Project Description

Telfs Investments (Pty) Ltd (*hereinafter referred to as "Proponent"*), intends to conduct salt mining (production) in the specified Mining Claims No. 75982, 75983, 75984, 75985 & 75986 has a combined total area of 60.1921 (ha). Therefore, an Archaeological and Heritage Impact Assessment was conducted to identify the possible impacts on the archaeological or heritage resources on the site. Project components and the location are outlined in **Tables 2** and **3** below.

Table 2: Project Area

Project Area	The proposed development site is located near Cape Cross.
Project Site/Name of the area	The proposed development site is located approximately 2 km south of Cape Cross.
Magisterial District/Location	Arandis Constituency in the Erongo Region.
Coordinate of the development.	Refer to Table 1 above
Topographic Map Number	N/A

Table 3: Infrastructure and project activities

Types of Development	Mining Rights Application: Mining Permit for the aforementioned salt production
Size of the five MCs	60.1921 (ha)
Salt Processing (Project Component)	The initial material removed from the pan surface to create the sunken crystalliser will be processed at the Plant situated on the active Mining License (ML) No.11, located about 10km southeast of the site (MCs). Therefore, no salt processing will be carried out on-site (within the boundaries of the MCs). The offsite processing plant on ML-11 is fully equipped with crushers (i.e., primary and secondary), conveyors, a wash plant, a drying and stockpiling area, and a bagging plant. The plant has pre-fabricated offices and sanitation facilities that are regularly emptied by "honeysuckers," and the sewage is disposed of at the Henties Bay Municipal sewage facility.
Site Clearance	Earthworks: The only site clearance that is going to be done is the ground clearing activities, soil excavation, and cut and fill only.
Machinery and Vehicles to be used	Bulldozers, excavators, trucks, 4 x 4 vehicles, etc.
Employment	The anticipated staff (project workers) for the site will entail a general manager, site/operations or production manager, foreman, Harvest & Haul Crew (drivers, operators, and laborer's), mechanic, electrician, operators, cooks, security, etc. The current range of operational staff complement for the operations across the partnered companies operating in collaboration with one another is between fifteen (15) and twenty-five (25). Cumulatively, these numbers represent the maximum staff complement that would exist for the collaborative operations.
Human Resources & Employment	Some of the project staff who are required to be on-site will be accommodated in a prefabricated campsite that is already in existence. The rest of the staff (particularly those from Henties Bay) reside in Henties Bay and commute to the site by bus (3 bus trips per day) or private vehicle daily, as necessary. The camp has a kitchen that provides food for the resident (camp) staff. Furthermore, the camp is equipped with a French drain system to manage sewage.
Site Access	The nearest proclaimed road to the mining claims' site is the C34 from Mile 72/Henties Bay towards Cape Cross. Therefore, the C34 will be used to access the area and then turn off to the left to the salt pans using the existing single dirt track (used by existing operators neighboring Telfs Investments' MCs).
Temporary roads	Where necessary, new access tracks will be created to access site-specific areas on the MCs.
Expected impacts	Positive impacts include - Local socio-economic development through employment creation and income generation for the communities of Henties Bay, Uis, and other nearby settlements. Thus, it reduces unemployment rates in this part of the Erongo Region. - Potential creation of opportunities for skills development and training related to salt production.

	• Procurement of local supply chain (through goods and services) by local/regional businesses to generate income. • An indirect positive impact on eco-industrial or educational tourism by incorporating the salt works site through guided tours, and birdwatching at the salt ponds. This would complement the Cape Cross seal reserve. Negative impacts include • Physical soil disturbance owing to the movements of project vehicles • Terrestrial habitat loss from salt production activities (creation of evaporation pans and access roads), such as loss of feeding/roosting areas for shore birds and reducing habitats for Cape fur seals, if activities are carried out near colonies. • Impact on local desert biodiversity (fauna and flora) through disturbance and barriers during salt production activities. • Aquatic habitat declines or loss (Cape Cross Lagoons) • Change in lagoon water volume and reduction in groundwater/lagoon water level (accelerated evaporation). The pans, embankments, and channels can change groundwater-surface water interactions and sediment transport, resulting in erosion. • Potential increase in salinity and brine leakage, due to concentrated brine released accidentally or via seepage, can raise salinity in soils, groundwater, and adjacent lagoon/nearshore waters, posing a threat to vegetation and altering benthic communities. • The potential impact of illegal hunting/poaching of wildlife in the area • Visual impacts due to the presence of mining equipment near tourism sites (within tourist sight). • Potential occupational health and safety risks • Noise generated by project vehicles and machinery may disturb or interfere with faunal activities (breeding/pupping, resting, and feeding behavior) near the site. • Vehicular traffic safety and impact on local roads • Environmental pollution (littering) through improper handling, storage, and disposal of waste • Impact on archaeological & cultural heritage resources.
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3. Legislative context

This chapter outlines the regulatory framework applicable to the proposed project. **Table 4** provides a brief list of applicable legislation and its relevance to the project.

National Heritage Act of Namibia (No. 27 of 2004)

This Act provides for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. The Client should ensure that if any archaeological or palaeontological objects, as described in this Act, are found in the course of the development, such findings are reported to the relevant Ministry immediately. If necessary, the relevant permits must be obtained before disturbing or destroying any heritage significance as envisaged by this Act.

Therefore, this AHIA report is a component of a broader Environmental Impact Assessment (EIA)/ Scoping Assessment (ESA) study and addresses the requirements of the National Heritage Act, No. 27 of 2004 and National Heritage Regulations (Government Notice 106 of 2005, in line with EIA Terms of Reference, and regarding the assessment of impacts of the proposed development on the archaeological, cultural and heritage resources associated with the receiving environment.

In principle, the National Heritage Act, 2004 (Act No. 27 of 2004) provides for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. Special

provision is given for the protection and management of certain heritage resources in Namibia, these are listed in **Part VI from paragraphs (53-58)** including listed buildings which are 50 years old or more than that, archaeological objects or paleontological interest in existence which is 50 years or more years old, meteorite, historic shipwrecks and shipwreck objects (Underwater heritage) this include the remains of all ships that have been situated on the coast or in the territorial waters or the contiguous zone of Namibia for 35 years or more are historic shipwrecks for this section.; and other heritage resources.

Part I, Section1 paragraph (a) and (b) defines "archaeological" concerning a place or an object, which means (a) any remains of human habitation or occupation that are 50 or more years old found on or beneath the surface on land or in the sea; and (b) rock art, being any form of painting, engraving or other representation on a fixed rock surface or loose rock or stone which is 50 or more years old. While **Part V Section 46** of the Act prohibits the removal, damage, alteration, or excavation of heritage Sites or remains. **Section 48** sets out the procedure for the application and granting of permits, such as might be required in the event of damage to a protected site occurring as an inevitable result of development.

Furthermore, **Section 51 (3)** sets out the requirements for impact assessment. **Part VI Section 55 Paragraphs (3) and (4)** require that any person who discovers an archaeological site should immediately notify the National Heritage Council.

Table 4: Summary of the relevant Act(s) and Ordinances

National Regulatory	Summary	Applicability to the Project
National Heritage Act, No. 27 of 2004.	The Act makes provision for the protection and conservation of places and objects with heritage significance. Section 55 compels exploration companies to report any archaeological findings to the National Heritage Council, after which a permit needs to be issued before the find can be disturbed.	There is potential for heritage objects to be found during the clearance of land and operations, the Stipulations in the Act have been taken into consideration and are incorporated into this A/HIA report and the overall project EMP. The Proponent should ensure compliance with these Acts' requirements. The necessary management measures and related permitting requirements must be taken. This will be done by consulting with the National Heritage Council of Namibia.
National Monuments Act of Namibia (No. 28 of 1969) as amended until 1979.	No person shall destroy, damage, excavate, alter, remove from their original site, or export from Namibia: Meteorites, fossils, petroglyphs, ornamental infrastructure graves, caves, rock shelters, middens, shells that came into existence before the year 1900 AD, or any other archaeological or paleontological finds.	
Burial Place Ordinance, Act No. 27 of 1966.	To prohibit the desecration or disturbance of graves in burial places and to regulate matters relating to the removal or disposal of dead bodies.	Graves and burial places such as stone cairns/mounds can occur anywhere (on surface and sub-surface) within the landscape. This Act is very relevant, and the adoption of Chance Find should be mandatory for envisaged prospecting works.

National Regulatory	Summary	Applicability to the Project
	The Municipal Ordinance 13 of 1963 has been replaced by the Local Authorities Act 23 of 1992. (3) No person shall, except with the permission of the Administrator, in any way disturb, damage, remove, or destroy a grave, monument, gravestone, cross, inscription, rail, enclosure, chain, or erection of any kind whatever, or part thereof in any burial place.	The Chance Find Procedure is commonly included in archaeological and heritage impact assessments (AHIAs) and project management plans to ensure the protection of heritage sites when such discoveries happen. These procedures often outline the steps to follow when an unanticipated find is made, ensuring the preservation and respectful treatment of the cultural material, while allowing the project to continue with minimal disruption.
Environmental Management Act (7 of 2007) Government Notice 232 27th December 2007	PART I: The definition of the environment employed by the Environmental Management Act (7 of 2007) Specifically includes "anthropogenic factors" such as archaeological remains or any other evidence of human activity. PART II: Environmental impact assessment (EIA) in Namibia is governed by this legislation and usually includes a specialist archaeological survey and assessment, following the stated Principles of Environmental Management, which require that Namibia's cultural heritage must be protected and respected for the benefit of present and future generations.	Archaeological materials, heritage resources, historical, cultural landscapes, or topographical settings are part of the environment in its context; hence, this Act is very relevant to the proposed project, and the Proponent is henceforth mandated to take into consideration all the necessary steps so as not to affect or destroy the environment where heritage resources are found.
Environmental Assessment Policy of Namibia 1995	The policy seeks to ensure that environmental consequences of development projects and policies are considered, understood and incorporated into the planning process, and the term environment is broadly interpreted to include biophysical, political, economic, social aspects, traditional norms, cultural and historical components.	This Archaeological and Heritage Assessment study considers the term environment to be part and parcel of archaeological and cultural heritage in its contexts.
Nature Conservation Ordinance 4 of 1975 with amendments and special regulations	Declaration of protected areas, as well as the protection status of individual species	
Seashore Ordinance 37 of 1958	Removal of living and non-living resources from seashore or seabed and depositing of rubbish within 3 nautical Miles of the shore.	

4. Approach and Methodology

4.1. Literature Review

The methodology for the study includes a survey of available literature conducted to extract data and information on the area in question to provide a general heritage context into which the proposed project would be set. This literature search included published material and unpublished reports, dissertations, papers, EIA reports, and internet search engines, including online material from various websites, followed by a field assessment. The latter was conducted according to generally accepted HIA Guidelines 2021 practices and was aimed at locating all possible objects, sites, and features of cultural significance in the area of the proposed project sites.

4.2. Documentation

All recorded sites, features, artefacts, and objects identified were documented according to the general minimum standards accepted by the archaeological standard, heritage impact assessment guidelines, and profession in Namibia. Co-ordinates of individual localities were determined by means of the Global Positioning System (GPS).

4.3. GIS Spatial analysis

Google Earth and topographic maps of the area were utilized to identify the locality, land-use, archaeology, geologic and topographic elevation of the area and possible places where sites of heritage significance might be located. Also, the GIS spatial database was utilized to collect any useful information on any of the above-mentioned in the area, as well as for geo-referencing purposes.

4.4. Public Consultation and Advertisements

The one-on-one consultation meeting took place on the 8th and 9th of December 2025 in Swakopmund. The newspaper adverts were put out on the 5th and 12th of November 2025.

4.4.1. Results of the Stakeholder Engagement

Stakeholder engagement is an important means of identifying cultural heritage, documenting its presence and significance, assessing potential impacts and exploring mitigation options (figures 3). Discussion with the different stakeholders indicated that;

- There are known burial place near the ocean.
- The proposed area has been disturbed from previous salt mining activities and guano mining, hence no chance of finding anything of cultural or heritage significance.



Figure 3: One-on-one meeting with stakeholder

Table 5: Placement of Newspaper adverts

Newspaper	Date of placement
<i>New Era</i>	05 November 2025
<i>New Era</i>	12 November 2025
<i>Market Watch</i>	05 November 2025
<i>Market Watch</i>	12 November 2025

4.5. Site Investigation

The site visit aimed to; (a) survey the proposed project area to locate, identify, record, photograph and describe sites of archaeological, historical or cultural interest (*if any*); (b) record GPS points of sites/areas identified as significant areas; (c) determine the levels of significance, grading of the various types of heritage resources recorded in the project area.

TARO Archaeological & Heritage Consultants inspected the environments in which the proposed project is located, including its surrounding areas, on the 08 & 09th of December 2025 (**Table 6**). Sufficient and extensive surface surveys of the ground were conducted for the claims that are targeted for salt production. Among others, the site surveys comprised the pre-planned foot investigation along the targeted areas for the proposed salt production. **Table 6** below highlights the situation during the field survey on the proposed development area.

5. Detailed Assessment

Table 6: Site Investigation Details

General Site Investigation	
Date of a visit	The site visit was undertaken on the 08 & 09 of December 2025 by the TARO Archaeological & Heritage Consultants personnel. Since the area of interest is completely situated adjacent to the sea, and the land is open, flat, and soft. Due to the softness of the ground, accessibility was limited to foot (walking over).
Season/Weather conditions and site visibility	Cold weather
Details of equipment used in the survey (GPS)	All readings and site positions were determined in the field by hand-held Garmin eTrex 32x GPS and GP\$map 60CSx (Accuracy levels are ± 3 meters). The Global Positioning System receiver was set to the hddd ⁰ mm'ss.s". Real-time aerial orientation, by means of a mobile QField application, was also employed to navigate and survey the areas.
Details of equipment used in the survey (Camera)	Photographs were taken using a Digital Camera - Nikon DX D3200.

6. Site Significance Rating

The presence and distribution of archaeological, historical, cultural, or heritage resources define a 'heritage or cultural landscape' of an area. In this particular landscape, every site is relevant, and because heritage resources are non-renewable, heritage surveys are needed to investigate the proposed project area or a representative sample, depending on the nature of the project. In all the initial investigations and surface surveys, however, the undersigned TARO Archaeological & Heritage Consultants (TARO AHC) is responsible only for the identification of resources visible on the surface.

Table 7: Grading of Heritage Significance and Field Rating

Level of significance	Grading	Description
Exceptional/upper higher	5	- Major national heritage resources - A rare and outstanding example - Containing unique evidence of the high regional and national significance
Considerably high	4	- Very important to the heritage of the region - A high degree of integrity/ authenticity - Multi-component site and objects - High research potential
Moderate	3	- Contributes to the heritage of the locality and region - Have some altered or modified elements, not necessarily detracting from the overall significance of the place - Forming part of an identifiable local distribution or group - Research potential

Low	2	- Isolated minor finds in an undisturbed primary context, with diagnostic materials - Makes some contribution to the heritage of the locality, usually in combination with similar places or objects
Little	1	- Makes a little contribution to the heritage resources of the locality - Heritage resources in a disturbed or secondary context, without diagnostic or associated heritage
Zero/ no significance	0	- Absence of heritage resources - Highly disturbed or secondary context, without diagnostic or associated heritage

6.1. Impact Assessment Methodology as developed by QRS Namibia

This Archaeological and Heritage Impact Assessment was carried out in two stages:

1. Desktop Study: Existing information about the area was reviewed. This included previous reports, maps, historical records, and any known information about archaeological or heritage sites in and around the project area.
2. Field Survey: A site visit was conducted to look for graves, archaeological remains, historical structures, or any other heritage features. Any findings were recorded using notes, photographs, and GPS coordinates.

The assessment followed methods that are commonly used in Namibia and are accepted by the National Heritage Council. To decide how important any identified heritage resources may be, and how sensitive they are to possible disturbance from development activities, a rating system was used. a standardized rating system developed by QRS (Kinahan, 2012) was applied. This system ranks both the importance (significance) of the site and its risk of being damaged (vulnerability) on a scale from 0 (very low) to 5 (very high), as summarized in (**Tables 8-10**) below.

Table 8: Archaeological Significance and Vulnerability Rankings (Kinahan, 2012)

Scale	Significance Ranking	Scale	Vulnerability Ranking
0	no significance	0	Not vulnerable
1	Disturbed or secondary context, without diagnostic material	1	No threat posed by current or proposed development activities
2	Isolated minor finds in an undisturbed primary context, with diagnostic material	2	low or indirect threat from possible consequences of development (e.g., soil erosion)
3	Archaeological site (s) forming part of an identifiable local distribution or group	3	Probable threat from inadvertent disturbance due to the proximity of development
4	Multi-component site (s), or central site (s) with high research potential	4	High likelihood of partial disturbance or destruction due to the proximity of development
5	Major archaeological site (s) containing unique evidence of the high regional significance	5	The direct and certain threat of major disturbance or destruction

Table 9: Assessment criteria for the evaluation of cumulative impacts on archaeological sites were devised by the QRN.

Criteria	Category	Description
The extent or spatial influence of impact	National	Within Namibia
	Regional	Within the Region
	Local	On-site or within 200 m of the impact site impact
The magnitude of impact (at the indicated spatial scale)	High	Social and/or natural functions and/or processes are severely altered
	Medium	Social and/or natural functions and/or processes are notably altered
	Low	Social and/or natural functions and/or processes are slightly altered
	Very Low	Social and/or natural functions and/or processes are negligibly altered
	Zero	Social and/or natural functions and/or processes remain unaltered
Duration of impact	Short Term	Up to 3 years
	Medium Term	4 to 10 years after construction
	Long Term	More than 10 years after construction

Table 10: Reversibility Rating Criteria

Reversibility Ratings	Criteria
Irreversible	The activity will lead to an impact that is permanent.
Reversible	The impact is reversible within a period of 10 years.

7. Literature Survey/ Background Study

7.1. Description of the Study Area

The coastal strip topography between Henties Bay and the Ugab River is dominated by a virtually continuous linear sandy beach, which north of Henties Bay to the Cape Cross salt pans, is backed by low sandy cliffs. Rocky shores are limited to a few short sections of coast and a larger rocky shore at the Cape Cross peninsula. North of Cape Cross, the coastal strip is covered by a ~3 m thick layer of loose sea sand, which stretches inland through a series of hummock dunes. East of the hummock dunes, the topography consists of flat saline pans of varying size, bordered by gravel plains and undulating rock outcrops. The gravel plains and rock outcrops are intersected by a few large and many small ephemeral washes. The habitat descriptions give detailed information on the topography of the study area.

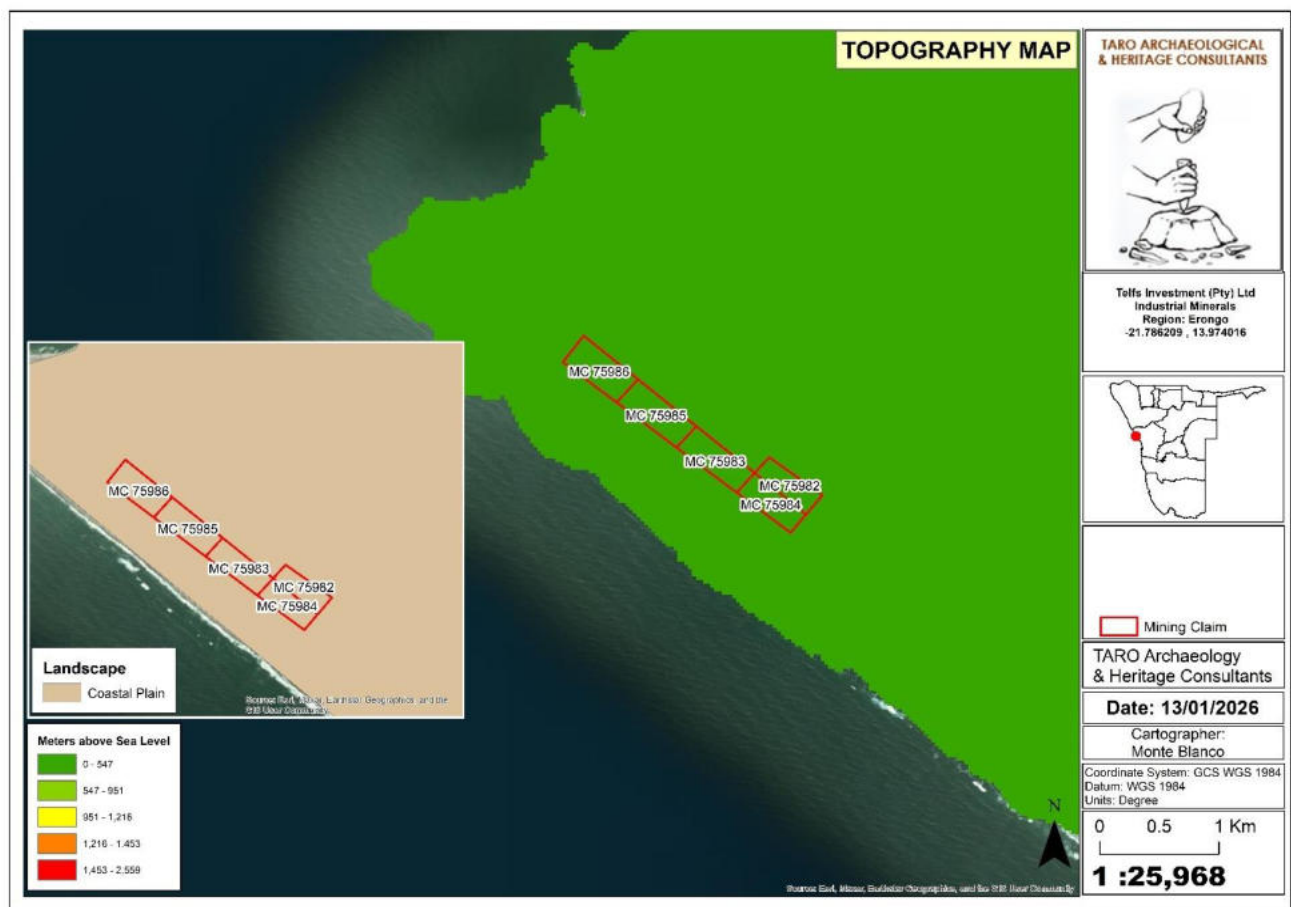


Figure 4: Topographic map of the area of interest.

7.2. Geology of the Project Area

The area forms part of the coastal plains of the Namib Desert and comprises a portion of the Cape Cross – Uis Pegmatite Belt, which has intruded Damaran-age meta-sediments and granites. Rare metal granitic pegmatites occur within this pegmatite belt and potentially within the area beneath the cover of Namib

Group alluvial sediments. There is also the potential existence of rare and precious, or base metals, in marine and fluvial placer deposits. (Figure 5).



Figure 5: A Geological map of the proposed project site.

8. Background and general Heritage Context of the area

8.1. Regional Archaeological and Heritage Context

Modern humans and their ancestors have lived in Namibia for more than one million years (Kinahan 2011), and there are fossil remains of lineal hominin ancestors as early as the Miocene Epoch (Conroy et al. 1992). Namibia has a relatively complete sequence covering the mid-Pleistocene to Recent Holocene period, represented by thousands of archaeological sites mainly concentrated in the central highlands, escarpment and Namib Desert.

The Recent Holocene archaeological sequence in Namibia, i.e., the last 5 000 years, is of particular importance because it provides the background evidence for the development and recent history of the indigenous peoples of Namibia before the advent of written historical records during the colonial era. Many archaeological sites from this period are of great significance to the understanding of Namibian history, and some are considered to be of global importance to our understanding of the African past.

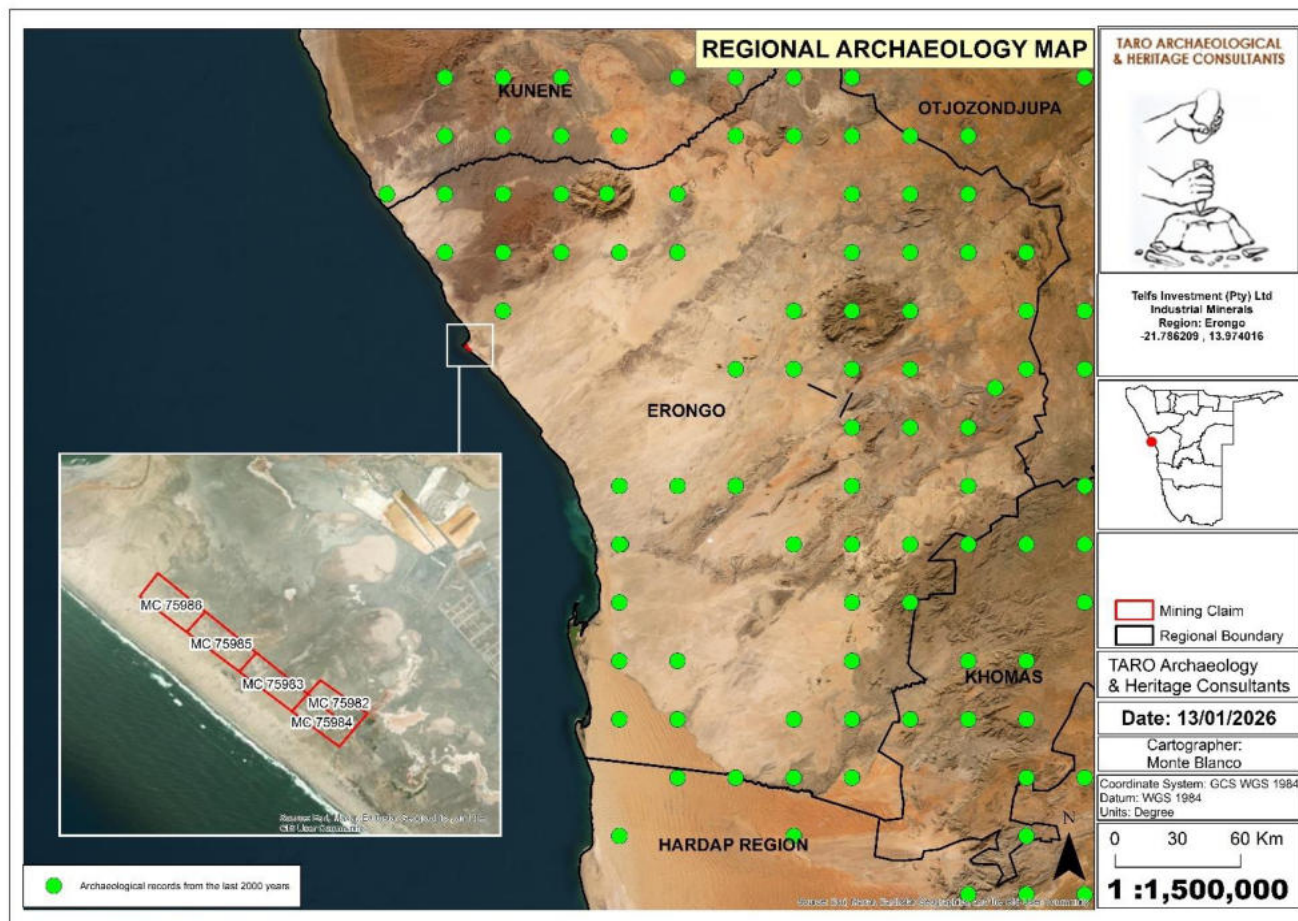


Figure 6: A Regional map of archaeological distribution in the Erongo Region

8.2. The Historical and Archaeological of the Subject Land

The archaeology or marine archaeology of Cape Cross, Namibia centers on its significant European colonial history (Diego Cão's 1486 padirão), later guano mining operations (late 1800s-early 1900s) leaving railway and settlement remnants, and evidence of earlier indigenous use like shell middens, though Holocene coastal settlement evidence is sparse, contrasting with the rich biological history of the massive Cape fur seal colony, making it a site of mixed cultural heritage and natural wonder.

Cape Cross is a headland on the Skeleton Coast of Namibia, extending into the South Atlantic Ocean within the Erongo Region.^[6] Positioned at approximately 21°46'11"S 13°58'12"E, it lies about 60 kilometers north of Henties Bay and 130 kilometers northwest of Swakopmund. The cape features a rugged rocky promontory with exposed coastal terrain, including rocky bays and expansive sandy beaches backed by gravel plains. Adjacent salt pans and elements of the Namib Desert biome, such as sparse desert vegetation and

occasional sand dunes, define the immediate surroundings¹. The area's geomorphology reflects the broader Skeleton Coast characteristics, with soft sands interrupted by rocky outcrops and a narrow strip of ocean-adjacent gravels and thin sands².

8.2.1. Early Exploration and the Padrão

The Cape Cross region was first documented by European explorers during the Portuguese Age of Discoveries, as navigators sought a sea route to India by charting Africa's western coastline.³ In the mid-1480s, Diogo Cão, a Portuguese explorer commissioned by King John II, undertook a second voyage southward from the Congo River, advancing beyond previous limits to counterbalance Spanish influence in the Atlantic.^[19] Cão's expedition reached Cape Cross in January 1486, marking the southernmost point achieved by Portuguese explorers at that time and representing the first recorded European contact with the area⁴. Upon landing, Cão erected a *padrão*, a large limestone pillar approximately 3 meters tall, inscribed with the coat of arms of Portugal and a Latin dedication attributing the act to King John II's orders.⁵

The inscription dates the event to 1485 by the Julian calendar (corresponding to 1486 Gregorian), stating: "In the year 6685 after the creation of the world and 1485 after the birth of Christ, the King of Portugal Don João II ordered this place to be marked by Diogo Cão."⁶ Padrões like the one at Cape Cross served dual purposes: as symbols of Portuguese sovereignty to assert territorial claims against rivals, and as navigational beacons for future voyages, often positioned at prominent headlands with embedded lead plates containing messages for passing ships.⁷ This structure at Cape Cross, originally termed *Cabo do Padrão* by the Portuguese, facilitated subsequent explorations, including Bartolomeu Dias's rounding of the Cape of Good Hope in 1488, though no immediate settlements or further claims followed due to the harsh environment and logistical challenges. The site's isolation preserved the *padrão* until its removal by German naval forces in 1893, underscoring its enduring historical significance as one of the few surviving markers from Cão's voyages.⁸

¹ <https://www.booknamibia.com/cape-cross-namibia/>

² <https://www.atlasobscura.com/articles/germany-will-return-namibian-cross>

³ <https://namibweb.com/searoute.htm>

⁴ <https://www.booknamibia.com/cape-cross-namibia/>

⁵ <https://www.atlasobscura.com/articles/germany-will-return-namibian-cross>

⁶ <https://www.atlasobscura.com/articles/germany-will-return-namibian-cross>

⁷ <https://www.dhm.de/blog/2018/06/06/stories-the-stone-cross-from-cape-cross-three-countries-three-histories-one-past/>

⁸ <https://www.atlasobscura.com/articles/germany-will-return-namibian-cross>

A



B



Figure 7: a *padrão*, (Credit: [Grobler du Preez](#))



Figure 8: Depiction of the encounter between the white explorers and natives at Cape Cross
(<https://gondwana-collection.com/blog/do-you-know-the-origin-of-the-cape-cross-in-namibia>)

8.2.2. 19th-Century Resource Extraction

In the late 19th century, Cape Cross emerged as a site of commercial resource extraction, primarily guano deposits and Cape fur seals, driven by European demand for fertilizer and animal products. Guano, accumulated bird droppings prized as "white gold" for its nitrogen-rich content, was discovered at the headland in 1894 by explorer Walter Matthews during an expedition from Swakopmund. This led to the formation of the Damaraland Guano Company, an English venture backed by Matthew's uncle, which secured a 10-year concession from German colonial authorities to exploit guano and seals in the area between Cape Cross and the Kunene River ⁹. Operations commenced in 1895, with guano scraped from rock platforms and fossilized layers, then crushed and transported to waiting ships.

By 1896, the site supported up to 100 laborers, who faced harsh desert conditions and imported water and equipment from Britain, establishing temporary infrastructure including a police station, customs office, post office, and worker housing. To facilitate export, the company constructed Namibia's first railway, a 21-kilometer narrow-gauge line from the extraction sites to the beach for loading onto vessels. Over the operation's duration until depletion in 1903, the Damaraland Guano Company exported approximately 5,700,000 kilograms of guano, yielding significant profits before the deposits were exhausted. Remnants of this era, such as rusted railway tracks and ruins, persist amid the dunes. Concurrent with guano mining, intensive harvesting of Cape fur seals targeted pups and adults for their pelts and blubber, which were processed for leather, oil, and meat. The first recorded European observation of seals at Cape Cross dates to 1884 by Captain Hoffmann, but commercial culling escalated under the company's concession from 1895, contributing to a regional population crash below 100,000 individuals by 1900 ¹⁰.

The Damaraland operation alone yielded about 2,500 seal skins for export, transported via the new railway, amid broader 19th-century harvests that claimed roughly 650,000 Cape fur seals across southern African colonies from 1814 to 1899. These activities, while economically viable short-term, led to rapid resource depletion and abandonment by 1903, marking the end of Cape Cross's extractive boom.

⁹ <https://padlangsnamibia.com/padlangsnamibia/cape-cross-white-gold-seals-mystery>

¹⁰ <https://namibian.org/parks/namibia-parks-west/cape-cross-seal-reserve>

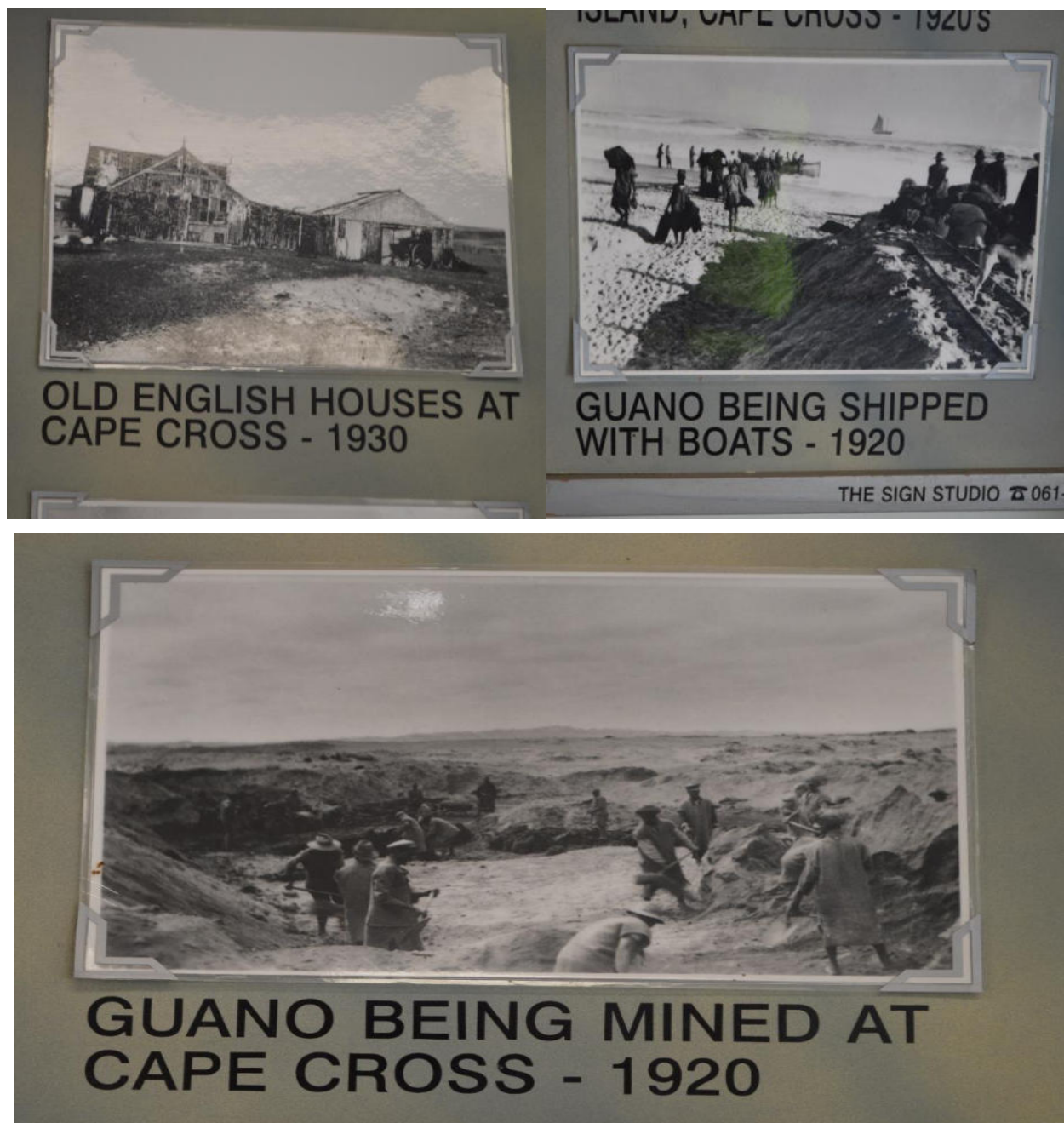


Figure 9: Historical images of guano activities at Cape Cross (Source: MEFT-Cape Cross office)

8.2.3. 20th-Century Designation and Preservation Efforts

Throughout the 20th century, preservation efforts at Cape Cross addressed both the ecological sustainability of the Cape fur seal population and the historical significance of the site. Early regulations under German colonial administration in 1893 required permits for fur seal hunting, followed by seasonal restrictions in 1909, and further controls in 1922 and 1949 under South African mandate rule, aimed at preventing depletion amid commercial sealing. In 1918, concessions for guano extraction, salt mining, and sealing were granted,

balancing resource use with emerging conservation needs. These measures reflected growing recognition of the area's biological importance, hosting the world's largest Cape fur seal breeding colony. The pivotal designation occurred on 16 June 1969, when the South West Africa administration proclaimed the Cape Cross Seal Reserve via Proclamation 37 in Official Gazette No. 3007, establishing a 60 km² protected area to conserve the seal population and associated coastal ecosystem ¹¹.

This formal protection built on prior regulations and was reinforced by the 1973 Sea Birds and Seals Protection Act, which promoted sustainable harvesting practices while safeguarding breeding sites. The reserve's boundaries incorporated former mining lands, addressing historical exploitation impacts. Parallel efforts preserved the historical *padrão* erected by Diogo Cão in 1486. After the original's removal to Germany in 1893, a replica with German insignia was erected in 1895 under Kaiser Wilhelm II's authorization. In 1980, the South West African government installed a second replica of dolerite on the original site, enhancing the monument's visibility and protection as a national heritage marker. Attempts to repatriate the original intensified in the mid-20th century, with formal requests from the South African government in 1925 and the National Monuments Council in 1956, underscoring the site's enduring cultural value despite colonial disruptions.

8.2.4. The Stone Cross of Cape Cross

The Stone Cross of Cape Cross, a *padrão* erected by Portuguese explorer Diogo Cão in 1486 to mark territorial claims along the southwestern African coast, represents an early European navigational monument featuring a limestone pillar topped with a cross and inscribed with the coat of arms of Portugal's Avis dynasty. This artifact, standing approximately 2 meters tall, was removed from its original site during the German colonial administration of South West Africa in the late 19th or early 20th century and transported to Germany, where it entered the collection of the German Historical Museum in Berlin. Namibia formally requested the repatriation of the cross in June 2017, framing it as a cultural heritage item integral to the nation's pre-colonial and colonial history, despite its Portuguese origins, emphasizing its long-standing presence at Cape Cross within modern Namibian territory. German authorities, including the Federal Government Commissioner for Culture and the Media Monika Grütters, approved the return on May 17, 2019, as part of broader commitments to address colonial-era acquisitions and foster bilateral cultural restitution efforts ¹².

The artifact was ceremonially repatriated to Namibia on August 6, 2019, and is now housed in the National Museum of Namibia in Windhoek, while a replica remains at the Cape Cross site to preserve the historical

¹¹ https://grokipedia.com/page/Cape_Cross

¹² https://grokipedia.com/page/Cape_Cross

landmark for visitors and researchers. The repatriation process highlighted cooperative diplomacy between Germany and Namibia, with no reported legal disputes or competing claims from Portugal, the original erector's nation; German officials described it as a gesture of historical responsibility rather than an admission of illicit acquisition ¹³,^[58] ^[60] This case aligns with increasing global precedents for returning colonial-era artifacts to African nations, though it involved minimal controversy compared to items with indigenous cultural ties, given the *padrão*'s function as a foreign imperial marker rather than a local artifact.

8.3. Archaeological Sequence in Namibia

To better understand heritage and archaeological sites in Namibia, it is important to place them within a broader historical timeline. This timeline reflects the known sequence of human occupation in Namibia and, more broadly, in Southern Africa. Understanding these different time periods helps explain how people lived in the past, how they adapted to their environments, and how cultures developed and changed over time. According to Nankela (2017), Namibia's archaeological history can be divided into several main periods. These periods represent different stages of human development and settlement in the region. A summary of these archaeological sequences is provided in Table 11 below.

Table 11: Archaeological Sequences in Namibia

Period	Year	Area/Location	Evidence	Description
Pleistocene	400 000 - 100 000	Namib Plains, Namib Desert & Lower Kuiseb	Bone fragments of extinct elephants and stone tools	
Holocene	10 000 - 1 000	Around Namibia	Scattered artefacts, rock art sites, potsherds, beads, grave cairns, hut circles, human remains, axes, pointed flakes, cleavers and blades.	Sites are fragile, inaccessible and due to inadequate archaeological investigations in some sites.
Historic Period	500	Around Namibia	Cemeteries, old mine workings, waste rock walling, architectural heritage and WWI military engagements.	Namibia has an indication of intensive settlements between indigenous people and Europeans.

9. Physical and Environmental Context of the Area (Physiography)

The proposed project is located 2km south of Cape Cross, the land is characterized with species, of which many are endemic and at least one is protected, include *Euphorbia giessii*, *Euphorbia lignosa*, *Jamesbrittenia maxii*, *Kleinia longiflora*, *Heliotropium oliveranum*, *Eberlanzia sedoides*, *Pelargonium otaviense*, and *Sarcocaulon marlothii*, *Brownanthus kuntzei*, *Zygophyllum stapffii*, *Tetragonia reduplicata*, *Drosanthemum luederitzii*, and *Arthraerua leubnitziae* dominant. *Hoodia pedicellata* occurs occasionally. Not all of these plants were found during the site visits but are possibly found on the rock outcrops within and outside the planned mining area.

¹³ <https://www.auswaertiges-amt.de/en/newsroom/news/muentefering-stone-cross-of-cape-cross-namibia-2219030>

9.1. Presence of Coastal hummocks

This is a narrow, discontinuous strip of sparsely vegetated, sandy hummock dunes parallel to the beach. It is the habitat with the densest concentration of vegetation in the study area, providing shelter and food for detritivores and the predators that feed on them. This makes the hummock dunes a highly restricted habitat type, meaning that taxa dependent on coastal hummocks may be considered habitat-specific, range-restricted endemic species. It is a highly sensitive habitat for invertebrates and reptiles. Along the Namibian coast much of this habitat has already been affected by mining, infrastructure, vehicle tracks and tourism, causing cumulative damage that may endanger range-restricted taxa. It is particularly vulnerable to physical destruction caused by uncontrolled vehicle activity and sand harvesting (Hooks & Petrick, 2020).



Figure 10: Vegetation types within the landscape (Coastal hummocks).

9.2. Topographically and environmental settings of the proposed development footprints

The topography of the subject land is characterized with different habitats based on the terrain and physical features. These are as follows; Rock outcrops, Saline pan, Coastal hummocks, Gravel plains and washes. The rock outcrops and the coastal hummock dunes were deemed the most sensitive. The accessory works area covered an area consisting of gravel plain and rock outcrops that represent disturbed environments to the east of the saline pan. Most of the mining activity will take place within the saline pan and secondly on the gravel plain adjacent to the saline pan. These 2 habitats have been disturbed over the preceding decades. The assessment considered all project activities and how they could potentially impact the various habitats (Hooks, P. 2020).



Figure 11: Landscape views of the Subject land

10. Assessment of the Findings within the Proposed Project

10.1. On-site findings

Heritage sites are fixed features in the environment, occurring within specific spatial confines. Any impact upon them is permanent and non-reversible. Namibia's unique and non-renewable archaeological and palaeontological heritage sites are protected in terms of the National Heritage Act No. 27 of 2004 and may not be disturbed at all without a permit from the relevant heritage authority such as National Heritage Council.

10.2. Observation made during the Site Survey of the Subject land

The MCs No. 75982, 75983, 75984, 75985 & 75986 are found in the saline pan which lies within the Dorob National Park along the central coastline north of the town of Henties Bay in the Erongo Region. The claims are situated on flat area adjacent to the sea. The features observed and recorded included the outcrops and surface scatter, sea-shells, faunal remains especially the seals due to presence of brown hyenas and the graves which are outside the mining claims. The archaeological and cultural significance within these claims is of **Low**.



Figure 12: The view toward the subject land

Table 12: Cultural Heritage Resources within the Landscape

Heritage resource type	Observation and recording made
Landscapes and Natural Features	Within Dorob National Park, rock outcrops, gravel plains, washes and coastal hummocks.
Holy Places	None were recorded
Historical Mine	Guano and salt mine
Rock shelters and Caves	None
Archaeological sites	None were recorded within the proposed project
Graves and burial places	Graves were recorded at Cape Cross near the ocean.
Historical settlements and Buildings	Buildings remains associated with of the old Guano and salt mine activities at the Cape Cross.
Places associated with oral traditions or living heritage	None
Public monuments and memorials	At the Cape Cross None (a padrão,)
Movable objects	Scattered stone artefacts and seashells

10.3. Sensitivity of the Receiving Environs

The planned mining project is to be located within the Dorob National Park, whose primary purpose is conservation of natural heritage. This does not exclude other subsidiary activities such as tourism and mineral exploration and extraction except where strict nature reserve status is delineated. Controlled access may be permitted for tourism in these strict nature reserve areas though not all these protected areas are sign posted or controlled by physical barriers. The planned mining activities will not occur inside one of the strict nature reserve areas. Recreational fishing may take place on occasions along the beach, west of the mining licence but mining activities will in no way restrict these activities

The areas of which the proposed project located is of ecological and marine significance, areas such as;

The *salt pan* is made of layers of salt and gypsum which have been formed by evaporation within a coastal lagoon of restricted sea water circulation. The water table in the pan is situated close to surface and it is in connection with the sea. Due to high permeability of the rock salt and surrounding sediments the seawater percolates into the pan and in a continuous process of leaching of the salt and new formation of salt through evaporation and crystallization, the concentration of the underground brine is found to be near saturation. (Toerien 1964)

Surface water in the form of standing sea water results from intermittent spring tides and corresponding stormy weather which breaches the beach berm. On rare occasions when flooding occurs, will the washes flow into the saline pan and fresh water floods the pan. The fresh water of lower density floats on the saltier brine of the pan and soon evaporates leaving behind the brine below.

The *coastal hummock dunes* are considered as very sensitive habitat. With the exception of the proposed bittern pipeline, the dune hummock belt should be designated a no-go area. No development should be allowed in the dune hummocks except the bittern pipelines and an access corridor that will allow routine maintenance. The *saline pan* is considered least sensitive. Following the precautionary principle, it is suggested that brine ponds be identified, and samples taken from them to identify any macro invertebrate fauna that might occur. Regular monitoring of these brine ponds should take place during the mining operations.

The *gravel plains* are sensitive but of low concern, provided that activity remains within the proposed boundaries of the operational and accessory works area. *The washes* are deemed sensitive areas. Neither the crystallisers nor the accessory works area will intrude into this habitat. Only the brine pipeline will pass through a few washes along the disturbed environment of the road reserve (Hooks & Petrick 2020).

The *rock outcrops* are considered very sensitive. The accessory works area, although small in surface area, will be located where rock outcrop occurs and these individual spots should be avoided. From the historical and recent satellite imagery it is evident that much of the rock outcrops within the accessory works area has been disturbed.

With all of these sensitivities, the archaeology aspect of it is considered to be **low** especially within the mining claim sites.

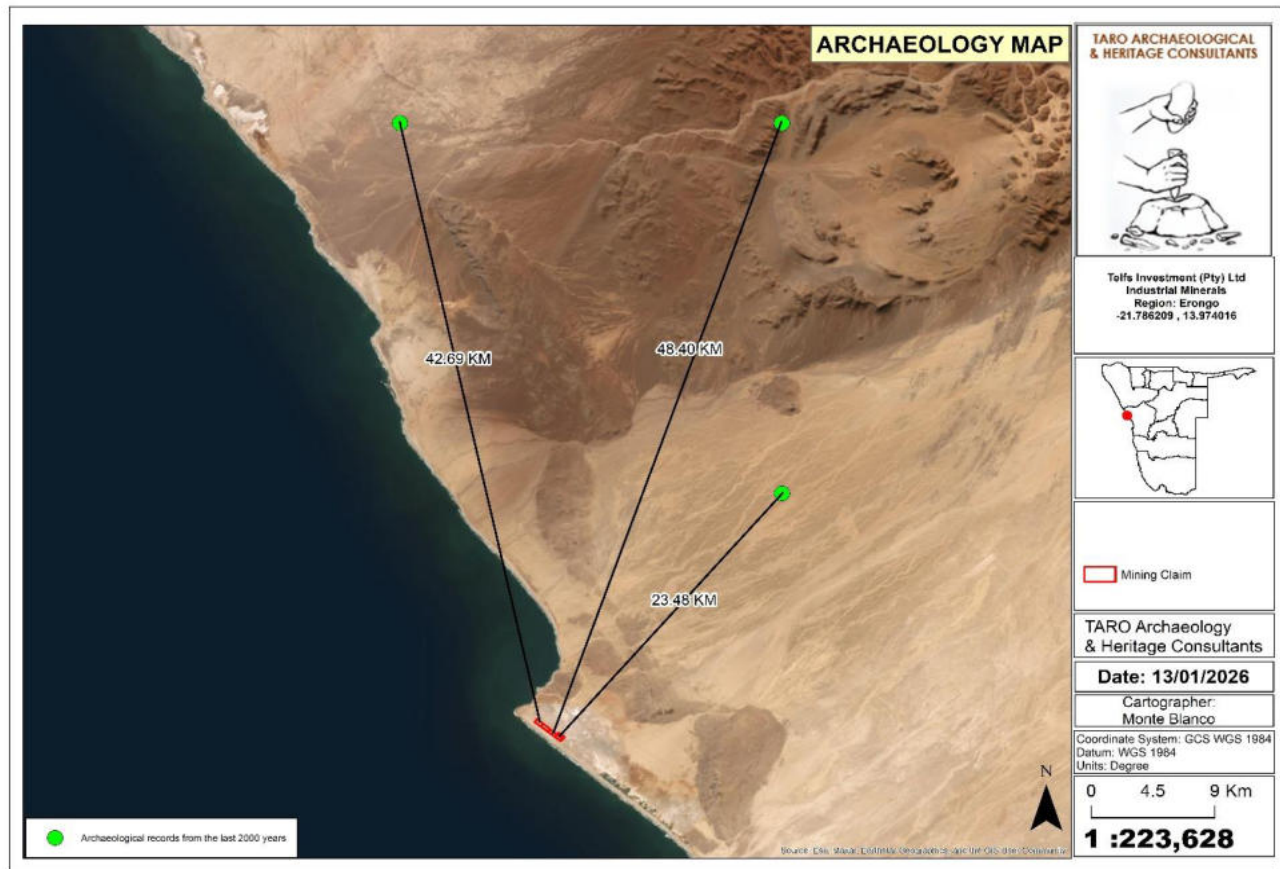


Figure 13: Landscape Archaeological Map

10.4. Photographic Documentation of the recorded features within the traversed areas.

All sites, objects and features that are were identified during the surface walk over are documented according to the general standards accepted by the NHC Guidelines 2021 and Archaeological Profession. Coordinates of individual localities are determined by means of the Global Positioning System (GPS) and plotted on a map. This information is usually added to the description in order to facilitate the identification and grading of each locality.

10.5. Tracklog Surveys of the selected tracking of the survey was conducted by using the QField program.

Tracklogs are useful in archaeological surveys because they provide a detailed record of the paths traversed during fieldwork (**Error! Reference source not found.**), allowing for accurate spatial documentation and analysis of archaeological sites. The QField program was used to track the paths taken, as seen below. This helps in mapping the distribution of artifacts, identifying potential areas of interest, and creating comprehensive site plans. The assessment of significance and grading of Archaeological and Heritage Resources on the Proposed Project are presented in **Error! Reference source not found.**3.



Figure 14: Tracklogs of the surveyed areas within the mining claims

Historically, the same areas have been mined for salt intermittently during the last 80 years. Remains of those workings can still be seen. The old mine's former buildings later became the Fisherman's Inn on the eastern flank of the pan, which was frequented by fisherman and tourists. With regard to the archaeology of the area, the landscape surrounding the saline pan has experienced varying degrees of disturbance over several decades. These disturbances include the development of multiple access roads and vehicle tracks used for mining operations at the saline pan, as well as access to the coastline for fishing activities. Historically, the area formed part of Cape Cross Farm 143.

The gravel plains and ephemeral drainage lines (washes) surrounding the pan have been subjected to various forms of disturbance, including the clearing of land for the construction of buildings associated with mining and tourism activities. More recently, since 2015, the holder of Mining Licences 82D, 82E, and 82F has initiated salt mining operations, including the construction of salt crystallisers and associated infrastructure (Hooks, 2019)

General features that were observed and recorded during these surveys are the;

Cape Cross, has a rich history involving guano and salt mining from the late 1800s, with remnants like old buildings and a graveyard. Historical mining era was between late 1800s and early 1900s, whereby activities such as Guano and salt mining were heavily conducted. Guano was used for fertilizer up until the decline in operation, and completely ceased by the early 1900s. salt continues, evidently some weathered buildings can still be seen as a reminder of the old operation and activities.

Rock outcrops: This habitat occurs in the north and northeast of the study area and consists of low, undulating hillocks and large boulder outcrops and ridges of dolerite or quartzite rock that stand as discontinuous, isolated islands within the gravel plain. More so, the outcrops which intersect the gravel plain, and the substrate contains rocks that vary in size from pebbles to large boulder (Potgieters, H. 2020).

Natural salt pans are flat expanses of ground covered with salt and other minerals, usually shining white under the sun. They are found in dry climates. In Namibia salt pans occur along the coast, for example at Cape Cross, as well as further inland (Etosha Pan ¹⁴).

Mining Claims No. 75982-75986: The subject claims are contiguous and situated within the same geographic locality. Comprehensive surveying and detailed surface observations were carried out across the entire area. However, fieldwork was conducted under challenging conditions, as the ground surface was predominantly soft and, in some areas, unstable, presenting potential safety hazards and requiring heightened caution during access and traversal. The overall significance of these claims is assessed as **low**.

¹⁴ https://www.mme.gov.na/files/publications/612_salt%20pans.pdf



Figure 15: Fieldwork observation within the mining claims



Figure 16: Surface scatter near the ocean



Figure 17: Old graves of guano workers at Cape Cross

Mining Claim No. 75982: This mining claim consists primarily of an open area (salt pan environment), numerous seashells were observed scattered across the surface, aside from this no any notable archaeological features or evidence were identified

Centre Coordinates: S 21° 47' 17"
E 13° 58' 48"

Status of the mining claim: Low significance



Figure 18: Soft and unstable ground



Figure 19: Scattered seashells



Figure 20: Visible car tracks within the mining claim

Mining Claim No. 75983: This claim is also located within an open saline pan environment consisting of flat, barren land. No archaeological features, materials, or evidence were observed.

Centre Coordinates: S 21° 47' 10"
E 13° 58' 29"

Status of the mining claim: Very low significance



Figure 21: Open space within MC 75983



Figure 22: The view towards the eastern direction within the mining claim

Mining Claim No. 75984: Mining Claim No. 75984 is situated within an open salt pan environment characterized by flat and largely barren terrain. Faunal remains were recorded within the claim area, these remains are identified as possibly belonging to seals. In addition, an intact bottle in very good condition was documented elsewhere within the claim. The bottle was identified as a *Pedro Domecq bottle originating from Jerez, Spain* (see Figure 26). Given its provenance and condition, the bottle may hold historical significance and has therefore been recorded as part of the heritage inventory for the site.

Centre Coordinates: S 21° 47' 22"
E 13° 58' 45"

Status of the mining claim: Low significance

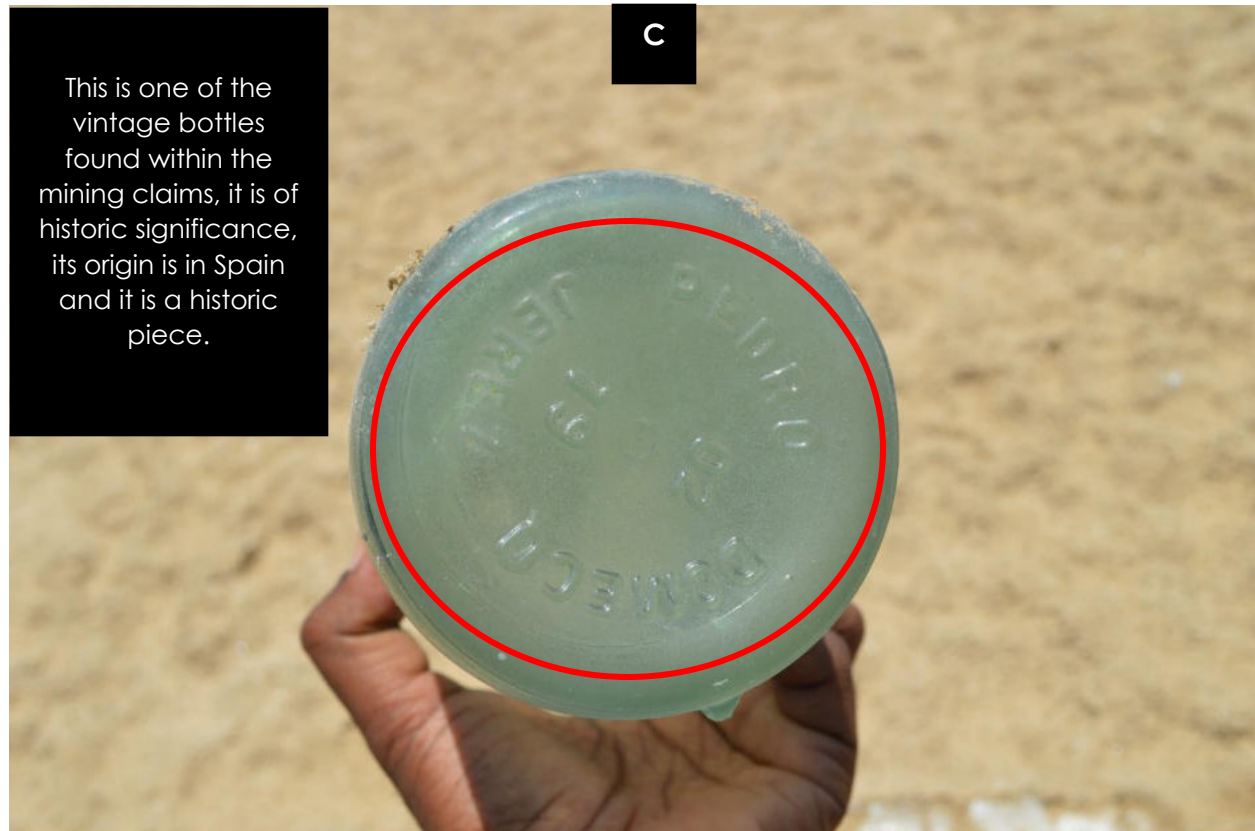


Figure 23: An open space within the salt pan



Figure 24: Faunal remains as observed





This is one of the vintage bottles found within the mining claims, it is of historic significance, its origin is in Spain and it is a historic piece.

Figure 25: A vintage bottle as recorded

Mining Claim No. 75985: This is yet another bare land or open space with little to no evidence of features or materials.

Centre Coordinates: S 21° 46' 58"
E 13° 58' 13"

Status of the mining claim: *Very little significance*



Figure 26: Open space with a corner beacon

Mining Claim No. 75986: Just an open space with fewer seashells scattered, faunal remains, isolated stone tools, and a piece of an old vintage bottle.

Centre Coordinates: S 21° 46' 47"
E 13° 57' 58"

Status of the mining claim: Low significance





Figure 27: Stone tools



Figure 28: A piece of an old bottle

Table 13: Assessment of Significance and Grading of Archaeological and Heritage Resources on the Proposed Project

Waypoint	Location	Elevation	Description of the findings	Heritage Significance	Grading	Vulnerability Description
General Findings						
TAHC 500	S 21° 45' 36.9" E 13° 57' 59.7"	18 m	Dense surface scatter. <i>Outside the proposed mining claims, 2km away (figure 30).</i>	Low	2	0
TAHC 501	S 21° 45' 31.6" E 13° 57' 58.1"	12 m	Burial site: 12 graves are recorded here, only two graves are marked; the rest are unmarked. <i>Located outside the proposed mining claims, approximately 2 km away (figure 30).</i>	Considerably High	4	0
Mining Claim No. 75986						
TAHC 503	S 21° 46' 41.4" E 13° 57' 54.8"	6 m	Presence of sea shells at this waypoint	0	0	0
TAHC 504	S 21° 46' 43.5" E 13° 57' 56.3"	6 m	Faunal remains (seal)	0	0	0
TAHC 509	S 21° 46' 46.8" E 13° 58' 02.7"	5 m	Isolated stone tool	Little	1	3
TAHC 510	S 21° 46' 54.3" E 13° 58' 02.0"	6 m	Piece of an old bottle (<i>secondary context</i>)	Little	1	3
Mining Claim No. 75985						
TAHC 505	S 21° 46' 53.6" E 13° 58' 07.1"	9 m	Open and bare land	0	0	0
Mining Claim No. 75983						
TAHC 511	S 21° 47' 04.3" E 13° 58' 24.5"	7 m	Open and bare land-few remains of sea-shells	0	0	0
TAHC 512	S 21° 47' 07.6" E 13° 58' 24.2"	6 m	Open and bare land-few remains of sea-shells	0	0	0
Mining Claim No. 75982						
TAHC 515	S 21° 47' 12.1" E 13° 58' 42.9"	8 m	Presence of seashells	0	0	0
Mining Claim No. 75984						
TAHC 516	S 21° 47' 18.6" E 13° 58' 41.5"	6 m	Open and bare land-few remains of sea-shells	0	0	0
TAHC 517	S 21° 47' 24.7" E 13° 58' 45.2"	17 m	Fauna remains probably a seal	0	0	0
TAHC 518	S 21° 47' 27.0" E 13° 58' 51.7"	18 m	Old bottle (<i>secondary context</i>)	Moderate	3	3

11. Identification of the Archaeological and Heritage Sensitivity Map

The purpose of the topographic map below is to indicate whether any sensitive archaeological or cultural heritage sites were identified during the surface survey. Graves were identified and recorded at Cape Cross; these are historic graves associated with the founders of Cape Cross (Figure 29). However, these cultural heritage features are located at a considerable distance from the proposed project area. As a result, no archaeological or cultural heritage impacts are anticipated.

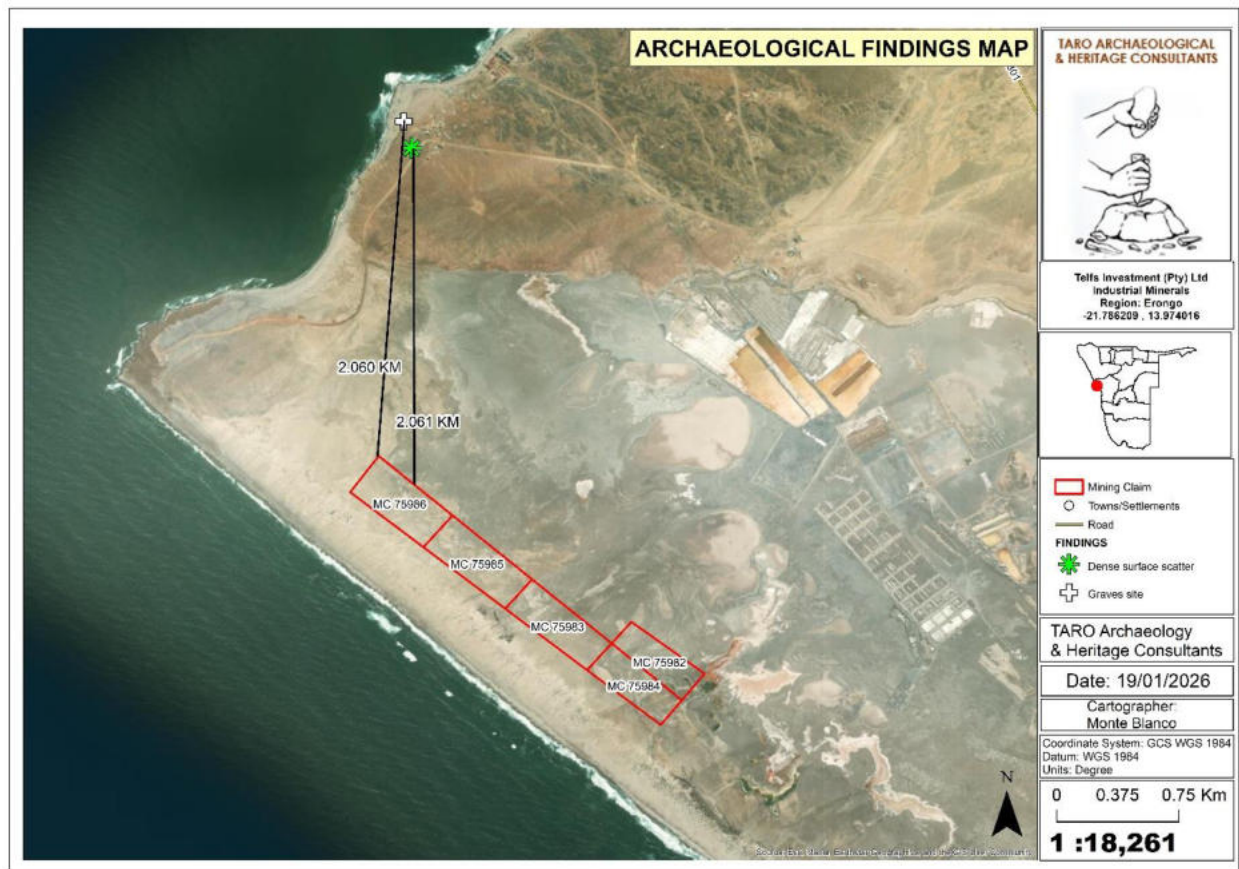


Figure 29: Archaeological finding map for Mining Claims No. 75982, 75983, 75984, 75985 & 75986

11.1. Sensitivity Analysis Summary Statement

The field survey conducted has revealed that the majority of the areas within the mining claims are actually of **very little sensitivity/negligible**. The only recorded site of **high sensitivity** was the graves of the late guano workers at Cape Cross. These graves are located near the ocean and far from the proposed project, which is about 2km north of the mining claims (see figure 29).

Archaeologically, it is evident that the majority of the areas within the claims are of low sensitivity, and that the remainder of the study area, outside the immediate claims' boundaries are of low sensitivity except where the historical graves were recorded, which is of **high sensitivity**. However, this does not mean that no

archaeological or heritage resources will be present within the mining claim, but the probability of resources of high cultural significance being found there is considered to be very low.

11.2. Identification and Description of the Potential Impact on Cultural Heritage Resources

11.2.1. Impact Assessment

Data collected during the site surveys on the archaeological and cultural heritage assessment revealed that the proposed project activities may have little to low negative, direct and indirect impacts during the mining of salt. The areas have been mined before in the colonial times, and thus disturbed to some extent. The purpose of the assessment was to identify potential sites or areas of cultural heritage importance, consider potential impacts thereof, and thereafter enhance the positive impacts and minimize. The potential impact of the proposed project on archaeological and cultural heritage resources is assessed as follows (Table 14).

Table 14: Impact Assessment/Impact Evaluation

Potential Impact	Impact Criteria		Significance Ranking (Without mitigation)	Potential Mitigation Measures	Significance Ranking (With mitigation)	Confidence Levels
Damage/destruction of archaeological sites or materials	Extent or Spatial of Impact	Local	Moderate/high	Salt mining and production activities should be implemented on targeted sites only. - Minimise cut-and-fill and landscape scarring in general -Ensure less micro-siting of loads to avoid the chance of impacts - Ensure effective rehabilitation of areas not needed during mining works. - Ensure proper micro-siting of mining equipment to avoid impacts -Demarcate and respect the No-Go-Zone of the identified sites. - Report any chance finds - Protect <i>in situ</i> materials	Low	High
	Duration of impact	Long-term				
	Probability (Threat)	Unlikely				
	Magnitude of impact	Low/little				
	Reversibility	Non-reversible				
	Can impacts be mitigated?	N/A				
Damage/destruction of graves and burial grounds	Extent or Spatial of Impact	Local	Moderate/high	Salt mining and production activities should be implemented on targeted sites only. - Graves and burial grounds should be avoided at all costs.	Low	High
	Duration of impact	Long-term				
	Probability (Threat)	Unlikely				

Potential Impact	Impact Criteria		Significance Ranking (Without mitigation)	Potential Mitigation Measures	Significance Ranking (With mitigation)	Confidence Levels
	Magnitude of impact	Zero		- Minimise cut-and-fill and landscape scarring in general - Ensure effective rehabilitation of areas not needed during salt mining works. - Ensure proper micro-siting of infrastructure and mining equipment to avoid impacts - Report any chance finds - Protect <i>in situ</i> materials		
	Reversibility	Non-reversible				
	Can impacts be mitigated?	Yes				
Damage to the rock shelters and caves	Extent or Spatial of Impact	Local	Moderate/high	Salt mining activities should be implemented on targeted sites only. - Minimise cut-and-fill and landscape scarring in general - Ensure effective rehabilitation of areas not needed during mining works. - Ensure proper micro-siting of infrastructure and mining equipment to avoid impacts - Avoid drilling or digging near rock shelters <i>(if any)</i>. - Report any chance finds - Protect <i>in situ</i> materials	Low	High
	Duration of impact	Long-term				
	Probability (Threat)	Unlikely				
	Magnitude of impact	Low				
	Reversibility	Non-reversible				
	Can impacts be mitigated?	N/A				

Potential Impact	Impact Criteria	Significance Ranking (Without mitigation)	Potential Mitigation Measures	Significance Ranking (With mitigation)	Confidence Levels
Cumulative impacts	Archaeological sites are non-renewable, and the impact on any archaeological context or material will be permanent and destructive.		Ensure proper micro-siting and siting of infrastructure and salt mining equipment to avoid a proliferation of archaeological sites and materials.		
Residual impacts	With the implementation of mitigation measures mentioned herein, the significance level of the impacts identified will be reduced to either minor adverse/low or negligible.		The undertaking of the mitigation measures outlined here before and during the proposed Salt mining and production activities of the aforementioned commodities will lead to <i>Minor</i> overall residual effects on archaeology. The recommended buffer zone of known archaeological sites in the vicinity of the application area, at least a distance of 50 m radius from the visual edge of the targeted site, will ensure that these sites are preserved <i>in situ</i> and thus will not be impacted by the salt mining activities.		

12. Summary of the Impacts

Direct or indirect impacts or risks of impact on archaeological sites located near or in the vicinity of the proposed salt mining project can be reduced to acceptable levels by the adoption of appropriate recommended mitigation measures, including integration of the archaeological heritage record, and *Chance Finds* procedure in the project EMP (see *Appendix 1*, & *recommended mitigations*). Special efforts should be made to reduce and avoid impacts on any discovered site, artefacts, or yet-to-be-discovered archaeological sites.

No significant archaeological or cultural heritage resources were noted within the project area, and no adverse impact to heritage resources is expected, especially within the boundaries of the surveyed mining claims. Any additional effects on subsurface heritage resources can be successfully mitigated by implementing a *chance find procedure*. Mitigation measures as recommended in this report should be implemented during all phases of the project. Impacts of the project on heritage resources are expected to be low during mining activities (Table 15). The only visible burial site noted during the surveys were the graves at Cape Cross (*refer to figure 29*), which are about 2km away from the proposed site. No impacts whatsoever are expected during the salt mining activities

Low Overall Impact: The conclusion that the overall impact on archaeological and cultural heritage is considered "low" is somewhat a good sign, but it does not absolve the project of responsibility and compliance. Environmental, Archaeological, and Heritage Impact Assessments (EIA/AHIA) should always plan for the unexpected.

Table 15: Archaeological & Heritage consideration for Inclusion in the Project EMP

Expected Impacts	Mitigation/management objectives & outcomes	Mitigation/management actions	Monitoring		
			Methodology	Frequency	Responsibility
Impacts on archaeology and graves					
Damage or destruction of archaeological sites or graves (known or unknown)	Avoid any impacts, if not possible, or locate and sample or rescue sites/burials before disturbance.	Pre-construction survey, micro-siting of infrastructures & equipment	Appoint an archaeologist to conduct a survey well before construction	Once-off	Project Proponent
	Rescue information, artefacts, or burials before extensive damage occurs	Reporting chance finds as early as possible, protect the <i>in situ</i> , and stop work in the immediate area.	Inform staff and carry out inspections of excavations.	On-going basis Whenever on site (at least weekly)	Contractors ECO
Impacts on the cultural landscape					
Visible landscape scarring	Minimize landscape scarring	Ensure disturbance is kept to a minimum and does not exceed project requirements. Rehabilitate areas not needed during the operation.	Monitoring of surface clearance relative to the approved layout	Ongoing basis Whenever on site (at least weekly)	Construction Manager or Contractor ECO

13. Management Plan and Mitigation Measures

Detailed mitigation measures are given herein in the form of recommendations (refer to the bulleted list in **Section 15.2** below under the conclusion and recommendation section). These mitigation measures will be included and implemented along with the general EMP of the project, as well as the implementation of the *Chance Find Procedures* and *Heritage Monitoring Plan* for the proposed project, as set out in *Appendix 1* below.

13.1. Conclusion and Recommendation

The study identified no significant impacts within the areas allocated for the proposed salt mining activities. As previously reported, the areas surrounding the proposed project near Cape Cross have been subject to mining for more than 100 years. Cape Cross has a well-documented history of guano and salt mining dating back to the late 1800s, with remaining heritage features such as old buildings and a historic graveyard still visible. The mining claims assessed are located at a considerable distance from these heritage features; therefore, no archaeological or cultural heritage impacts are anticipated. Nevertheless, all recommended mitigation measures, including adherence to the *Chance Finds Procedure*, must be strictly implemented, and compliance is mandatory.

13.2. Recommended Mitigation Measures

It is extremely important for the Project Proponent, and all those involved in the project to fully understand that all archaeological and palaeontological objects and meteorites are, the property of the State, except such an archaeological or palaeontological object the private possession and ownership of which (a) was acquired not in contravention of **Section 12** of the National Monuments Act, 1969 (Act No. 28 of 1969) or a law repealed by that Act; and thus, as part of mitigation measures, it should be noted that according to National Heritage Act No. 27 of 2004 that all activities that will involve digging or excavating the ground will require a permit from National Heritage Council of Namibia. Therefore, to prevent accidental damage to the archaeological landscape, including any potential sub-surface archaeological finds or features, the following mitigation strategies are proposed and recommended;

- If any archaeological materials, human burials, or skeletal remains are uncovered during mining activities, then the work in the immediate area should be halted, the finds would need to be reported to the Heritage Authority, and may require inspection by an Archaeologist. The ECO should have the area fenced off and contact NHC (Tel: **+264 61 244 375**), National Forensic Laboratory (**+264 61 240 461**) immediately.
- Under no circumstances shall any artefacts be removed, destroyed, or interfered with by anyone on the site; and Contractors and workers shall be advised of the penalties associated with the unlawful removal of cultural, historical, archaeological, or palaeontological artefacts, as set out in the National Heritage Act (Act No. 27 of 2004), Section 52 (2).
- Staff Training: Ensure that all workers involved in the project are trained to recognize potential archaeological materials, whether on the surface or subsurface. This can help avoid delays and ensure the process is efficient.

- Any pile of stones or mound of earth looking even remotely like a grave should be avoided at all costs.
- A "No-Go-Area" should be put in place where there is evidence of sub-surface archaeological materials, archaeological sites, gravesites, historical, or past human dwellings. It can be a demarcation by fencing off or avoiding the site completely by not working closely or near the known site. The 'No-Go Option' might have a NEUTRAL impact on significance.
- Cognizance must be taken of the larger cultural & heritage landscape of the area to avoid the destruction of previously undetected heritage sites. Should any previously undetected heritage or archaeological resources be exposed or uncovered during the development phases of the proposed project, these should immediately be reported to the heritage specialist or heritage authority (National Heritage Council of Namibia).
- The Proponent and Contractors should adhere to the provisions of **Section 55** of the National Heritage Act in the event significant heritage and cultural features are discovered in the course of developmental works.
- It should be noted that the subterranean presence of archaeological and/or historical sites, features, or artefacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, work on the site ceases immediately and a qualified archaeologist is called in to investigate the occurrence.
- Documentation and Reporting: All findings should be documented thoroughly. Even minor artifacts or features should be recorded, as they can help build a broader understanding of the region's history or may be relevant to future heritage projects or conservation efforts.
- Bi-annual auditing is highly recommended.

It should be taken into consideration that, according to **Part VI sub-section (1), (2) or (3)** A person who contravenes these provisions commits an offence and is liable to a fine not exceeding N\$100 000 or to imprisonment for a period not exceeding 5 years, or to both such fine and such imprisonment. A Project Proponent should heed these recommendations and comply with the existing legislation and Act as reflected in this report.

13.3. Statement and reasoned opinion of the specialist

It is the reasoned opinion of the undersigned archaeologist that the overall impact of the proposed salt mining project is considered to be **low**. Residual impacts can be managed to an acceptable level through the implementation of the recommendations provided in this report. Furthermore, the anticipated socio-economic benefits of the development are considered to outweigh the potential impacts, provided that appropriate mitigation measures are effectively applied throughout the project lifecycle.

It is therefore recommended that a Chance Finds Procedure be implemented during the salt mining activities to safeguard any unforeseen archaeological discoveries.

14. References

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- National Heritage Act 27 of 2004. 2004 Government Gazette.
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- Potgieter, H. (2020). *Gecko Salt Mile 68: Fauna Baseline Study and Impact Assessment*

Appendix 1: Archaeological “*Chance Finds Procedure*”

A **Chance Find Procedure (CFP)** outlines the actions to be taken when previously unknown cultural heritage resources, especially archaeological sites or artifacts, are discovered during a project. This procedure ensures that such discoveries are handled responsibly, potentially halting construction or development activities while assessments are conducted. The CFP aims to protect these resources and ensure compliance with relevant regulations.

Key Steps in a Chance Find Procedure:

1. **Discovery and Reporting:** Anyone who discovers a potential heritage resource must immediately halt work and report the find to their supervisor or the project manager.
2. **Site Security:** The supervisor or project manager ensures the site is secured to prevent further damage or disturbance.
3. **Expert Assessment:** A qualified archaeologist or heritage specialist is consulted to assess the significance of the discovery and determine appropriate actions.
4. **Further Action:** Based on the assessment, the project may proceed with caution, construction may be halted, or further investigation (e.g., archaeological excavation) may be required.
5. **Compliance:** The project must comply with relevant regulations and guidelines for handling heritage resources.

Examples of Chance Finds:

- Burials or remains of deceased individuals
- Palaeontological, archaeological sites, such as settlements, burial grounds, or rock art
- Isolated artifacts, like pottery, tools, or other objects of potential cultural significance

Purpose of the Chance Find Procedure (CFP):

- **Protection of Heritage:** To prevent damage or destruction of cultural heritage resources.
- **Legal Compliance:** To ensure compliance with heritage protection laws and regulations.
- **Preservation of Information:** To document and potentially preserve important information about the past.
- **Public Education:** To raise awareness of the importance of cultural heritage and encourage responsible stewardship.

The Project Manager or ECO/Site Manager/Supervisor must report the findings to the following competent authorities:

- **National Heritage Council of Namibia (061 244 375)**
- **National Museum (+264 61 276800),**
- **National Forensic Laboratory (+264 61 240461).**

Heritage Monitoring and Management Requirements

Throughout the development phases of the proposed project, monitoring is necessary to ensure compliance with measures agreed upon in the recommended mitigation as well as to assess how effective the mitigation measures are in protecting the values and significance of the heritage resources. This can be achieved through regular monitoring of the project site or random visits to ensure compliance with measures outlined in the recommendation section is monitored, recorded, and reported. However, in principle, heritage monitoring and management should be conducted and implemented by archaeologist/heritage specialist or trained personnel, while other activities, especially day-to-day monitoring, can be done by an Environmental Control Officer (ECO) or, in some cases, a trained Site manager can be responsible for this.

Site monitoring: As most heritage resources occur below the surface, all earth-moving activities need to be routinely monitored in case of accidental discoveries. The greatest potential impacts are the initial soil removal and subsequent earthworks during the construction or development of the area. The ECO should monitor all such activities daily. If any heritage resources are found, the *chance finds procedure* must be followed as outlined in **Appendices 1 and 2**.

Monitoring is generally only considered appropriate where changes are probable or likely, and where these changes could be significant and would require remedial or specific management measures. This process can be done in all stages of the development of the proposed project, and during the actual operational phases where more impact on archaeological and heritage resources is probable.

Appendix 2: Archaeological and Heritage Monitoring Measures for Mining Claim No. 75982, 75983, 75984, 75985 & 75986

Table 16: Chance Find and Heritage Monitoring Measures

Area/Site	Archaeological/Heritage Aspect	Potential Impact	Mitigation Measures	Responsible Party	Method Statement required
Chance Find (Chance Archaeological and Heritage sites (Accidental discoveries)	General area where the proposed project is taking place (i.e., proposed development which may yield archaeological, cultural materials, or human remains. This means that there are possibilities of encountering unknown archaeological sites during subsurface salt mining work, which may disturb previously unidentified chance finds.	Possible damage to previously unidentified Archaeological and heritage sites during the salt mining phase. Unanticipated impacts on archaeological sites where project actions inadvertently uncovered significant Archaeological sites. Loss of historic cultural landscape; Destruction of burial sites and associated graves (if any) Loss of aesthetic	In situations where unpredictable impacts occur, salt mining activities must be stopped, and the heritage authority should be notified immediately. Where remedial action is warranted, minimize disruption in salt mining scheduling while recovering archaeological data. Where necessary, Implement emergency measures to mitigate. Where burial sites are accidentally disturbed during salt production, the affected area	Project Proponent- Contractor/ Salt Mining crews, Project Manager (PM) / Environmental Control Officer (ECO) or Site Manager.	Monitoring measures should be issued as instruction within the Project EMP. PM / ECO / Site Manager / Archaeologist Should monitor development works on sites where such development projects commence within the project site.

Area/Site	Archaeological/Heritage Aspect	Potential Impact	Mitigation Measures	Responsible Party	Method Statement required
		value due to salt production work Loss of sense of place Loss of intangible heritage value due to a change inland use.	should be demarcated as a 'no-go zone' by use of fencing during construction, and access thereto by the construction team must be denied. Accidentally discovered burials in a development context should be salvaged and rescued to safe sites as may be directed by relevant heritage authorities. The heritage officer responsible should secure the relevant heritage and health authorities permit the possible relocation of affected graves		

Area/Site	Archaeological/Heritage Aspect	Potential Impact	Mitigation Measures	Responsible Party	Method Statement required
			accidentally encountered during salt production work.		
Compliance Review	A review of archaeological and cultural heritage incidents, their impacts, mitigation used, and the success of mitigation should be conducted at a certain stage of the project. The review should be looking at mitigation measures in place, and ways of improvement if needed. This exercise can be done after every 6 months or whenever the Project Proponent sees fit. The overall objective is to ensure full compliance with relevant legislation, especially under Section 5 (4) of the National Heritage Act No. 27 of 2004, <i>Chance Find Procedure</i> , and the recommendations made by the Heritage Specialist.				

Knowledge Gaps

Due to the subsurface nature of heritage resources, the possibility of the discovery of any archaeological or heritage resources during the mining (salt production) activities phase cannot be excluded. However, this limitation is successfully mitigated with the adoption and implementation of a **Chance Find Procedure** as elaborated above in Table 16.

Appendix 3: Site Notice and Newspaper Advert for the Mining Claims

LEGAL NOTICE

PUBLIC NOTICE: A CALL FOR PARTICIPATION & SUBMISSION OF COMMENTS

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) STUDY FOR THE PROPOSED SALT PRODUCTION ACTIVITIES ON TEN (10) MINING CLAIMS NO. 75982, 75983, 75984, 75985, 75986, 75987, 75988, 75989, 75990 & 75991 (MC75982-75991) NEAR CAPE CROSS IN THE ERONGO REGION – APPLICATION FOR ENVIRONMENTAL CLEARANCE CERTIFICATE (ECC)

The public is hereby notified that an application for Environmental Clearance Certificate (ECC) will be submitted to the Environmental Commissioner as required under the Environmental Management Act No. 7 of 2007 and its 2012 EIA Regulations. The proposed salt production (industrial mineral mining) (the Project) is a listed activity in the EIA Regulations that cannot be undertaken without an ECC, which is subject to an EIA Study, approval of an EIA Scoping Report & Environmental Management Plan (EMP).

Project Proponent: Telfs Investments (Pty) Ltd
Project Nature and Location: The proposed project entails the mining of industrial minerals (salt production) within crystallisers enclosed within the boundaries of ten (10) Mining Claims (MCs), MC75982-75991. The brine infiltrates the constructed crystallisers from the existing resource within the salt pan. The initial material removed from the pan surface to create the sunken crystalliser will be processed at an off-site Plant situated on the active Mining License (ML) No.11, located about 10km southeast of the site (MCs). Therefore, no salt processing will be done on-site. The MCs cover a combined area of 123.0962 hectares (ha) and are located about 2km south of Cape Cross Settlement in the Arandis Constituency of the Erongo Region.

Environmental Assessment Practitioner: Serja Hydrogeo-Environmental Consultants CC

The public is invited to register as Interested and Affected Parties (I&APs), submit comments, and receive further information on the EIA Study. The deadline for registration as an I&AP and submission of comments, issues, or concerns is **Friday, 19 December 2025**.

Contact Person: Ms. Fredrika Shagema
Email: public@serjaconsultants.com
Mobile No.: +264 81 749 9223

SERJAHANDÉ CONSULTANTS

NOTICE OF INTENTION: IN THE HIGH COURT OF NAMIBIA

Regkennissgewings Legal Notices

Project Proponent: Telfs Investments (Pty) Ltd
Project Nature and Location: The proposed project entails the mining of industrial minerals (salt production) within crystallisers enclosed within the boundaries of ten (10) Mining Claims (MCs), MC75982-75991. The brine infiltrates the constructed crystallisers from the existing resource within the salt pan. The initial material removed from the pan surface to create the sunken crystalliser will be processed at an off-site Plant situated on the active Mining License (ML) No.11, located about 10km southeast of the site (MCs). Therefore, no salt processing will be done on-site. The MCs cover a combined area of 123.0962 hectares (ha) and are located about 2km south of Cape Cross Settlement in the Arandis Constituency of the Erongo Region.

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The public is invited to register as Interested and Affected Parties (I&APs), submit comments, and receive further information on the EIA Study. The deadline for registration as an I&AP and submission of comments, issues, or concerns is **Friday, 19 December 2025**.

Contact Person: Ms. Fredrika Shagema
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Figure 30: Site notice and snippets of Newspapers Adverts for Mining Claims No. 75982, 75983, 75984, 75985 & 75986

Appendix 4: Supporting Documents

ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT REPORT

FOR THE PROPOSED SALT PRODUCTION WITHIN MINING CLAIMS No. 75987, 75988, 75989, 75090 & 75991,
LOCATED SOUTH OF CAPE CROSS IN THE ERONGO REGION, Namibia



Prepared by: Roland Mushi



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Prepared for: Telfs Investments (Pty) Ltd

**As required under Section 53 (7) and Section 54 (7) of the National Heritage Act (No. 27 of
2004).**

Document Information/Project Details

Item	Description
Report Title	Archaeological and Heritage Impact Assessment Report for the Salt Production in the Erongo Region
Project Location & Site Name	The Proposed Project is located about 2 km south of Cape Cross in the Erongo Region.
Granted Date	<i>Pending ECC</i>
Expiry Date	<i>Pending ECC</i>
Target Commodities & Minerals	The Proposed Project intends to mine salt.
Approximately Coordinates	<i>Refer to Table 1</i>
Purpose of the Archaeological & Heritage Assessment	The purpose of the study is to identify, record, and recommend measures for mitigation in areas of archaeological and cultural heritage significance, which includes rock art sites, artefacts, graves or burial grounds features, paleontological, structures, buildings, landscapes, etc., that might be impacted by the proposed project.
Address & Contacts of the Project Proponent/Developer	<i>Telfs Investments (Pty) Ltd P.O. Box 8912 Swakopmund</i>
Total size of the application areas (MCs)	59.3572 (ha)
Author Identification	Prepared by TARO Archaeological & Heritage Consultants Cell: +264 81 3332373 Email: rolandmushi@gmail.com
Site Survey and Report Writing	<i>Mr. Roland Mushi (Archaeologist & Cultural Heritage Specialist)</i>
Heritage Research Permit	Permit No. 11/2025 <i>Issued under section 52(1) of the National Heritage Council Act (Act 27 of 2004).</i>
Competent Authority	National Heritage Council of Namibia
Report Date	21/01/2026
Cite this document as:	<i>Mushi, R. 2026. (AHIA) Archaeological and Heritage Impact Assessment for Salt Production on Mining Claims No. 75987-75991 located south of Cape Cross in the Erongo Region.</i>

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Disclaimer: Although all possible care is taken to identify sites of cultural importance during the investigation of study areas, it is always possible that hidden or sub-surface sites could be overlooked during the study. TARO Archaeological & Heritage Consultants and its personnel will not be held liable for such oversights, and inconsistencies that may result from information that may not be available at the time this report was prepared, or for costs incurred as a result of such oversights. The client is advised to seek clarification on any elements that may be indistinct. Information and recommendations in this document should only be relied upon in the context of this document; any documents referenced explicitly herein should only be used within the context of the appointment.

Declaration of Independence

Specialist Name/Archaeologist who prepared this report	Mr. Roland Mushi Contacts: +264 81 3332373 Email: rolandmushi@gmail.com
Declaration of Independence	I/we, TARO Archaeological & Heritage Consultants, hereby confirm my/our independence as an Archaeologist/Heritage specialist and declare that I/we have no interest in the business of our client, other than fair remuneration for work performed on this project/contract as well as the execution of archaeological sound fieldwork and the submission of a professional report to our client and Body of Authority (National Heritage Council of Namibia). This Archaeological & Heritage Assessment Report has been prepared according to the provisions of Section 51 (3) of the National Heritage Act, No 27 of 2004, and National Heritage Guidelines for Heritage Impact Assessment of 2021, Environmental Management Act, No 7 of 2007, and other relevant legislation.
Signature & Stamp	
Date	21/01/2026

The expertise of the Specialist

Roland Mushi is a skilled professional with many years of experience in the heritage sector. He has several years of experience working in desert environments, more specifically in Namib Naukluft National Park as a Researcher, and he has been working as a full-time archaeologist since 2021. Academically, he obtained an MSc in Natural Resources Assessment and Management and B. A (*Hons*) in History and Archaeology with a special focus and interest in Lithic and Fauna Analysis in Archaeology, both degrees were obtained from the University of Dar Es Salaam. Roland is an accredited member of the following:

- **ASAPA** - Association of Southern African Professional Archaeologists # **480**
- **SAfA** - Society of Africanist Archaeologists
- **SAMA** - South African Museums Association # **NCM 008**
- **MAN** - Museums Association of Namibia # **1311556**
- **EAPAN** - Environmental Assessment Professionals Association of Namibia # **179**
- **ICOM** – International Council of Museums # **177513**

SUBMISSION OF REPORT

Please note that the National Heritage Council of Namibia needs to comment on and review this report. The Project Proponent/Client is advised not to proceed with any action before receiving the necessary consent/comments from NHCN.

Executive Summary

TARO Archaeological & Heritage Consultants (TARO AHC) was appointed by Serja Hydrogeo-Environmental Consultants CC, on behalf of Telfs Investments (Pty) Ltd (hereafter referred to as the Proponent), to undertake an Archaeological and Heritage Impact Assessment (AHIA) for the proposed salt mining activities at Mining Claims No. 75987, 75988, 75989, 75990, and 75091. The targeted mineral commodity for this proposed project is salt production. The combined total footprint areas of the proposed salt mining project are about 59.3572 (ha). Topographically, the claims are situated within the saline pan. Archaeologically, the findings from the surface survey conducted are of **LOW** significance.

The area around the saline pan has been disturbed to varying degrees over many decades. This includes multiple roads and vehicle tracks for access to the saline pan for mining and to the beach for fishing. Originally, the area formed part of the Cape Cross Farm 143. The gravel plains and washes around the pan fell prey to various types of disturbance, namely, the clearing of areas for the construction of buildings utilized for mining and later for tourism.

Findings and observations made

Identification, mapping, classification, and assessment of the significance of the archaeological, historical, and cultural heritage resources in the area were conducted according to the National Heritage Guidelines of 2021. The site surveys were undertaken on the 08th and 09 of December 2025. Key findings of this AHIA assessment include:

Burial site: A burial site comprising graves has previously been recorded at Cape Cross, in proximity to the existing office facilities. The site holds cultural heritage significance, particularly in terms of its contribution to the historical landscape of the area. The burial site is located approximately 2 km from the boundaries of the proposed salt mining claims and falls outside the anticipated impact zone of the salt mining operations.

No additional burial sites were identified within the proposed mining claim areas during the field survey. Based on current observations, the proposed development is unlikely to directly or indirectly impact known heritage resources. A chance-find procedure should, however, be implemented during mining operations to safeguard against the potential discovery of previously unidentified subsurface heritage materials.

Conclusion and Recommendations

The Archaeological and Heritage Impact Assessment (AHIA) has identified no significant impacts expected at the proposed mining site. It should be noted that the areas in which the mining claims are located have been disturbed by previous salt mining and other activities, including tourism. The surface-level assessment has shown that the proposed mining claim areas are not archaeologically sensitive. Consequently, the overall impact of the proposed project has been assessed as **LOW**.

It is strongly recommended that project activities focus exclusively on the identified target sites. Strict compliance with the mitigation measures outlined in Section 16.2 is essential. Additionally, the adoption and implementation of Chance Find Procedures as part of the Environmental Management Plan (EMP) is required, pending approval from the relevant authority.

While the recommended mitigations pertain specifically to archaeological and heritage considerations, it is important to note that project authorization is still subject to approval. The proposed salt production activities may only proceed upon review and approval by the National Heritage Council of Namibia.

Document information

The contents of this Heritage Assessment Report are in accordance with the National Heritage Act, No. 27 of 2004, and the Guidelines for Heritage Impact Assessment 2021 of Namibia.

This Specialist Report is prepared in terms of the NHC Guidelines, and contains the following:	Addressed in the Specialist Report
A. Title Page: - Title of the report, Subheading: Property name and portion (where applicable), Area, Region; - Type of development; - Author of the AHIA; - - Name of Proponent, - Consultant and Date of the AHIA. Details of- - the specialist who prepared the report; and - the expertise of that specialist to compile a specialist report including a curriculum vitae and relevant documents	Page i & ii (Preliminary Section of this report)
B. Executive Summary: - The purpose of the study; - A brief development project description; - Brief methodology including desktop study - Identification and/or outline of consultations with interested and affected parties relating specifically to heritage resources; - - Findings: Brief description of heritage resources, Significance of the resources and potential impacts and; Recommendations and reasoned opinions made by the heritage consultant.	Page v (Preliminary Section of this report)
C. Declaration of Independence and CV: - Heritage consultants must provide a very brief summary of their experience, - Qualifications, - Membership affiliations and membership numbers, and accreditation level if relevant, - A detailed CV and certified copies of degree certificates and ID must be attached in the Appendix); - - Heritage consultant(s) must declare (and sign) their independence from the developer.	Page iv (Preliminary Section of this report) Appendix 2 & 3
D. Contents Page: - List of acronyms used in the report and glossary.	Page xiv & xv (Preliminary Section of this report)
E. Introduction and Background Information: - Introduction to the development project and background information; - Detailed terms of reference as provided to the heritage consultant from the commissioning body	Section 1 & 1.1 Section 1.2
F. Project Description: - General project area and the specifics of the development i.e., Size of farm and portions, Magisterial District, location, aerial or geographic map and co-ordinates of the project development;	Section 2
G. Legislation Requirement - A summary of which legislation (including the relevant NHA sections) and other local by-laws are relevant to the	Section 3

proposed project, and those identified must be subsequently outlined and quoted;	
H. Methodology - A description of the methodology used in undertaking a field survey including site investigation, and preparation of the report	Section 4, 4.1, 4.2 & 4.3
I. Consultation and Stakeholder Engagement - A description of the result of consultation undertaken during the site visit (Relevant to heritage resources only)	Section 4.4 & 4.4.1
J. Site Investigation	Section 4.5
K. Detailed Assessments - Site investigation details	Section 5, Table 6
L. Site Significance Rating	Section 6
Literature reviews - Summary of reports used - Description of the Study Area/topography - Geology of the project area	Section 7 Sub-section 7.1 & 7.1.1 Sub-section 7.2
(i) Background and general Heritage Context of the area - Desktop Study/ Regional Archaeological & Heritage context.	Section 8, 8.1, 8.2, 8.2.1, 8.2.2, 8.2.3, 8.2.4 & 8.3
(ii) Physical and Environmental Context of the area - Vegetation and Landscape - Site context	Sections 9, 9.1 & 9.2
(iii) Assessment of the findings - On-site findings	Sections 10, 10.1, 10.2, 10.3, 10.4 & 10.5 Table 13
(iv) Identification of the Archaeological & Heritage Sensitivity Map	Sections 11, 11.1, 11.2 & 11.2.1
(v) Impact evaluation of the proposed project	Table 15
(vi) Impact Assessment	
Summary of the Impact - Archaeological & Heritage consideration for inclusion in the Project EMP	Section 12
(vii) An identification of any areas to be avoided, including buffers;	None
M. Management Plan and Mitigation Measures - Any mitigation measures for inclusion in the proposed project EMP - Conclusion and Recommendation - Recommended Mitigations Statement and reasoned opinion of the specialist - whether the proposed development should be authorized or not;	Section 13 Section 13.1 Section 13.2 Section 13.3
N. References	Section 14
M. Appendices - Any archaeological and heritage monitoring requirements for inclusion in the EMP or Environmental Authorization;	Appendix 1

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Glossary list used in this report

Abbreviation	Description
AHIA	Archaeological and Heritage Impact Assessment
AMP	Archaeological Management Plan
AD	Anno Domini
ASAPA	Association of Southern African Professional Archaeologists
CFP	Chance Find Procedure
EAPAN	Environmental Assessment Professionals Association of Namibia
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment*
EMP	Environmental Management Plan
ESA	Early Stone Age
GIS	Geographical Information System
NHC	National Heritage Council
MAN	Museum Association of Namibia
MSA	Middle Stone Age
LSA	Late Stone Age
PM	Project Manager
SM/I	Site Manager/Inspector
SAfA	Society of Africanist Archaeologists
SAMA	South African Museums Association

Definitions of Key Concepts and Terms

Archaeological	In relation to a place or an object, means (a) any remains of human habitation or occupation that are 50 or more years old found on or beneath the surface of the land or in the sea; (b) rock art, being any form of painting, engraving or other representation on a fixed rock surface or loose rock or stone which is 50 or more years old;
Archaeological Site	This means an area in which archaeological objects are situated. Archaeological remains can be defined as any features or objects resulting from human activities, which have been deposited on or in the ground, reflecting past ways of life and are either 50 years old or older than that.
An artefact or artifact	A general term for an item made or given shape by human culture, such as a tool or a work of art, especially an object of archaeological interest
Isolated finds	Occurrences of artefacts or other remains that are not in situ or are located apart from archaeological sites. Although these are noted and recorded but do not usually constitute the core of an impact assessment, unless they have intrinsic cultural significance and value
In-situ	Refers to material culture and surrounding deposits in their original location and context, for example, an archaeological site that has not been disturbed by farming.
Built environment	The built environment includes an array of historic buildings, structures, and objects, from missions, forts, and rock walls to entire town sites and settlements.
Monuments	Architectural works, works of monumental sculpture and paintings, elements or structures of an archaeological nature, inscriptions, cave dwellings, and combinations of features, which are of outstanding universal value from the point of view of history, art, or science;
Heritage significance	Means aesthetic, archaeological, architectural, cultural, historical, scientific, or social significance;
Cultural Heritage	Encompasses the range of tangible material reflecting past and present human culture (e.g., archaeology), as well as cultural practices, performance, indigenous knowledge, and oral traditions (intangible) that are bequeathed from one generation to the next, and which each subsequent generation molds and adapts to suit the changing conditions of its time.
Heritage, Intangible	Aspects of culture that cannot be touched, including song, dance, oral traditions, indigenous knowledge, etc. However, most sites of material or tangible heritage are imbued with intangible elements – thus, a site where a famous battle took place is

	<i>inextricably linked to the oral traditions and history surrounding the site and any material remains related to the battle itself.</i>
Heritage, Tangible	<i>Physical heritage material or sites that include buildings, graves, sacred pools, rock art, and other sites, e.g., stone age pottery, tools, iron smelting sites, etc.</i>
A grave	<i>A place of interment (variably referred to as burial) includes the contents, headstone, or other markers of such a place, and any other structure on or associated with such place. A grave may occur in isolation or in association with others, where it is referred to as being situated in a cemetery (contemporary) or burial ground (historic).</i>
Boulder	<i>A large fragment of bedrock that has detached from the mountainside.</i>
Historic building	<i>Refers to a structure or building that is over 50 years old.</i>
Chance Finds	<i>This means archaeological artefacts, features, structures, or historical cultural remains such as human burials that are found accidentally in the context previously not identified during cultural heritage scoping, screening, and assessment studies. Such finds are usually found during earth-moving activities.</i>
Study area or 'proposed project area'	<i>Refers to the area where the Proponent/developer wants to focus its development activities.</i>
Periodization	<i>Archaeologists divide the different cultural epochs according to the dominant material finds for the different periods. This periodization is usually region-specific, such that the same label can have different dates for different areas. This makes it important to clarify and declare the periodization of the area one is studying. These periods are nothing more than convenient time brackets because their termini and commencement are not absolute, and there are several instances of overlap.</i>
Pleistocene	<i>Is a basis for the Quaternary period, which started around 2.58 million years ago to 11.7 thousand years ago</i>
Mid-Pleistocene	<i>A period known as the Mid-Pleistocene Transition (MPT) or the Mid-Pleistocene Revolution (MPR) was the transition that happened approximately 1.25–0.7 million years ago, in the Pleistocene epoch. In other words, this middle Pleistocene transition (MPT) began 1250 kya and was completed by 700 Kya.</i>
Later Pleistocene	<i>The Late Pleistocene is an unofficial age in the international geologic timescale in chronostratigraphy; it is currently defined as the time between c. 129,000 and c. 11,700 years ago.</i>
Holocene	<i>Started from 11.7/ 10 Kya to the present</i>
ESA	<i>>2 600 000 years ago – 250 000/200 000 years ago</i>
MSA	<i>250 000/200 000 years ago – 40/25 000 years ago</i>
LSA	<i>25 000 years ago – AD 200 (up to historic times in certain areas)</i>
Iron Age Period	<i>AD 200 – AD 1840</i>
Historic Period	<i>AD 1840 - 1950</i>

1. Introduction

TARO Archaeological & Heritage Consultants (TARO AHC) was appointed by Serja Hydrogeo-Environmental Consultants CC, on behalf of *Telfs Investments (Pty) Ltd* (hereafter referred to as the Proponent), to undertake an Archaeological and Heritage Impact Assessment (AHIA) for the proposed salt mining activities at Mining Claims No. 75987, 75988, 75989, 75990, and 75091. The targeted mineral commodity is salt.

Telfs Investments (Pty) Ltd applied to the Ministry of Industries, Mines, and Energy (MIME) on 03 April 2025 for rights to mine industrial minerals (salt production). The company intends to do mining in the area to produce salt on the saline pan. In total, the Proponent holds ten interconnected mining claims (MCs). However, in accordance with the 2021 National Heritage Council (NHC) Guidelines, only five mining claims are addressed in this report, while the remaining five mining claims are presented in a separate report. The planned project is located along the northern-central Namibian coast within the Dorob National Park, some 25km north of Henties Bay, specifically 2 km south of the Cape Cross settlement within Arandis Constituency of the Erongo Region. Figure 1 renders a topographic image of the project's location.

This report, compiled by TARO AHC, draws extensively on data collected during the surface survey, as well as archaeological and historical records obtained from various sources, site reconnaissance, and other relevant documentation. The findings and conclusions presented herein are subject to the defined scope of work, the assumptions made during the assessment, and the limitations outlined in the respective sections of this report.

The primary objective of this study is to provide specialist input into the screening process for the Environmental Application, which is necessary for the issuance of the Environmental Clearance Certificate (ECC). This input will inform the Environmental Scoping Assessment (ESA) Report and the Environmental Management Plan (EMP). Heritage Impact Assessments in Namibia are required under the National Heritage Act (No. 27 of 2004) and the Environmental Management Act (No. 27 of 2007).



Figure 1: Locality map of the area of interest.

1.1. Mining Claims Coverage

The five surveyed mining claims cover a combined total area of 59.3572 ha hectares (ha), which constitutes 17.3727 ha, 2.0384 ha, 7.4275 ha, 24.2953 ha & 8.2233 ha, for each mining claim, respectively. However, the approval of the MCs' applications with MIME and subsequent operations (salt production) is conditional on the issuance of an Environmental Clearance Certificate (ECC) and a Consent letter from NHC.

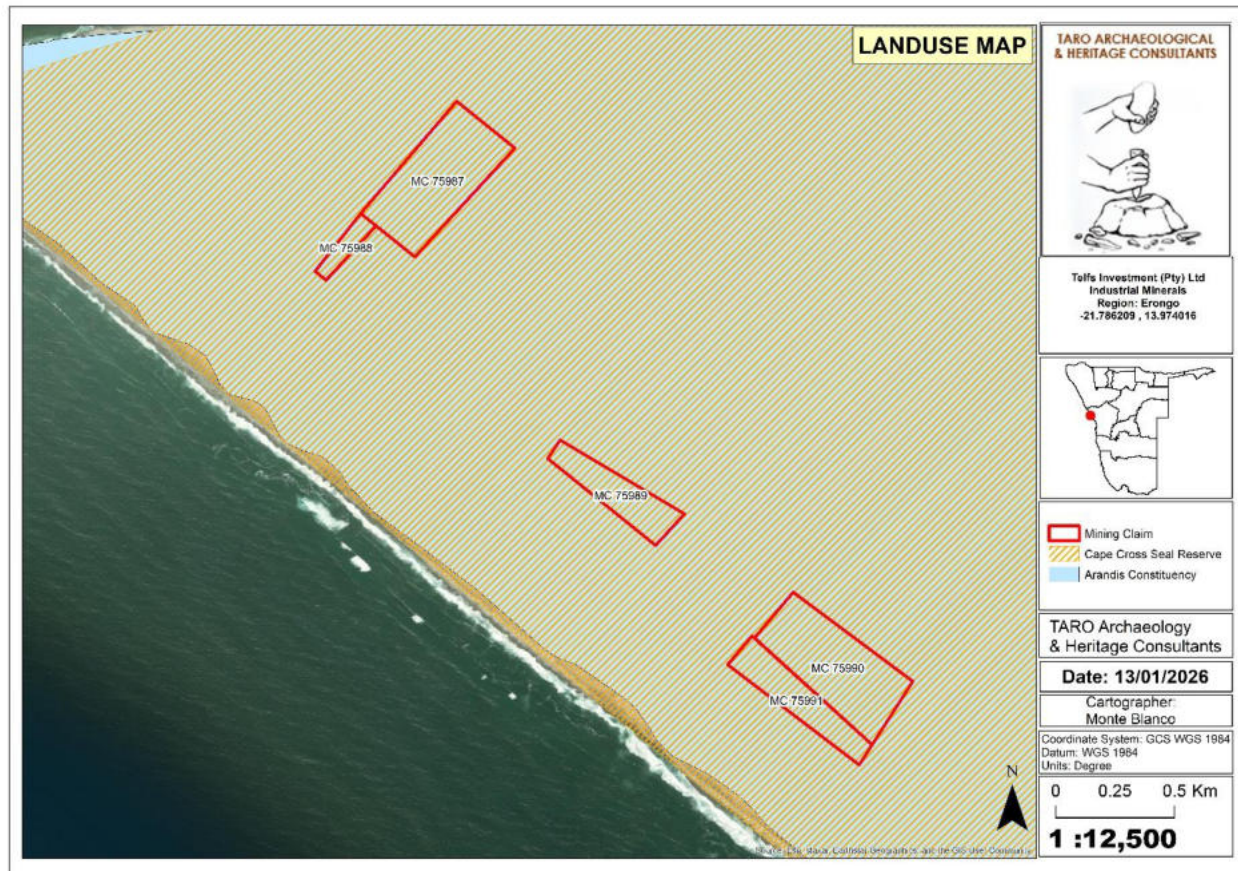


Figure 2: Land-use map of the proposed project.

1.1.1. Accessibility, Location, and Landscape

The extent of the mining claims is strongly influenced by the high accessibility of the area, which is characterized by a broad, flat expanse of ground covered with salt minerals and a vast, open landscape with very sparse vegetation, as illustrated in Figure 2. The claims are located approximately 2 km south of Cape Cross. The generally level terrain, absence of significant physical obstacles, and low vegetation density facilitated easy access across the study area, allowing most of the mining claims to be surveyed thoroughly and efficiently.

Table 1: Approximate GPS Centre Coordinates of the Proposed Project Site

Geographic Positioning System Points in degrees, minutes & seconds			Total Area of the Mining Claims No. 75987, 75988, 75989, 75090 & 75991 is 59.3572 ha
Centre Coordinates for MC No. 75987	21° 47' 22" S	13° 58' 11" E	
Centre Coordinates for MC No. 75988	21° 47' 33" S	13° 58' 57" E	
Centre Coordinates for MC No. 75989	21° 47' 06" S	13° 58' 34" E	
Centre Coordinates for MC No. 75990	21° 47' 30" S	13° 59' 03" E	
Centre Coordinates for MC No. 75991	21° 47' 35" S	13° 58' 59" E	

1.2. Terms of Reference

Terms of reference for this archaeological and heritage impact assessment study were to;

- Locate, identify all objects, record, photograph, and describe sites of archaeological, historical, or cultural interest located in the area of the proposed development,
- Record coordinate points (GPS) of identified areas as significant and photographing,
- Determine the levels of significance of the various types of heritage resources that might be affected by the proposed project, and
- Suggest or propose appropriate management and mitigation measures for the archaeological and cultural heritage resources that might occur in the area proposed for exploration or mining activities, which can be potentially destroyed in the course of salt production and other related development.
- Review applicable legislative requirements.

2. Project Description

Telfs Investments (Pty) Ltd (*hereinafter referred to as "Proponent"*) intends to conduct salt mining in the specified Mining Claims No. 75987, 75988, 75989, 75090 & 75991 has a combined total area of 59.3572 (ha). Therefore, an Archaeological and Heritage Impact Assessment was conducted to identify the possible impacts on the archaeological or heritage resources on the site. Project components and the location are outlined in **Tables 2** and **3** below.

Table 2: Project Area

Project Area	The proposed development site is located near Cape Cross.
Project Site/Name of the area	The proposed development site is located approximately 2 km south of Cape Cross.
Magisterial District/Location	Arandis Constituency in the Erongo Region.
Coordinate of the development.	Refer to Table 1 above
Topographic Map Number	N/A

Table 3: Infrastructure and project activities

Types of Development	Mining Rights Application: Mining Permit for the aforementioned salt production
Size of the five MCs	59.3572 (ha)
Salt Processing (Project Component)	The initial material removed from the pan surface to create the sunken crystalliser will be processed at the Plant situated on the active Mining License (ML) No.11, located about 10km southeast of the site (MCs). Therefore, no salt processing will be carried out on-site (within the boundaries of the MCs). The offsite processing plant on ML-11 is fully equipped with crushers (i.e., primary and secondary), conveyors, a wash plant, a drying and stockpiling area, and a bagging plant. The plant has pre-fabricated offices and sanitation facilities that are regularly emptied by "honeysuckers," and the sewage is disposed of at the Henties Bay Municipal sewage facility.
Site Clearance	Earthworks: The only site clearance that is going to be done is the ground clearing activities, soil excavation, and cut and fill only.
Machinery and Vehicles to be used	Bulldozers, excavators, trucks, 4 x 4 vehicles, etc.
Employment	The anticipated staff (project workers) for the site will entail a general manager, site/operations or production manager, foreman, Harvest & Haul Crew (drivers, operators, and labourers), mechanic, electrician, operators, cooks, security, etc. The current range of operational staff complement for the operations across the partnered companies operating in collaboration with one another is between fifteen (15) and twenty-five (25). Cumulatively, these numbers represent the maximum staff complement that would exist for the collaborative operations.
Human Resources & Employment	Some of the project staff who are required to be on-site will be accommodated in a prefabricated campsite that is already in existence. The rest of the staff (particularly those from Henties Bay) reside in Henties Bay and commute to the site by bus (3 bus trips per day) or private vehicle daily, as necessary. The camp has a kitchen that provides food for the resident (camp) staff. Furthermore, the camp is equipped with a French drain system to manage sewage.
Site Access	The nearest proclaimed road to the mining claims' site is the C34 from Mile 72/Henties Bay towards Cape Cross. Therefore, the C34 will be used to access the area and then turn off to the left to the salt pans using the existing single dirt track (used by existing operators neighbouring Telfs Investments' MCs).
Temporary roads	Where necessary, new access tracks will be created to access site-specific areas on the MCs.
Expected impacts	Positive impacts include

	- Local socio-economic development through employment creation and income generation for the communities of Henties Bay, Uis, and other nearby settlements. Thus, it reduces unemployment rates in this part of the Erongo Region. - Potential creation of opportunities for skills development and training related to salt production. - Procurement of local supply chain (through goods and services) by local/regional businesses to generate income. - An indirect positive impact on eco-industrial or educational tourism by incorporating the salt works site through guided tours, and birdwatching at the salt ponds. This would complement the Cape Cross seal reserve. Negative impacts include - Physical soil disturbance owing to the movements of project vehicles - Terrestrial habitat loss from salt production activities (creation of evaporation pans and access roads), such as loss of feeding/roosting areas for shore birds and reducing habitats for Cape fur seals, if activities are carried out near colonies. - Impact on local desert biodiversity (fauna and flora) through disturbance and barriers during salt production activities. - Aquatic habitat declines or loss (Cape Cross Lagoons) - Change in lagoon water volume and reduction in groundwater/lagoon water level (accelerated evaporation). The pans, embankments, and channels can change groundwater-surface water interactions and sediment transport, resulting in erosion. - Potential increase in salinity and brine leakage, due to concentrated brine released accidentally or via seepage, can raise salinity in soils, groundwater, and adjacent lagoon/nearshore waters, posing a threat to vegetation and altering benthic communities. - The potential impact of illegal hunting/poaching of wildlife in the area - Visual impacts due to the presence of mining equipment near tourism sites (within tourist sight). - Potential occupational health and safety risks - Noise generated by project vehicles and machinery may disturb or interfere with faunal activities (breeding/pupping, resting, and feeding behavior) near the site. - Vehicular traffic safety and impact on local roads - Environmental pollution (littering) through improper handling, storage, and disposal of waste - Impact on archaeological & cultural heritage resources.
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3. Legislative context

This chapter outlines the regulatory framework applicable to the proposed project. **Table 4** provides a brief list of applicable legislation and its relevance to the project.

National Heritage Act of Namibia (No. 27 of 2004)

This Act provides for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. The Client should ensure that if any archaeological or palaeontological objects, as described in this Act, are found in the course of the development, such findings are reported to the relevant Ministry immediately. If necessary, the relevant permits must be obtained before disturbing or destroying any heritage significance as envisaged by this Act.

Therefore, this AHIA report is a component of a broader Environmental Impact Assessment (EIA)/ Scoping Assessment (ESA) study and addresses the requirements of the National Heritage Act, No. 27 of 2004 and National Heritage Regulations (Government Notice 106 of 2005, in line with EIA Terms of Reference, and regarding the assessment of impacts of the proposed development on the archaeological, cultural and heritage resources associated with the receiving environment.

In principle, the National Heritage Act, 2004 (Act No. 27 of 2004) provides for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. Special provision is given for the protection and management of certain heritage resources in Namibia, these are listed in **Part VI from paragraphs (53-58)** including listed buildings which are 50 years old or more than that, archaeological objects or paleontological interest in existence which is 50 years or more years old, meteorite, historic shipwrecks and shipwreck objects (Underwater heritage) this include the remains of all ships that have been situated on the coast or in the territorial waters or the contiguous zone of Namibia for 35 years or more are historic shipwrecks for this section.; and other heritage resources.

Part I, Section1 paragraph (a) and (b) defines "archaeological" concerning a place or an object, which means (a) any remains of human habitation or occupation that are 50 or more years old found on or beneath the surface on land or in the sea; and (b) rock art, being any form of painting, engraving or other representation on a fixed rock surface or loose rock or stone which is 50 or more years old. While **Part V Section 46** of the Act prohibits the removal, damage, alteration, or excavation of heritage Sites or remains. **Section 48** sets out the procedure for the application and granting of permits, such as might be required in the event of damage to a protected site occurring as an inevitable result of development.

Furthermore, **Section 51 (3)** sets out the requirements for impact assessment. **Part VI Section 55 Paragraphs (3) and (4)** require that any person who discovers an archaeological site should immediately notify the National Heritage Council.

Table 4: Summary of the relevant Act(s) and Ordinances

National Regulatory	Summary	Applicability to the Project
National Heritage Act, No. 27 of 2004.	The Act makes provision for the protection and conservation of places and objects with heritage significance. Section 55 compels exploration companies to report any archaeological findings to the National Heritage Council, after which a permit needs to be issued before the find can be disturbed.	There is potential for heritage objects to be found during the clearance of land and operations, the Stipulations in the Act have been taken into consideration and are incorporated into this A/HIA report and the overall project EMP. The Proponent should ensure compliance with these Acts'

National Regulatory	Summary	Applicability to the Project
National Monuments Act of Namibia (No. 28 of 1969) as amended until 1979.	No person shall destroy, damage, excavate, alter, remove from their original site, or export from Namibia: Meteorites, fossils, petroglyphs, ornamental infrastructure graves, caves, rock shelters, middens, shells that came into existence before the year 1900 AD, or any other archaeological or paleontological finds.	requirements. The necessary management measures and related permitting requirements must be taken. This will be done by consulting with the National Heritage Council of Namibia.
Burial Place Ordinance, Act No. 27 of 1966.	To prohibit the desecration or disturbance of graves in burial places and to regulate matters relating to the removal or disposal of dead bodies. The Municipal Ordinance 13 of 1963 has been replaced by the Local Authorities Act 23 of 1992. (3) No person shall, except with the permission of the Administrator, in any way disturb, damage, remove, or destroy a grave, monument, gravestone, cross, inscription, rail, enclosure, chain, or erection of any kind whatever, or part thereof in any burial place.	Graves and burial places such as stone cairns/mounds can occur anywhere (on surface and sub-surface) within the landscape, therefore, this Act is very relevant, and adoption of Chance find should be mandatory for envisaged prospected works. The Chance Find Procedure is commonly included in archaeological and heritage impact assessments (AHIAs) and project management plans to ensure the protection of heritage sites when such discoveries happen. These procedures often outline the steps to follow when an unanticipated find is made, ensuring the preservation and respectful treatment of the cultural material, while allowing the project to continue with minimal disruption.
Environmental Management Act (7 of 2007) Government Notice 232 27th December 2007	PART I: The definition of the environment employed by the Environmental Management Act (7 of 2007) Specifically includes "anthropogenic factors" such as archaeological remains or any other evidence of human activity. PART II: Environmental impact assessment (EIA) in Namibia is governed by this legislation and usually includes a specialist	Archaeological materials, heritage resources, historical, cultural landscapes or topographical settings are part of the environment in its context; hence this Act is very relevant to the proposed project and the Proponent is henceforth mandated to take into consideration all the necessary steps so as not to affect or destroy the environment where heritage resources are found.

National Regulatory	Summary	Applicability to the Project
	archaeological survey and assessment, following the stated Principles of Environmental Management which require that Namibia's cultural heritage must be protected and respected for the benefit of present and future generations.	
Environmental Assessment Policy of Namibia 1995	The policy seeks to ensure that environmental consequences of development projects and policies are considered, understood and incorporated into the planning process, and the term environment is broadly interpreted to include biophysical, political, economic, social aspects, traditional norms, cultural and historical components.	This Archaeological and Heritage Assessment study considers the term environment to be part and parcel of archaeological and cultural heritage in its contexts.
Nature Conservation Ordinance 4 of 1975 with amendments and special regulations	Declaration of protected areas, as well as the protection status of individual species	
Seashore Ordinance 37 of 1958	Removal of living and non-living resources from seashore or seabed and depositing of rubbish within 3 nautical Miles of the shore.	

4. Approach and Methodology

4.1. Literature Review

The methodology for the study includes a survey of available literature conducted to extract data and information on the area in question to provide a general heritage context into which the proposed project would be set. This literature search included published material and unpublished reports, dissertations, papers, EIA reports, and internet search engines, including online material from various websites, followed by a field assessment. The latter was conducted according to generally accepted HIA Guidelines 2021 practices and was aimed at locating all possible objects, sites, and features of cultural significance in the area of the proposed project sites.

4.2. Documentation

All recorded sites, features, artefacts, and objects identified were documented according to the general minimum standards accepted by the archaeological standard, heritage impact assessment guidelines, and profession in Namibia. Co-ordinates of individual localities were determined by means of the Global

Positioning System (GPS). The information was added to the description (Table 15) to facilitate the identification of each locality.

4.3. GIS Spatial analysis

Google Earth and topographic maps of the area were utilized to identify the geologic and topographic elevation of the area and possible places where sites of heritage significance might be located. Also, the GIS spatial database was utilized to collect any useful information on any of the above-mentioned topics in the area, as well as for geo-referencing purposes. The GIS and mapping sources were provided by the TARO Archaeological & Heritage Consultants.

4.4. Public Consultation and Advertisements

The one-on-one consultation meeting took place on the 8th and 9th of December 2025 in Swakopmund. The newspaper adverts were put out on the 5th and 12th of November 2025.

4.4.1. Results of the Stakeholder Engagement

Stakeholder engagement is an important means of identifying cultural heritage, documenting its presence and significance, assessing potential impacts and exploring mitigation options (figures 3). Discussion with the different stakeholders indicated that;

- There are known burial place near the ocean.
- The proposed area has been disturbed from previous salt mining activities and guano mining, hence no chance of finding anything of cultural or heritage significance.



Figure 3: One-on-one engagement with the stakeholder

Table 5: Placement of Newspaper adverts

Newspaper	Date of placement
<i>New Era</i>	05 November 2025
<i>New Era</i>	12 November 2025
<i>Market Watch</i>	05 November 2025
<i>Market Watch</i>	12 November 2025

4.5. Site Investigation

The site visit aimed to; (a) survey the proposed project area to locate, identify, record, photograph and describe sites of archaeological, historical or cultural interest (*if any*); (b) record GPS points of sites/areas identified as significant areas; (c) determine the levels of significance, grading of the various types of heritage resources recorded in the project area. TARO Archaeological & Heritage Consultants inspected the environments in which the proposed project is located, including its surrounding areas, on the 08 & 09th of December 2025 (**Table 6**). Sufficient and extensive surface surveys of the ground were conducted for the claims that are targeted for salt production. Among others, the site surveys comprised the pre-planned foot

investigation along the targeted areas for the proposed salt production. **Table 6** below highlights the situation during the field survey on the proposed development area.

5. Detailed Assessment

Table 6: Site Investigation Details

General Site Investigation	
Date of a visit	The site visit was undertaken on the 08 & 09 of December 2025 by the TARO Archaeological & Heritage Consultants personnel. Since the area of interest is completely situated adjacent to the sea, and the land is open, flat, and soft. Due to the softness of the ground, accessibility was limited to foot (walking over).
Season/Weather conditions and site visibility	Cold weather
Details of equipment used in the survey (GPS)	All readings and site positions were determined in the field by hand-held Garmin eTrex 32x GPS and GPShmap 60CSx (Accuracy levels are ± 3 meters). The Global Positioning System receiver was set to the hddd°mm'ss.s". Real-time aerial orientation, by means of a mobile QField application, was also employed to navigate and survey the areas.
Details of equipment used in the survey (Camera)	Photographs were taken using a Digital Camera - Nikon DX D3200.

6. Site Significance Rating

The presence and distribution of archaeological, historical, cultural, or heritage resources define a 'heritage or cultural landscape' of an area. In this particular landscape, every site is relevant, and because heritage resources are non-renewable, heritage surveys are needed to investigate the proposed project area or a representative sample, depending on the nature of the project. In all the initial investigations and surface surveys, however, the undersigned TARO Archaeological & Heritage Consultants (TARO AHC) is responsible only for the identification of resources visible on the surface. The grading and level of significance of the identified heritage resources in the area of interest are given in the following pages in *Table 13*.

Table 7: Grading of Heritage Significance and Field Rating

Level of significance	Grading	Description
Exceptional/upper higher	5	- Major national heritage resources - A rare and outstanding example - Containing unique evidence of the high regional and national significance
Considerably high	4	- Very important to the heritage of the region - A high degree of integrity/ authenticity

Level of significance	Grading	Description
		- Multi-component site and objects - High research potential
Moderate	3	- Contributes to the heritage of the locality and region - Have some altered or modified elements, not necessarily detracting from the overall significance of the place - Forming part of an identifiable local distribution or group - Research potential
Low	2	- Isolated minor finds in an undisturbed primary context, with diagnostic materials - Makes some contribution to the heritage of the locality, usually in combination with similar places or objects
Little	1	- Makes a little contribution to the heritage resources of the locality - Heritage resources in a disturbed or secondary context, without diagnostic or associated heritage
Zero/ no significance	0	- Absence of heritage resources - Highly disturbed or secondary context, without diagnostic or associated heritage

6.1. Impact Assessment Methodology as developed by QRS Namibia

This Archaeological and Heritage Impact Assessment followed a two-stage process of assessment: desktop and field-based assessments. The methodologies were adopted in line with the standards for environmental assessment and the protocol developed for archaeological heritage assessment in Namibia that reflect Namibian conditions and are accepted as a basis of evaluation by the National Heritage Council. To establish the heritage significance of the resources and their vulnerability to possible disturbance in the course of development activities, the assessment criteria below, developed by QRS (Kinahan, 2012), established parallel 0-5 scales, as summarized in **(Tables 8-10)** below.

Table 8: Archaeological Significance and Vulnerability Rankings (Kinahan, 2012)

Scale	Significance Ranking	Scale	Vulnerability Ranking
0	no significance	0	Not vulnerable
1	Disturbed or secondary context, without diagnostic material	1	No threat posed by current or proposed development activities
2	Isolated minor finds in an undisturbed primary context, with diagnostic material	2	low or indirect threat from possible consequences of development (e.g., soil erosion)

3	Archaeological site (s) forming part of an identifiable local distribution or group	3	Probable threat from inadvertent disturbance due to the proximity of development
4	Multi-component site (s), or central site (s) with high research potential	4	High likelihood of partial disturbance or destruction due to the proximity of development
5	Major archaeological site (s) containing unique evidence of the high regional significance	5	The direct and certain threat of major disturbance or destruction

Table 9: Assessment criteria for the evaluation of cumulative impacts on archaeological sites were devised by the QRN.

Criteria	Category	Description
The extent or spatial influence of impact	National Regional Local	Within Namibia Within the Region On-site or within 200 m of the impact site impact
The magnitude of impact (at the indicated spatial scale)	High Medium Low Very Low Zero	Social and/or natural functions and/ or processes are severely altered Social and/or natural functions and/ or processes are notably altered Social and/or natural functions and/ or processes are slightly altered Social and/or natural functions and/ or processes are negligibly altered Social and/or natural functions and/ or processes remain unaltered
Duration of impact	Short Term Medium Term Long Term	Up to 3 years 4 to 10 years after construction More than 10 years after construction

Table 10: Reversibility Rating Criteria

Reversibility Ratings	Criteria
Irreversible	The activity will lead to an impact that is permanent.
Reversible	The impact is reversible within a period of 10 years.

7. Literature Survey/ Background Study

7.1. Description of the Study Area

The coastal strip topography between Henties Bay and the Ugab River is dominated by a virtually continuous linear sandy beach, which north of Henties Bay to the Cape Cross salt pans, is backed by low sandy cliffs. Rocky shores are limited to a few short sections of coast and a larger rocky shore at the Cape Cross peninsula. North of Cape Cross, the coastal strip is covered by a ~3 m thick layer of loose sea sand, which stretches inland through a series of hummock dunes. East of the hummock dunes, the topography consists of flat saline pans of varying size, bordered by gravel plains and undulating rock outcrops. The gravel plains and rock outcrops are intersected by a few large and many small ephemeral washes. The habitat descriptions give detailed information on the topography of the study area.

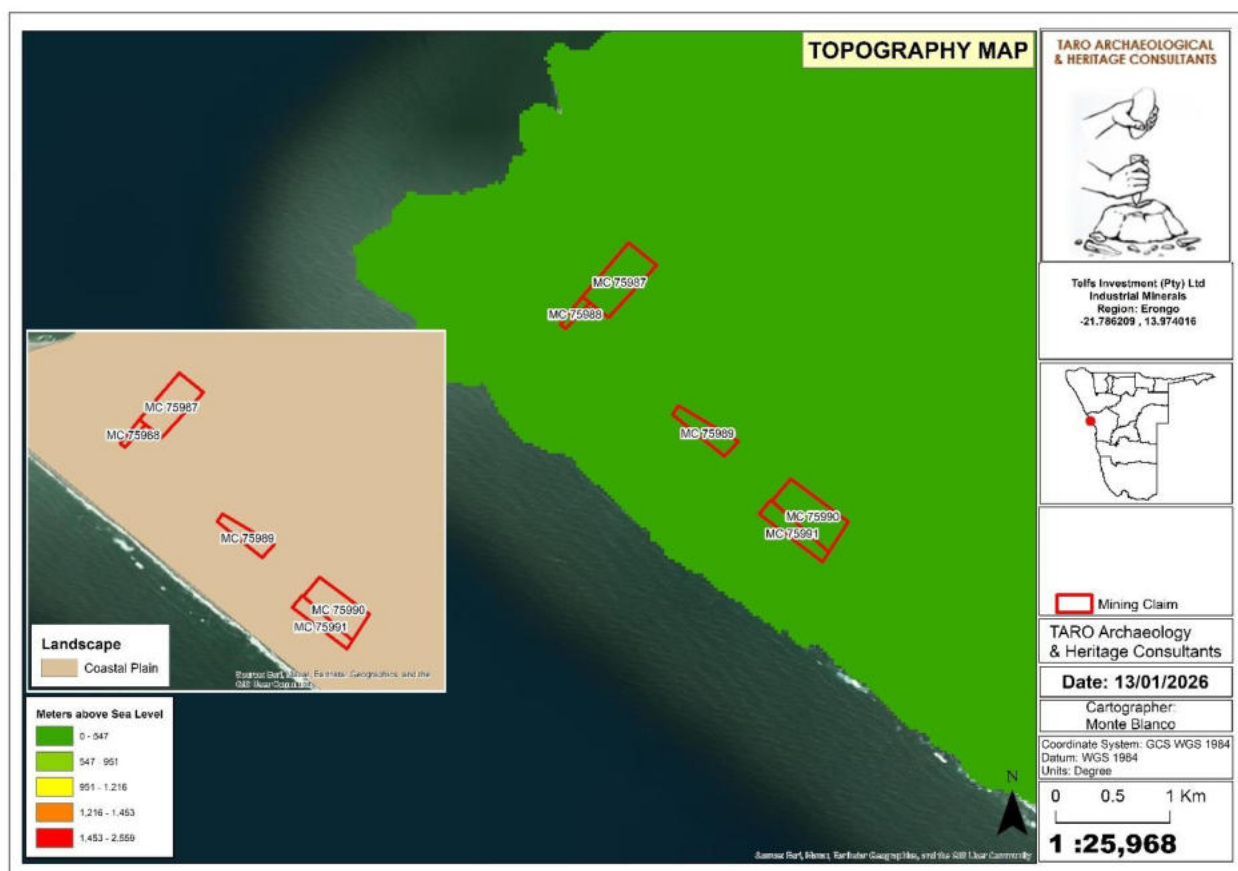


Figure 4: Topographic map of the area of interest.

7.1.1. Geology of the Project Area

The area forms part of the coastal plains of the Namib Desert and comprises a portion of the Cape Cross – Uis Pegmatite Belt, which has intruded Damaran-age meta-sediments and granites. Rare metal granitic pegmatites occur within this pegmatite belt and potentially within the area beneath the cover of Namib

Group alluvial sediments. There is also the potential existence of rare and precious, or base metals, in marine and fluvial placer deposits. (Figure 5).

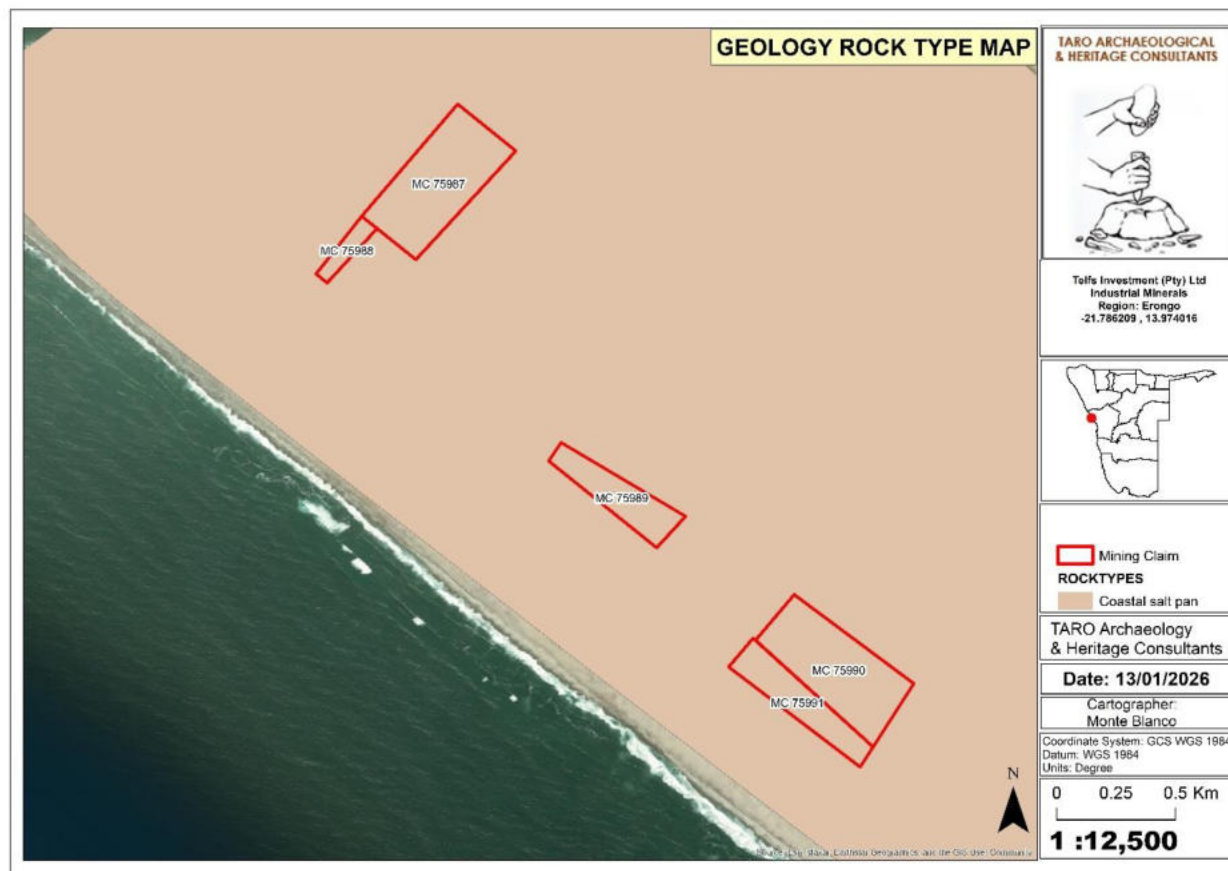


Figure 5: A Geological map of the proposed project site.

8. Background and general Heritage Context of the area

8.1. Regional Archaeological and Heritage Context

Modern humans and their ancestors have lived in Namibia for more than one million years (Kinahan 2011), and there are fossil remains of lineal hominin ancestors as early as the Miocene Epoch (Conroy et al. 1992). Namibia has a relatively complete sequence covering the mid-Pleistocene to Recent Holocene period, represented by thousands of archaeological sites mainly concentrated in the central highlands, escarpment and Namib Desert.

The Recent Holocene archaeological sequence in Namibia, i.e., the last 5 000 years, is of particular importance because it provides the background evidence for the development and recent history of the indigenous peoples of Namibia before the advent of written historical records during the colonial era. Many archaeological sites from this period are of great significance to the understanding of Namibian history, and some are considered to be of global importance to our understanding of the African past.

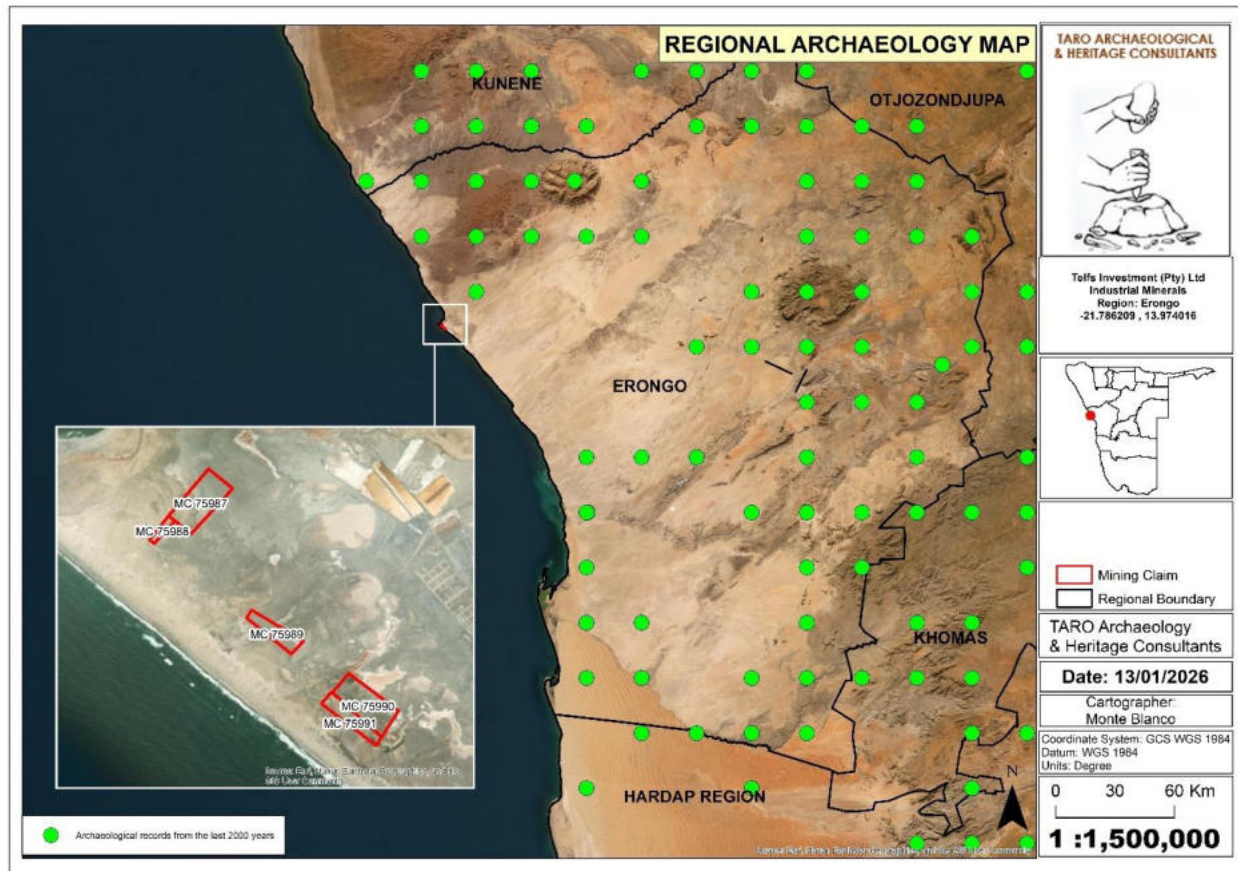


Figure 6: A Regional map of archaeological distribution in the Erongo Region

8.2. The Historical and Archaeology of the Subject Land

The archaeology or marine archaeology of Cape Cross, Namibia centers on its significant European colonial history (Diego Cão's 1486 padrão), later guano mining operations (late 1800s-early 1900s) leaving railway and settlement remnants, and evidence of earlier indigenous use like shell middens, though Holocene coastal settlement evidence is sparse, contrasting with the rich biological history of the massive Cape fur seal colony, making it a site of mixed cultural heritage and natural wonder.

Cape Cross is a headland on the Skeleton Coast of Namibia, extending into the South Atlantic Ocean within the Erongo Region.^[6] Positioned at approximately 21°46'11"S 13°58'12"E, it lies about 60 kilometers north of Henties Bay and 130 kilometers northwest of Swakopmund. The cape features a rugged rocky promontory with exposed coastal terrain, including rocky bays and expansive sandy beaches backed by gravel plains. Adjacent salt pans and elements of the Namib Desert biome, such as sparse desert vegetation and occasional sand dunes, define the immediate surroundings¹. The area's geomorphology reflects the broader

¹ <https://www.booknamibia.com/cape-cross-namibia/>

Skeleton Coast characteristics, with soft sands interrupted by rocky outcrops and a narrow strip of ocean-adjacent gravels and thin sands².

8.2.1. Early Exploration and the Padrão

The Cape Cross region was first documented by European explorers during the Portuguese Age of Discoveries, as navigators sought a sea route to India by charting Africa's western coastline.³ In the mid-1480s, Diogo Cão, a Portuguese explorer commissioned by King John II, undertook a second voyage southward from the Congo River, advancing beyond previous limits to counterbalance Spanish influence in the Atlantic.^[19] Cão's expedition reached Cape Cross in January 1486, marking the southernmost point achieved by Portuguese explorers at that time and representing the first recorded European contact with the area ⁴. Upon landing, Cão erected a *padrão*, a large limestone pillar approximately 3 meters tall, inscribed with the coat of arms of Portugal and a Latin dedication attributing the act to King John II's orders.⁵

The inscription dates the event to 1485 by the Julian calendar (corresponding to 1486 Gregorian), stating: "In the year 6685 after the creation of the world and 1485 after the birth of Christ, the King of Portugal Don João II ordered this place to be marked by Diogo Cão."⁶ Padrões like the one at Cape Cross served dual purposes: as symbols of Portuguese sovereignty to assert territorial claims against rivals, and as navigational beacons for future voyages, often positioned at prominent headlands with embedded lead plates containing messages for passing ships. ⁷. This structure at Cape Cross, originally termed *Cabo do Padrão* by the Portuguese, facilitated subsequent explorations, including Bartolomeu Dias's rounding of the Cape of Good Hope in 1488, though no immediate settlements or further claims followed due to the harsh environment and logistical challenges. The site's isolation preserved the *padrão* until its removal by German naval forces in 1893, underscoring its enduring historical significance as one of the few surviving markers from Cão's voyages.⁸

² <https://www.atlasobscura.com/articles/germany-will-return-namibian-cross>

³ <https://namibweb.com/searoute.htm>

⁴ <https://www.booknamibia.com/cape-cross-namibia/>

⁵ <https://www.atlasobscura.com/articles/germany-will-return-namibian-cross>

⁶ <https://www.atlasobscura.com/articles/germany-will-return-namibian-cross>

⁷ <https://www.dhm.de/blog/2018/06/06/stories-the-stone-cross-from-cape-cross-three-countries-three-histories-one-past/>

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⁸ <https://www.atlasobscura.com/articles/germany-will-return-namibian-cross>

A



bo da Cruz
a criação do mundo
e de Cristo de 1485
te e esclarecido Rei
I de Portugal mandou
esta terra e colocar
rão por Diogo Cão,
iro de sua casa.

Kreuzkap

Im Jahre 6685 nach der
Schöpfung der Welt und
1485 nach Christi Geburt
beauftragte der hervor-
ragende, ubrausschauende
König Johann II. von Portugal
einen Ritter seines Hofes,
Diogo Cão, dieses Land
zu entdecken und das
Padrão hier zu errichten.

Kaap Kruis

In die jaar 6685 na die skepp
van die wêreld en 1485 na die
boorte van Christus het die bri-
versierende koning Johannes I
Portugal Diogo Cão, 'n ridder
hof, gestuur om hierdie land te
en hierdie padrão hier op t

In the year 6685 after the creation of the world

B



Figure 7: a *padrão*, (Credit: [Grobler du Preez](#))



Figure 8: Depiction of the encounter between the white explorers and natives at Cape Cross
(<https://gondwana-collection.com/blog/do-you-know-the-origin-of-the-cape-cross-in-namibia>)

8.2.2. 19th-Century Resource Extraction

In the late 19th century, Cape Cross emerged as a site of commercial resource extraction, primarily guano deposits and Cape fur seals, driven by European demand for fertilizer and animal products. Guano, accumulated bird droppings prized as "white gold" for its nitrogen-rich content, was discovered at the headland in 1894 by explorer Walter Matthews during an expedition from Swakopmund. This led to the formation of the Damaraland Guano Company, an English venture backed by Matthew's uncle, which secured a 10-year concession from German colonial authorities to exploit guano and seals in the area between Cape Cross and the Kunene River.⁹ Operations commenced in 1895, with guano scraped from rock platforms and fossilized layers, then crushed and transported to waiting ships.

By 1896, the site supported up to 100 laborers, who faced harsh desert conditions and imported water and equipment from Britain, establishing temporary infrastructure including a police station, customs office, post office, and worker housing. To facilitate export, the company constructed Namibia's first railway, a 21-kilometer narrow-gauge line from the extraction sites to the beach for loading onto vessels. Over the operation's duration until depletion in 1903, the Damaraland Guano Company exported approximately 5,700,000 kilograms of guano, yielding significant profits before the deposits were exhausted. Remnants of this era, such as rusted railway tracks and ruins, persist amid the dunes. Concurrent with guano mining, intensive harvesting of Cape fur seals targeted pups and adults for their pelts and blubber, which were processed for leather, oil, and meat. The first recorded European observation of seals at Cape Cross dates to 1884 by Captain Hoffmann, but commercial culling escalated under the company's concession from 1895, contributing to a regional population crash below 100,000 individuals by 1900¹⁰.

The Damaraland operation alone yielded about 2,500 seal skins for export, transported via the new railway, amid broader 19th-century harvests that claimed roughly 650,000 Cape fur seals across southern African colonies from 1814 to 1899. These activities, while economically viable in the short term, led to rapid resource depletion and abandonment by 1903, marking the end of Cape Cross's extractive boom.

⁹ <https://padlangsnamibia.com/padlangsnamibia/cape-cross-white-gold-seals-mystery>

¹⁰ <https://namibian.org/parks/namibia-parks-west/cape-cross-seal-reserve>

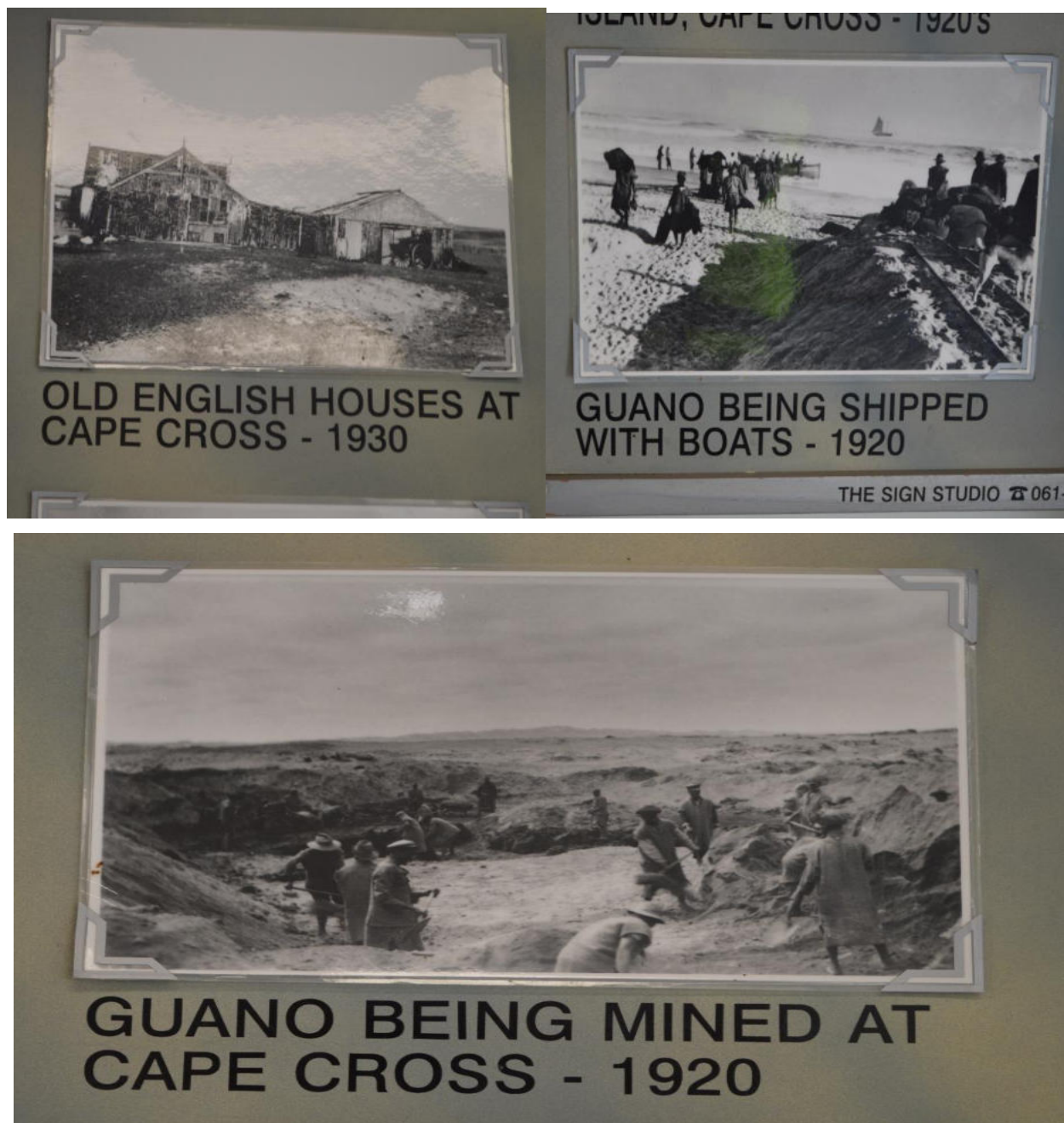


Figure 9: Historical images of guano activities at Cape Cross (Source: MEFT-Cape Cross Seal Reserve office)

8.2.3. 20th-Century Designation and Preservation Efforts

Throughout the 20th century, preservation efforts at Cape Cross addressed both the ecological sustainability of the Cape fur seal population and the historical significance of the site. Early regulations under German colonial administration in 1893 required permits for fur seal hunting, followed by seasonal restrictions in 1909, and further controls in 1922 and 1949 under South African mandate rule, aimed at preventing depletion amid commercial sealing. In 1918, concessions for guano extraction, salt mining, and sealing were granted,

balancing resource use with emerging conservation needs. These measures reflected growing recognition of the area's biological importance, hosting the world's largest Cape fur seal breeding colony. The pivotal designation occurred on 16 June 1969, when the South West Africa administration proclaimed the Cape Cross Seal Reserve via Proclamation 37 in Official Gazette No. 3007, establishing a 60 km² protected area to conserve the seal population and associated coastal ecosystem¹¹.

This formal protection was built on prior regulations and was reinforced by the 1973 Sea Birds and Seals Protection Act, which promoted sustainable harvesting practices while safeguarding breeding sites. The reserve's boundaries incorporated former mining lands, addressing historical exploitation impacts. Parallel efforts preserved the historical *padrão* erected by Diogo Cão in 1486. After the original's removal to Germany in 1893, a replica with German insignia was erected in 1895 under Kaiser Wilhelm II's authorization. In 1980, the South West African government installed a second replica of dolerite on the original site, enhancing the monument's visibility and protection as a national heritage marker. Attempts to repatriate the original intensified in the mid-20th century, with formal requests from the South African government in 1925 and the National Monuments Council in 1956, underscoring the site's enduring cultural value despite colonial disruptions.

8.2.4. The Stone Cross of Cape Cross

The Stone Cross of Cape Cross, a *padrão* erected by Portuguese explorer Diogo Cão in 1486 to mark territorial claims along the southwestern African coast, represents an early European navigational monument featuring a limestone pillar topped with a cross and inscribed with the coat of arms of Portugal's Avis dynasty. This artifact, standing approximately 2 meters tall, was removed from its original site during the German colonial administration of South West Africa in the late 19th or early 20th century and transported to Germany, where it entered the collection of the German Historical Museum in Berlin. Namibia formally requested the repatriation of the cross in June 2017, framing it as a cultural heritage item integral to the nation's pre-colonial and colonial history, despite its Portuguese origins, emphasizing its long-standing presence at Cape Cross within modern Namibian territory. German authorities, including the Federal Government Commissioner for Culture and the Media Monika Grütters, approved the return on May 17, 2019, as part of broader commitments to address colonial-era acquisitions and foster bilateral cultural restitution efforts.¹²

The artifact was ceremonially repatriated to Namibia on August 6, 2019, and is now housed in the National Museum of Namibia in Windhoek, while a replica remains at the Cape Cross site to preserve the historical

¹¹ https://grokipedia.com/page/Cape_Cross

¹² https://grokipedia.com/page/Cape_Cross

landmark for visitors and researchers. The repatriation process highlighted cooperative diplomacy between Germany and Namibia, with no reported legal disputes or competing claims from Portugal, the original erector's nation; German officials described it as a gesture of historical responsibility rather than an admission of illicit acquisition.¹³ This case aligns with increasing global precedents for returning colonial-era artifacts to African nations, though it involved minimal controversy compared to items with indigenous cultural ties, given the *padrão's* function as a foreign imperial marker rather than a local artifact.

8.3. Archaeological Sequence in Namibia

To put Namibian heritage and archaeological contexts into perspective, the following information is crucial to the general understanding of the occurrence and the associated period in different time frames that would represent the known human occupation sequence in Namibia and Southern Africa in general. This helps in building knowledge about past adaptations and cultural dynamics. According to Nankela (2017), the archaeological sequences of Namibia can be summarized as follows (*Table 11*).

Table 11: Archaeological Sequences in Namibia

Period	Year	Area/Location	Evidence	Description
Pleistocene	400 000 - 100 000	Namib Plains, Namib Desert & Lower Kuiseb	Bone fragments of extinct elephants and stone tools	
Holocene	10 000 - 1 000	Around Namibia	Scattered artefacts, rock art sites, potsherds, beads, grave cairns, hut circles, human remains, axes, pointed flakes, cleavers, and blades.	Sites are fragile due to inadequate archaeological investigations in some sites.
Historic Period	500	Around Namibia	Cemeteries, old mine workings, waste rock walling, architectural heritage, and WWI military engagements.	Namibia indicates intensive settlements between indigenous people and Europeans.

9. Physical and Environmental Context of the Area (Physiography)

The proposed project is located 2km south of Cape Cross. The land is characterized by species, of which many are endemic and at least one is protected, including *Euphorbia giessii*, *Euphorbia lignosa*, *Jamesbrittenia maxii*, *Kleinia longiflora*, *Heliotropium oliveranum*, *Eberlanzia sedoides*, *Pelargonium otaviense*, and *Sarcocaulon marlothii*, *Brownanthus kuntzei*, *Zygophyllum stapfii*, *Tetragonia reduplicata*, *Drosanthemum luederitzii*, and *Arthraerua leubnitziae*. *Hoodia pedicellata* occurs occasionally. Not all of

¹³ <https://www.auswaertiges-amt.de/en/newsroom/news/muentefering-stone-cross-of-cape-cross-namibia-2219030>

these plants were found during the site visits, but they are possibly found on the rock outcrops within and outside the planned mining area.

9.1. Presence of Coastal hummocks

This is a narrow, discontinuous strip of sparsely vegetated, sandy hummock dunes parallel to the beach. It is the habitat with the densest concentration of vegetation in the study area, providing shelter and food for detritivores and the predators that feed on them. This makes the hummock dunes a highly restricted habitat type, meaning that taxa dependent on coastal hummocks may be considered habitat-specific, range-restricted endemic species. It is a highly sensitive habitat for invertebrates and reptiles. Along the Namibian coast, much of this habitat has already been affected by mining, infrastructure, vehicle tracks, and tourism, causing cumulative damage that may endanger range-restricted taxa. It is particularly vulnerable to physical destruction caused by uncontrolled vehicle activity and sand harvesting (Hooks & Petrick, 2020).



Figure 10: Vegetation types within the landscape (Coastal hummocks).

9.2. Topographically and environmental settings of the proposed development footprints

The topography of the subject land is characterized by different habitats based on the terrain and physical features. These are as follows: Rock outcrops, Saline pans, Coastal hummocks, Gravel plains, and washes. The rock outcrops and the coastal hummock dunes were deemed the most sensitive. The accessory works area covered an area consisting of gravel plain and rock outcrops that represent disturbed environments to the east of the saline pan. Most of the mining activity will take place within the saline pan and secondly on the gravel plain adjacent to the saline pan. These 2 habitats have been disturbed over the preceding

decades. The assessment considered all project activities and how they could potentially impact the various habitats (Hooks, P. 2020).



Figure 11: Landscape views of the Subject land

10. Assessment of the Findings within the Proposed Project

10.1. On-site findings

Heritage sites are fixed features in the environment, occurring within specific spatial confines. Any impact upon them is permanent and non-reversible. Namibia's unique and non-renewable archaeological and palaeontological heritage sites are protected in terms of the National Heritage Act No. 27 of 2004 and may not be disturbed at all without a permit from the relevant heritage authority, such as the National Heritage Council.

10.2. Observation made during the Site Survey of the Subject land

The MCs No. 75987, 75988, 75989, 75090 & 75991 are found in the saline pan which lies within the Dorob National Park along the central coastline north of the town of Henties Bay in the Erongo Region. The claims are situated on a flat area adjacent to the sea. The features observed and recorded included the outcrops and surface scatter, sea-shells, faunal remains, especially the seals, due to the presence of brown hyenas, and the graves, which are outside the mining claims. The archaeological and cultural significance within these claims is **Low**.



Figure 12: The view toward the subject land

Table 12: Cultural Heritage Resources within the Landscape

Heritage resource type	Observation and recording made.
Landscapes and Natural Features	Within Dorob National Park, rock outcrops, gravel plains, washes, and coastal hummocks.
Holy Places	None were recorded
Historical Mine	Guano and salt mine
Rock shelters and Caves	None
Archaeological sites	None were recorded within the proposed project.
Graves and burial places	Graves were recorded at Cape Cross near the sea; these graves belong to the founders of Cape Cross.
Historical settlements and Buildings	Buildings remain associated with the old Guano and salt mine activities at the Cape Cross.
Places associated with oral traditions or living heritage	None
Public monuments and memorials	At the Cape Cross None (<i>a padrão</i>)
Movable objects	Scattered stone artefacts and seashells

10.3. Sensitivity of the Receiving Environs

The planned mining project is to be located within the Dorob National Park, whose primary purpose is the conservation of natural heritage. This does not exclude other subsidiary activities such as tourism, mineral exploration, and extraction, except where strict nature reserve status is delineated. Controlled access may be permitted for tourism in these strict nature reserve areas, though not all these protected areas are signposted or controlled by physical barriers. The planned mining activities will not occur inside one of the

strict nature reserve areas. Recreational fishing may take place on occasions along the beach, west of the mining licence, but mining activities will in no way restrict these activities.

The areas in which the proposed project is located are of ecological and marine significance, areas such as;

The *salt pan* is made of layers of salt and gypsum, which have been formed by evaporation within a coastal lagoon of restricted sea water circulation. The water table in the pan is situated close to the surface, and it is in connection with the sea. Due to the high permeability of the rock salt and surrounding sediments, the seawater percolates into the pan, and in a continuous process of leaching of the salt and new formation of salt through evaporation and crystallization, the concentration of the underground brine is found to be near saturation. (Toerien 1964)

Surface water in the form of standing seawater results from intermittent spring tides and corresponding stormy weather, which breaches the beach berm. On rare occasions when flooding occurs, the washes will flow into the saline pan, and fresh water floods the pan. The fresh water of lower density floats on the saltier brine of the pan and soon evaporates, leaving behind the brine below.

The *coastal hummock dunes* are considered a very sensitive habitat. Except for the proposed bittern pipeline, the dune hummock belt should be designated a no-go area. No development should be allowed in the dune hummocks except for the bittern pipelines and an access corridor that will allow routine maintenance. The *saline pan* is considered the least sensitive. Following the precautionary principle, it is suggested that brine ponds be identified and samples taken from them to identify any macroinvertebrate fauna that might occur. Regular monitoring of these brine ponds should take place during the mining operations.

The *gravel plains* are sensitive but of low concern, provided that activity remains within the proposed boundaries of the operational and accessory works area. *The washes* are deemed sensitive areas. Neither the crystallisers nor the accessory works area will intrude into this habitat. Only the brine pipeline will pass through a few washes along the disturbed environment of the road reserve (Hooks & Petrick 2020).

The *rock outcrops* are considered very sensitive. The accessory works area, although small in surface area, will be located where rock outcrop occurs, and these individual spots should be avoided. From the historical and recent satellite imagery, it is evident that much of the rock outcrops within the accessory works area have been disturbed. With all of these sensitivities, the archaeology aspect of it is considered to be **low**, especially within the mining claim sites.

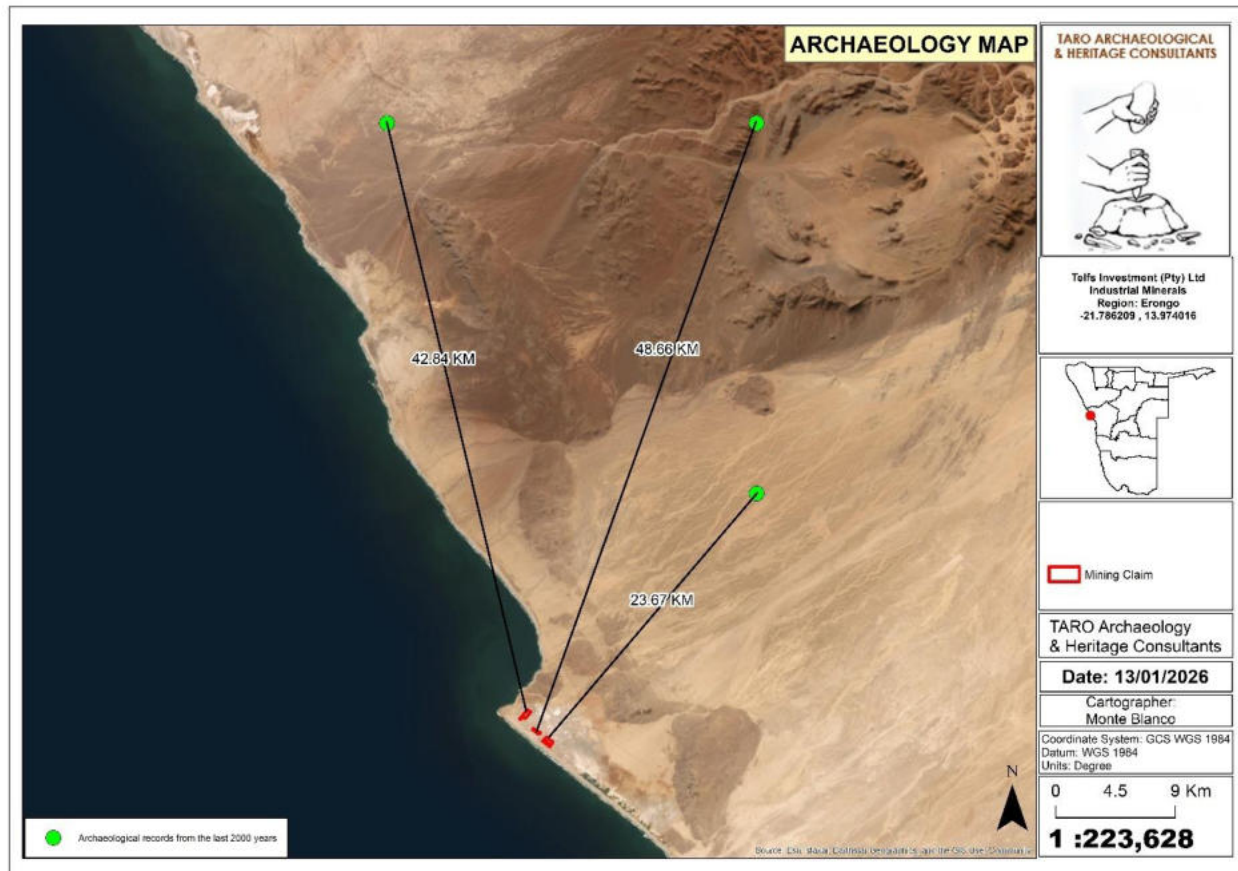


Figure 13: Landscape Archaeological Map

10.4. Photographic Documentation of the recorded features within the traversed areas.

All sites, objects, and features that were identified during the surface walk over are documented according to the general standards accepted by the NHC Guidelines 2021 and the Archaeological Profession. Coordinates of individual localities are determined by means of the Global Positioning System (GPS) and plotted on a map. This information is usually added to the description in order to facilitate the identification and grading of each locality.

10.5. Tracklog Surveys of the selected tracking of the survey were conducted by using the QField program.

Tracklogs are useful in archaeological surveys because they provide a detailed record of the paths traversed during fieldwork (**Error! Reference source not found.**), allowing for accurate spatial documentation and analysis of archaeological sites. The QField program was used to track the paths taken, as seen below. This helps in mapping the distribution of artifacts, identifying potential areas of interest, and creating comprehensive site plans. The assessment of significance and grading of Archaeological and Heritage Resources on the Proposed Project are presented in **Error! Reference source not found.**



Figure 14: Tracklogs of the surveyed areas within the mining claims

Historically, the same areas have been mined for salt intermittently during the last 80 years. Remains of those workings can still be seen. The old mine's former buildings later became the Fisherman's Inn on the eastern flank of the pan, which was frequented by fishermen and tourists. With regard to the archaeology of the area, the landscape surrounding the saline pan has experienced varying degrees of disturbance over several decades. These disturbances include the development of multiple access roads and vehicle tracks used for mining operations at the saline pan, as well as access to the coastline for fishing activities. Historically, the area formed part of Cape Cross Farm 143.

The gravel plains and ephemeral drainage lines (washes) surrounding the pan have been subjected to various forms of disturbance, including the clearing of land for the construction of buildings associated with mining and tourism activities. More recently, since 2015, the holder of Mining Licences 82D, 82E, and 82F has initiated salt mining operations, including the construction of salt crystallisers and associated infrastructure (Hooks, 2019)

General features that were observed and recorded during these surveys are the;

Cape Cross has a rich history involving guano and salt mining from the late 1800s, with remnants like old buildings and a graveyard. The historical mining era was between the late 1800s and the early 1900s, during which activities such as Guano and salt mining were heavily conducted. Guano was used for fertilizer up until the decline in operation, and completely ceased by the early 1900s. Salt continues; evidently, some weathered buildings can still be seen as a reminder of the old operation and activities.

Rock outcrops: This habitat occurs in the north and northeast of the study area and consists of low, undulating hillocks and large boulder outcrops and ridges of dolerite or quartzite rock that stand as discontinuous, isolated islands within the gravel plain. More so, the outcrops which intersect the gravel plain, and the substrate contains rocks that vary in size from pebbles to large boulders (Potgieters, H. 2020).

Natural salt pans are flat expanses of ground covered with salt and other minerals, usually shining white under the sun. They are found in dry climates. In Namibia, salt pans occur along the coast, for example, at Cape Cross, as well as further inland (Etosha Pan. ¹⁴).

Mining Claims No. 75987-75991: The subject claims are contiguous and situated within the same geographic locality. Comprehensive surveying and detailed surface observations were carried out across the entire area. However, fieldwork was conducted under challenging conditions, as the ground surface was predominantly soft and, in some areas, unstable, presenting potential safety hazards and requiring heightened caution during access and traversal. The overall significance of these claims is assessed as **low**.



Figure 15: Notable features near the graves

¹⁴ https://www.mme.gov.na/files/publications/612_salt%20pans.pdf



Figure 16: Old graves at Cape Cross

Mining Claim No. 75987: This claim is characterized primarily by an open salt pan environment, just like the rest of the mining claims in this landscape. The notable features were the seashells, which were observed dispersed across the surface; however, no archaeological features or other cultural heritage evidence were identified.

Centre Coordinates: S 21° 46' 22"
E 13° 58' 11"

Status of the mining claim: Low significance



Figure 17: A barren landscape (soft, unstable ground)



Figure 18: Few seashells as observed

Mining Claim No. 75988: A vintage bottle was recorded within the landscape. While such features are typically considered secondary context, they are important for understanding the historical setting of the late 19th and early 20th centuries, particularly in the Cape Cross area, where commercial activities such as guano extraction, salt mining, and seal skin export occurred.

Centre Coordinates: S 21° 46' 33"
E 13° 57' 57"

Status of the mining claim: Very low significance



Figure 19: The surface views within the mining claim



Figure 20: Old bottle

Mining Claim No. 75989: This section of the land exhibited a widespread scatter of seashells across the claim. Aside from this, no archaeological or historical features of significance were observed during the inspection.

Centre Coordinates: S 21° 47' 06"
E 13° 58' 34"

Status of the mining claim: Low significance



Figure 21: seashells scattered across the surface



Figure 22: A corner beacon

Mining Claim No. 75990: The overall findings within mining claim No. 75990 were assessed as having low archaeological significance, with no features identified during surface inspection.

Centre Coordinates: S 21° 47' 30"
E 13° 59' 03"

Status of the mining claim: Very low significance



Figure 23: Soft ground within salt pan



Figure 24: Remains of seal most likely killed by Brown Hyena



Figure 25: An open area containing a middle corner beacon



Figure 26: flat, vast expanse of landscape within a salty environment

Mining Claim No. 75991: The claim is consistent with other licenses in the area, comprising a vast, flat expanse of landscape characterized by a low-density scatter of seashells and minor faunal remains. No archaeological or historical features were observed based on surface visibility.

Centre Coordinates: S 21° 47' 35"
E 13° 58' 59"

Status of the mining claim: Low significance



Figure 27: Animal tracks within the salt pan



Figure 28: A few notable seashells across the surface of the claim

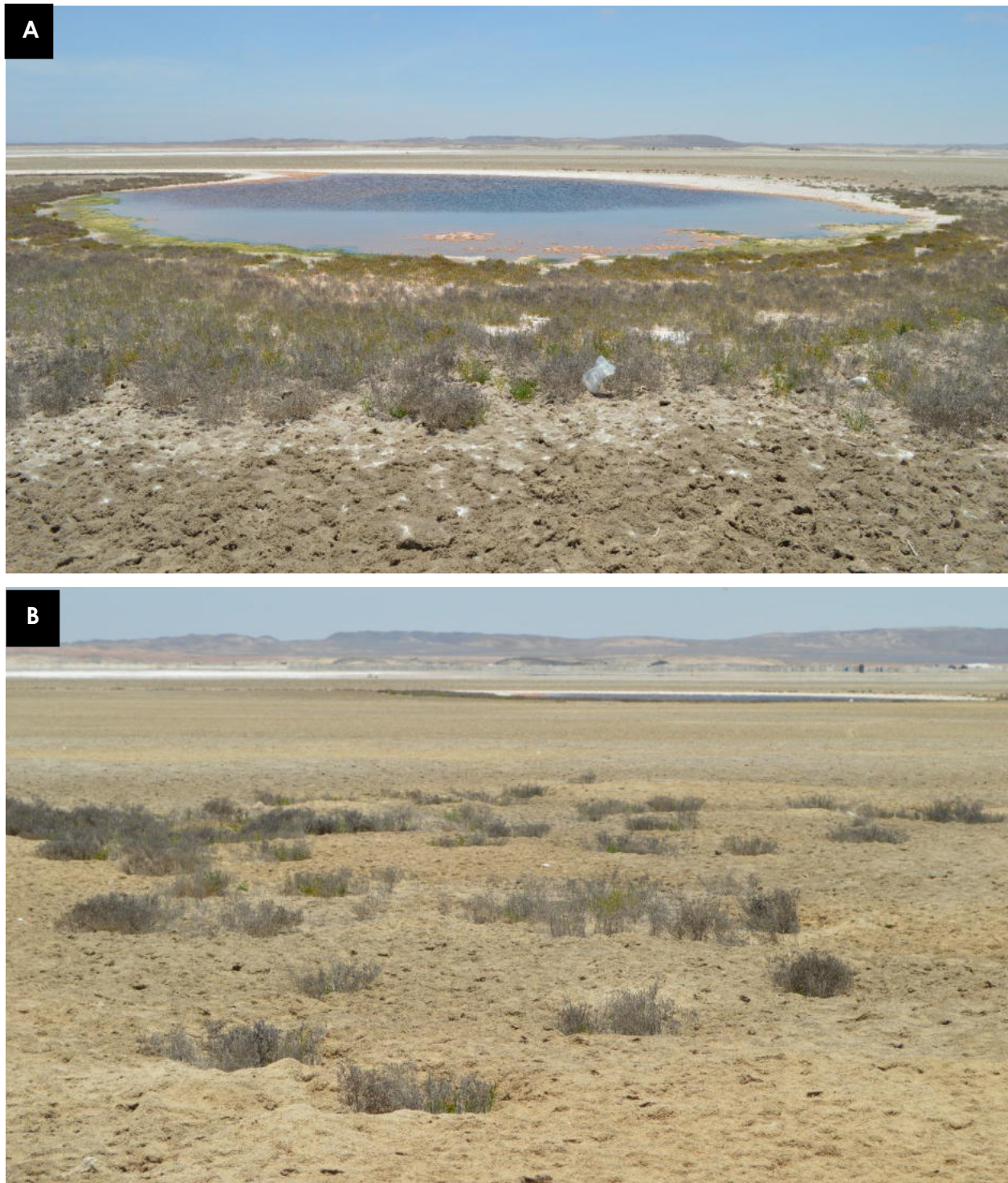


Figure 29: The vegetation environment within the mining claim

Table 13: Assessment of Significance and Grading of Archaeological and Heritage Resources on the Proposed Project

Waypoint	Location	Elevation	Description of the findings	Heritage Significance	Grading	Vulnerability Description
General Findings						
TAHC 500	S 21° 45' 36.9" E 13° 57' 59.7"	18 m	Dense surface scatter. <i>Outside the proposed mining claims, 2km away (figure 32).</i>	Low	2	0
TAHC 501	S 21° 45' 31.6" E 13° 57' 58.1"	12 m	Burial site: 12 graves are recorded here, only two graves are marked; the rest are unmarked. <i>Located outside the proposed mining claims, approximately 2 km away (figure 32).</i>	Considerably High	4	0
Mining Claim No. 75987						
TAHC 506	S 21° 46' 30.4" E 13° 58' 01.8"	2 m	Presence of seashells	0	0	0
TAHC 507	S 21° 46' 32.3" E 13° 57' 03.9"	1 m	Faunal remains (seal)	0	0	0
TAHC 508	S 21° 46' 34.9" E 13° 58' 07.0"	2 m	Corner beacon-No notable/visible features on the surface	0	0	0
Mining Claim No. 75988						
TAHC 502	S 21° 46' 37.9" E 13° 57' 54.9"	6 m	Corner beacon-Soft, unstable ground, presence of seashells as visible features on the surface.	0	0	0
Mining Claim No. 75989						
TAHC 513	S 21° 47' 04.3" E 13° 58' 24.5"	1 m	Open and bare land-few remains of sea-shells	0	0	0
TAHC 514	S 21° 47' 06.6" E 13° 58' 34.2"	4 m	Open, bare land containing a few seashells	0	0	0
Mining Claim No. 75990						
TAHC 521	S 21° 47' 33.7" E 13° 59' 01.2"	4 m	Faunal remains (seals) with Brown hyena tracks nearby	0	0	0
TAHC 522	S 21° 47' 35.0" E 13° 59' 01.7"	8 m	Seashells	0	0	0
TAHC 523	S 21° 47' 33.2" E 13° 59' 05.2"	8 m	Seashells	0	0	0
Mining Claim No. 75991						
TAHC 519	S 21° 47' 29.2" E 13° 58' 51.8"	22 m	Open, bare land-few remains of sea-shells and an old bottle	0	0	0

11. Identification of the Archaeological and Heritage Sensitivity Map

The purpose of the topographic map below is to indicate whether any sensitive archaeological or cultural heritage sites were identified during the surface survey. Burial site was identified and recorded at Cape Cross. However, these cultural heritage features are located at a considerable distance from the proposed project area. As a result, no archaeological or cultural heritage impacts are anticipated (Figure 30).

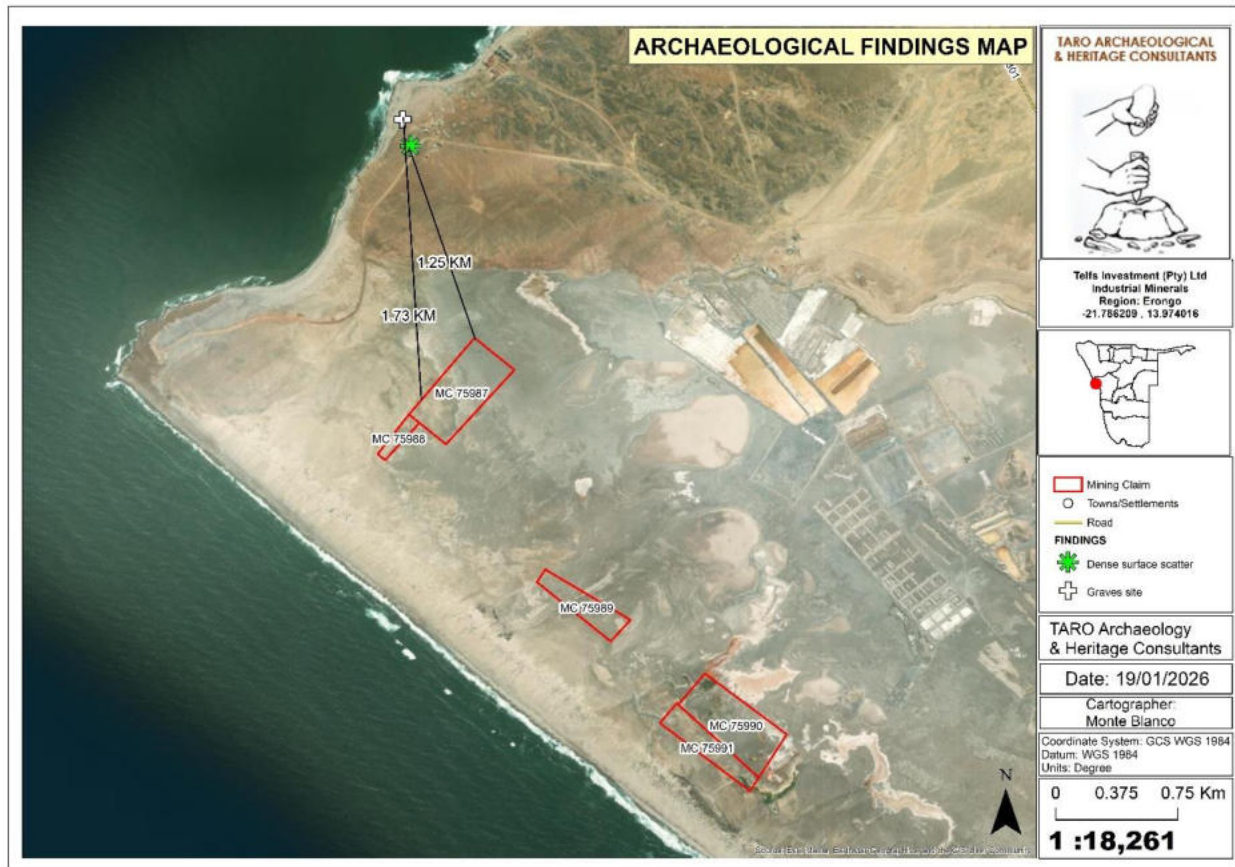


Figure 30: Archaeological finding map for Mining Claims No. 75987, 75988, 75989, 75990 & 75991

11.1. Sensitivity Analysis Summary Statement

The field survey conducted has revealed that the majority of the areas within the mining claims are actually of **very little sensitivity/negligible**. The only recorded site of **high sensitivity** was the burial site at Cape Cross. These graves are located near the sea and far from the proposed project, which is about 1.7 km NW from the mining claims (see figure 30). Archaeologically, it is evident that the majority of the areas within the proposed mining claims are of very little sensitivity. However, this does not mean that no archaeological or heritage resources will be present within the mining claim, but the probability of resources of high cultural significance being found there is considered to be very low.

11.2. Identification and Description of the Potential Impact on Cultural Heritage Resources

11.2.1. Impact Assessment

Data collected during the site surveys on the archaeological and cultural heritage assessment revealed that the proposed project activities may have little to low negative, direct and indirect impacts during the mining of salt. The areas have been mined before in colonial times, and thus disturbed to some extent. The purpose of the assessment was to identify potential sites or areas of cultural heritage importance, consider potential impacts thereof, and thereafter enhance the positive impacts and minimize the negative impacts. The potential impact of the proposed project on archaeological and cultural heritage resources is assessed as follows (Table 14).

Table 14: Impact Assessment/Impact Evaluation

Potential Impact	Impact Criteria		Significance Ranking (Without mitigation)	Potential Mitigation Measures	Significance Ranking (With mitigation)	Confidence Levels
Damage/destruction of archaeological sites or materials	Extent or Spatial of Impact	Local	Moderate/high	Salt mining and production activities should be implemented on targeted sites only. - Minimise cut-and-fill and landscape scarring in general -Ensure less micro-siting of loads to avoid the chance of impacts - Ensure effective rehabilitation of areas not needed during mining works. - Ensure proper micro-siting of mining equipment to avoid impacts -Demarcate and respect the No-Go-Zone of the identified sites. - Report any chance finds - Protect <i>in situ</i> materials	Low	High
	Duration of impact	Long-term				
	Probability (Threat)	Unlikely				
	Magnitude of impact	Low/little				
	Reversibility	Non-reversible				
	Can impacts be mitigated?	N/A				
Damage/destruction of graves and burial grounds	Extent or Spatial of Impact	Local	Moderate/high	Salt mining and production activities should be implemented on targeted sites only. - Graves and burial grounds should be avoided at all costs.	Low	High
	Duration of impact	Long-term				
	Probability (Threat)	Unlikely				

Potential Impact	Impact Criteria		Significance Ranking (Without mitigation)	Potential Mitigation Measures	Significance Ranking (With mitigation)	Confidence Levels
	Magnitude of impact	Zero		- Minimise cut-and-fill and landscape scarring in general - Ensure effective rehabilitation of areas not needed during salt mining works. - Ensure proper micro-siting of infrastructure and mining equipment to avoid impacts - Report any chance finds - Protect <i>in situ</i> materials		
	Reversibility	Non-reversible				
	Can impacts be mitigated?	Yes				
Damage to the rock shelters and caves	Extent or Spatial of Impact	Local	Moderate/high	Salt mining activities should be implemented on targeted sites only. - Minimise cut-and-fill and landscape scarring in general - Ensure effective rehabilitation of areas not needed during mining works. - Ensure proper micro-siting of infrastructure and mining equipment to avoid impacts - Avoid drilling or digging near rock shelters <i>(if any)</i>. - Report any chance finds - Protect <i>in situ</i> materials	Low	High
	Duration of impact	Long-term				
	Probability (Threat)	Unlikely				
	Magnitude of impact	Low				
	Reversibility	Non-reversible				
	Can impacts be mitigated?	N/A				

Potential Impact	Impact Criteria	Significance Ranking (Without mitigation)	Potential Mitigation Measures	Significance Ranking (With mitigation)	Confidence Levels
Cumulative impacts	Archaeological sites are non-renewable, and the impact on any archaeological context or material will be permanent and destructive.		Ensure proper micro-siting and siting of infrastructure and salt mining equipment to avoid a proliferation of archaeological sites and materials.		
Residual impacts	With the implementation of mitigation measures mentioned herein, the significance level of the impacts identified will be reduced to either minor adverse/low or negligible.		The undertaking of the mitigation measures outlined here before and during the proposed Salt mining and production activities of the aforementioned commodities will lead to <i>Minor</i> overall residual effects on archaeology. The recommended buffer zone of known archaeological sites in the vicinity of the application area, at least a distance of 50 m radius from the visual edge of the targeted site, will ensure that these sites are preserved <i>in situ</i> and thus will not be impacted by the salt mining activities.		

12. Summary of the Impacts

Direct or indirect impacts or risks of impact on archaeological sites located near or in the vicinity of the proposed mining project can be reduced to acceptable levels by the adoption of appropriate recommended mitigation measures, including integration of the archaeological heritage record and *Chance Finds procedure* in the project EMP (see *Appendix 1, & recommended mitigations*). Special efforts should be made to reduce and avoid impacts on any discovered site, artefacts, or yet-to-be-discovered archaeological sites.

No significant archaeological or cultural heritage resources were noted within the project area, and no adverse impact to heritage resources is expected, especially within the boundaries of the surveyed mining claim. Any additional effects on subsurface heritage resources can be successfully mitigated by implementing a *chance find procedure*. Mitigation measures as recommended in this report should be implemented during all phases of the project. Impacts of the project on heritage resources are expected to be low during mining activities (Table 15). The only visible burial site noted during the surveys were the graves at Cape Cross (*refer to figure 32*), which are about 2km away from the proposed site. No impacts whatsoever are expected during the salt mining activities.

Low Overall Impact: The conclusion that the overall impact on archaeological and cultural heritage is considered "low" is somewhat a good sign, but it does not absolve the project of responsibility and compliance. Environmental, Archaeological, and Heritage Impact Assessments (EIA/AHIA) should always plan for the unexpected.

Table 15: Archaeological & Heritage consideration for Inclusion in the Project EMP

Expected Impacts	Mitigation/management objectives & outcomes	Mitigation/management actions	Monitoring		
			Methodology	Frequency	Responsibility
Impacts on archaeology and graves					
Damage or destruction of archaeological sites or graves (known or unknown)	Avoid any impacts, if not possible, or locate and sample or rescue sites/burials before disturbance.	Pre-construction survey, micro-siting of infrastructures & equipment	Appoint an archaeologist to conduct a survey well before construction	Once-off	Project Proponent
	Rescue information, artefacts, or burials before extensive damage occurs	Reporting chance finds as early as possible, protect <i>in situ</i> , and stop work in the immediate area.	Inform staff and carry out inspections of excavations.	On-going basis Whenever on site (at least weekly)	Contractors ECO
Impacts on the cultural landscape					
Visible landscape scarring	Minimize landscape scarring	Ensure disturbance is kept to a minimum and does not exceed project requirements. Rehabilitate areas not needed during the operation.	Monitoring of surface clearance relative to the approved layout	Ongoing basis Whenever on site (at least weekly)	Construction Manager or Contractor ECO

13. Management Plan and Mitigation Measures

Detailed mitigation measures are given herein in the form of recommendations (refer to the bulleted list in **Section 15.2** below under the conclusion and recommendation section). These mitigation measures will be included and implemented along with the general EMP of the project, as well as the implementation of the *Chance Find Procedures* and *Heritage Monitoring Plan* for the proposed project, as set out in *Appendix 1* below.

13.1. Conclusion and Recommendation

The study identified no significant impacts within the areas allocated for the proposed salt mining activities. As previously reported, the areas surrounding the proposed project near Cape Cross have been subject to mining for more than 100 years. Cape Cross has a well-documented history of guano and salt mining dating back to the late 1800s, with remaining heritage features such as old buildings and a historic graveyard still visible. The mining claims assessed are located at a considerable distance from these heritage features; therefore, no archaeological or cultural heritage impacts are anticipated. Nevertheless, all recommended mitigation measures, including adherence to the *Chance Finds Procedure*, must be strictly implemented, and compliance is mandatory.

13.2. Recommended Mitigation Measures

It is extremely important for the Project Proponent, and all those involved in the project to fully understand that all archaeological and palaeontological objects and meteorites are the property of the State, except such an archaeological or palaeontological object the private possession and ownership of which (a) was acquired not in contravention of **Section 12** of the National Monuments Act, 1969 (Act No. 28 of 1969) or a law repealed by that Act; and thus, as part of mitigation measures, it should be noted that according to National Heritage Act No. 27 of 2004 that all activities that will involve digging or excavating the ground will require a permit from National Heritage Council of Namibia. Therefore, to prevent accidental damage to the archaeological landscape, including any potential sub-surface archaeological finds or features, the following mitigation strategies are proposed and recommended;

- If any archaeological materials, human burials, or skeletal remains are uncovered during mining activities, then the work in the immediate area should be halted, the finds would need to be reported to the Heritage Authority, and may require inspection by an Archaeologist. The ECO should have the area fenced off and contact NHC (Tel: **+264 61 244 375**), National Forensic Laboratory (**+264 61 240 461**) immediately.
- Under no circumstances shall any artefacts be removed, destroyed, or interfered with by anyone on the site; and Contractors and workers shall be advised of the penalties associated with the unlawful removal of cultural, historical, archaeological, or palaeontological artefacts, as set out in the National Heritage Act (Act No. 27 of 2004), Section 52 (2).
- Staff Training: Ensure that all workers involved in the project are trained to recognize potential archaeological materials, whether on the surface or subsurface. This can help avoid delays and ensure the process is efficient.

- Any pile of stones or mound of earth looking even remotely like a grave should be avoided at all costs.
- A "No-Go-Area" should be put in place where there is evidence of sub-surface archaeological materials, archaeological sites, gravesites, historical, or past human dwellings. It can be a demarcation by fencing off or avoiding the site completely by not working closely or near the known site. The 'No-Go Option' might have a NEUTRAL impact significance.
- Cognizance must be taken of the larger cultural & heritage landscape of the area to avoid the destruction of previously undetected heritage sites. Should any previously undetected heritage or archaeological resources be exposed or uncovered during the development phases of the proposed project, these should immediately be reported to the heritage specialist or heritage authority (National Heritage Council of Namibia).
- The Proponent and Contractors should adhere to the provisions of **Section 55** of the National Heritage Act in the event significant heritage and cultural features are discovered in the course of developmental works.
- It should be noted that the subterranean presence of archaeological and/or historical sites, features, or artefacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, work on the site ceases immediately and a qualified archaeologist is called in to investigate the occurrence.
- Documentation and Reporting: All findings should be documented thoroughly. Even minor artifacts or features should be recorded, as they can help build a broader understanding of the region's history or may be relevant to future heritage projects or conservation efforts.
- Bi-annual auditing is highly recommended.

It should be taken into consideration that, according to **Part VI sub-section (1), (2) or (3)** A person who contravenes these provisions commits an offence and is liable to a fine not exceeding N\$100 000 or to imprisonment for a period not exceeding 5 years, or to both such fine and such imprisonment. A Project Proponent should heed these recommendations and comply with the existing legislation and Act as reflected in this report.

13.3. Statement and reasoned opinion of the specialist

It is the reasoned opinion of the undersigned archaeologist that the overall impact of the proposed salt mining project is considered to be low. Residual impacts can be managed to an acceptable level through the implementation of the recommendations provided in this report. Furthermore, the anticipated socio-economic benefits of the development are considered to outweigh the potential impacts, provided that appropriate mitigation measures are effectively applied throughout the project lifecycle.

It is therefore recommended that a *Chance Finds Procedure* be implemented during the salt mining activities to safeguard any unforeseen archaeological discoveries.

14. References

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Appendix 1: Archaeological “*Chance Finds Procedure*”

A **Chance Find Procedure (CFP)** outlines the actions to be taken when previously unknown cultural heritage resources, especially archaeological sites or artifacts, are discovered during a project. This procedure ensures that such discoveries are handled responsibly, potentially halting construction or development activities while assessments are conducted. The CFP aims to protect these resources and ensure compliance with relevant regulations.

Key Steps in a Chance Find Procedure:

1. **Discovery and Reporting:** Anyone who discovers a potential heritage resource must immediately halt work and report the find to their supervisor or the project manager.
2. **Site Security:** The supervisor or project manager ensures the site is secured to prevent further damage or disturbance.
3. **Expert Assessment:** A qualified archaeologist or heritage specialist is consulted to assess the significance of the discovery and determine appropriate actions.
4. **Further Action:** Based on the assessment, the project may proceed with caution, construction may be halted, or further investigation (e.g., archaeological excavation) may be required.
5. **Compliance:** The project must comply with relevant regulations and guidelines for handling heritage resources.

Examples of Chance Finds:

- Burials or remains of deceased individuals
- Palaeontological, archaeological sites, such as settlements, burial grounds, or rock art
- Isolated artifacts, like pottery, tools, or other objects of potential cultural significance

Purpose of the Chance Find Procedure (CFP):

- **Protection of Heritage:** To prevent damage or destruction of cultural heritage resources.
- **Legal Compliance:** To ensure compliance with heritage protection laws and regulations.
- **Preservation of Information:** To document and potentially preserve important information about the past.
- **Public Education:** To raise awareness of the importance of cultural heritage and encourage responsible stewardship.

The Project Manager or ECO/Site Manager/Supervisor must report the findings to the following competent authorities:

- **National Heritage Council of Namibia (061 244 375)**
- **National Museum (+264 61 276800),**
- **National Forensic Laboratory (+264 61 240461).**

Heritage Monitoring and Management Requirements

Throughout the development phases of the proposed project, monitoring is necessary to ensure compliance with measures agreed upon in the recommended mitigation as well as to assess how effective the mitigation measures are in protecting the values and significance of the heritage resources. This can be achieved through regular monitoring of the project site or random visits to ensure compliance with measures outlined in the recommendation section is monitored, recorded, and reported. However, in principle, heritage monitoring and management should be conducted and implemented by archaeologist/heritage specialist or trained personnel, while other activities, especially day-to-day monitoring, can be done by an Environmental Control Officer (ECO) or, in some cases, a trained Site manager can be responsible for this.

Site monitoring: As most heritage resources occur below the surface, all earth-moving activities need to be routinely monitored in case of accidental discoveries. The greatest potential impacts are the initial soil removal and subsequent earthworks during the construction or development of the area. The ECO should monitor all such activities daily. If any heritage resources are found, the *chance finds procedure* must be followed as outlined in **Appendices 1 and 2**.

Monitoring is generally only considered appropriate where changes are probable or likely, and where these changes could be significant and would require remedial or specific management measures. This process can be done in all stages of the development of the proposed project, and during the actual operational phases where more impact on archaeological and heritage resources is probable.

Appendix 2: Archaeological and Heritage Monitoring Measures for Mining Claim No. 75987, 75988, 75989, 75090 & 75991

Table 16: Chance Find and Heritage Monitoring Measures

Area/Site	Archaeological/Heritage Aspect	Potential Impact	Mitigation Measures	Responsible Party	Method Statement required
Chance Find (Chance Archaeological and Heritage sites (Accidental discoveries)	General area where the proposed project is taking place (i.e., proposed development which may yield archaeological, cultural materials, or human remains. This means that there are possibilities of encountering unknown archaeological sites during subsurface salt mining work, which may disturb previously unidentified chance finds.	Possible damage to previously unidentified Archaeological and heritage sites during the salt mining phase. Unanticipated impacts on archaeological sites where project actions inadvertently uncovered significant Archaeological sites. Loss of historic cultural landscape; Destruction of burial sites and associated graves (if any) Loss of aesthetic	In situations where unpredictable impacts occur, salt mining activities must be stopped, and the heritage authority should be notified immediately. Where remedial action is warranted, minimize disruption in salt mining scheduling while recovering archaeological data. Where necessary, Implement emergency measures to mitigate. Where burial sites are accidentally disturbed during salt production, the affected area	Project Proponent- Contractor/ Salt Mining crews, Project Manager (PM) / Environmental Control Officer (ECO) or Site Manager.	Monitoring measures should be issued as instruction within the Project EMP. PM / ECO / Site Manager / Archaeologist Should monitor development works on sites where such development projects commence within the project site.

Area/Site	Archaeological/Heritage Aspect	Potential Impact	Mitigation Measures	Responsible Party	Method Statement required
		value due to salt production work Loss of sense of place Loss of intangible heritage value due to a change inland use.	should be demarcated as a 'no-go zone' by use of fencing during construction, and access thereto by the construction team must be denied. Accidentally discovered burials in a development context should be salvaged and rescued to safe sites as may be directed by relevant heritage authorities. The heritage officer responsible should secure the relevant heritage and health authorities permit the possible relocation of affected graves		

Area/Site	Archaeological/Heritage Aspect	Potential Impact	Mitigation Measures	Responsible Party	Method Statement required
			accidentally encountered during salt production work.		
Compliance Review	A review of archaeological and cultural heritage incidents, their impacts, mitigation used, and the success of mitigation should be conducted at a certain stage of the project. The review should be looking at mitigation measures in place, and ways of improvement if needed. This exercise can be done after every 6 months or whenever the Project Proponent sees fit. The overall objective is to ensure full compliance with relevant legislation, especially under Section 5 (4) of the National Heritage Act No. 27 of 2004, Chance Find Procedure, and the recommendations made by the Heritage Specialist.				

Knowledge Gaps

Due to the subsurface nature of heritage resources, the possibility of the discovery of any archaeological or heritage resources during the mining (salt production) activities phase cannot be excluded. However, this limitation is successfully mitigated with the adoption and implementation of a **Chance Find Procedure** as elaborated above in Table 16.

Appendix 3: Site Notice and Newspaper Advert for the Mining Claims

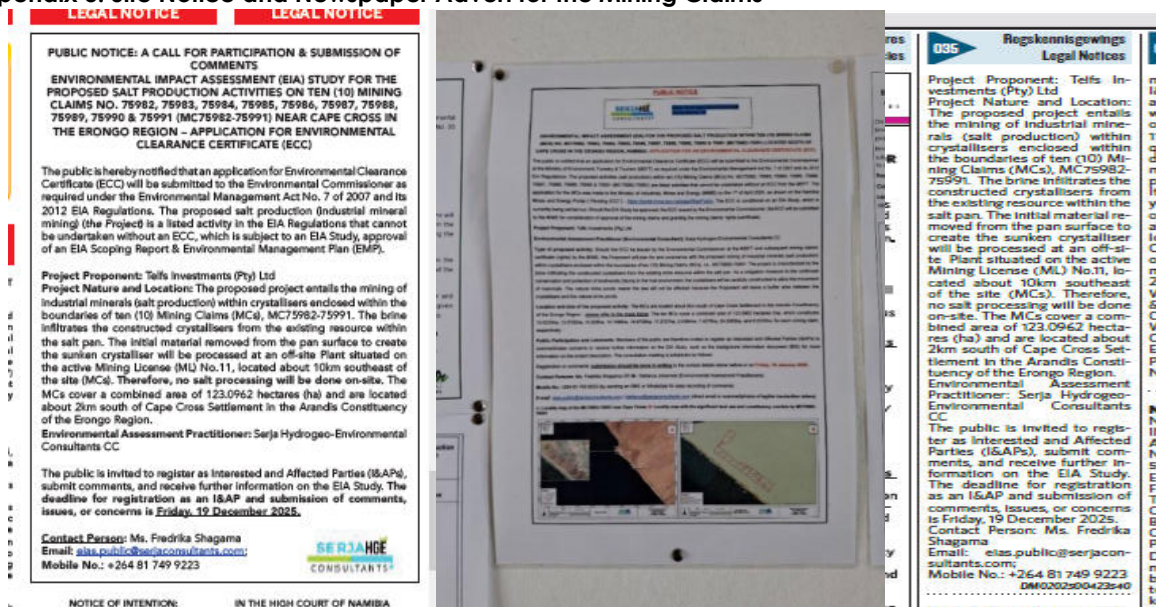


Figure 31: Site notice and snippets of Newspapers Adverts for Mining Claims No. 75987, 75988, 75989, 75090 & 75991

Appendix 4: Supporting Documents