



# National Heritage Council of Namibia

52 Robert Mugabe Avenue • P/Bag 12043 • Ausspannplatz • Windhoek • Namibia  
Tel: (061) 244 375 • Fax: (061) 246 872 • E-mail: finance@nhc-nam.org

Secretariat

Receipt No. **6090**

CASH RECEIPT

Customer

Date:

26/01/2024

Full Name:

KOBOLD METALS NAMIBIA (PTY) LTD

Postal Address:

Box 3300

City:

WINDHOEK

Phone:

+264 81 3083774



Quantity	Description	Unit Price	TOTAL
1x	APPLICATION FEES - HIA		N\$ 150-00
	CONSENT LETTER FOR EPL		
	NO: 9048, 9050, 9053, 9060		
	& 9061, IN ARIAMSVEI,		
	KARAS		N\$ 150-00

Amount in Words:

ONE FIVE ZERO N\$ ONLY

Receipt Issued by:

*[Signature]*

studio print 30155



## National Heritage Council of Namibia

### Technical Department

52 Robert Mugabe Avenue, Windhoek  
Private Bag 12043, Ausspannplatz, Windhoek  
Tel: (061) 244375 • Fax: (061) 246 872 • Email: [info@nhc-nam.org](mailto:info@nhc-nam.org)

## OFFICE OF THE DIRECTOR

### APPLICATION FOR CONSENT

(Sections 53(7) and 55(8) of the National Heritage Act, 2004 (Act No.27 of 2004))

### CONDITIONS AND INSTRUCTIONS

1. The receipt issued serves as a reference when making enquiries.
2. Works and activities applied for under section C, of this application, is subject to an environmental impact assessment at the applicant's expense.

3. Instructions for completion:

**Applicants must complete the relevant parts of this application.**

### A. APPLICANT'S DETAILS

1. Name and address of applicant

KOIBOLD METALS NAMIBIA (PTY) LTD  
P.O. BOX 3300  
WINDHOEK

2. Full name and designation of the person in charge of undertaking the works or activities:

\_\_\_\_\_

3. Full name and personal details of researcher, contractor or person in charge of the proposed works or activities:

CHRISTIAN AWEKARE

\_\_\_\_\_

4. Academic qualifications, skills, occupation and competencies of the person in charge mentioned under A2 above.

MA. HERITAGE STUDIES



5. Previous permits issued in Namibia:

6. Period for which permit is required: From \_\_\_\_\_  
to \_\_\_\_\_

7. Date by which permit is required: \_\_\_\_\_

**B: WORKS OR ACTIVITIES**

15. Geographic location and address (farm, village, settlement, town, region, magisterial district, constituency, Global Positioning System coordinates) of the site, protected place or protected object where works or activities are proposed:

EPL 9048, 9050, 9053, 9060, 9061  
located within Ariamsvlei district  
Karas Region

20 Government Gazette 1 September 2005 No. 3490

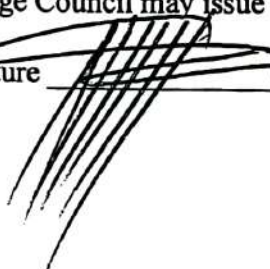
16. Detailed description of the nature of works or activities for which the permit is applied for: (e.g. excavation, construction, filming etc) (Attach additional and supporting information if the space on the form is insufficient.)

HERITAGE IMPACT ASSESSMENT

**C: UNDERTAKING BY APPLICANT**

17. I CHRISTIAN NERATE (the person in charge of undertaking the works or activities) and (where applicable) being head of the \_\_\_\_\_ institute, hereby undertake to strictly observe the terms and conditions under which the National Heritage Council may issue the permit.

Signature



dated

26/01/2024

Consent No. \_\_\_\_\_  
(Consecutive number & year of issue)

**CONSENT**



**A PHASE 1 REPORT ON HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED  
EXPLORATION ACTIVITIES ON EPL 9048, 9050, 9053, 9060, 9061, LOCATED WITHIN  
ARIAMSVLEI DISTRICT, //KARA REGION, NAMIBIA.**

**Prepared for:**

**KoBold Metals Namibia (Pty) Ltd  
P.O. Box 3300, Windhoek, Namibia**

**by:**

**Christian Nekare**

**(B. Ed (UNAM), MA (WHSD-UNITO), MA (Geography Candidate-UNAM)**

**Accredited member of Namibian Scientific Society (NSS)**



**A PHASE 1 REPORT ON HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED  
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**(B. Ed (UNAM), MA (WHSD-UNITO), MA (Geography Candidate-UNAM))**

**Accredited member of Namibian Scientific Society (NSS)**

## DISCLAIMER:

I hereby declare that:

- a. I have the knowledge of and experience in conducting Heritage Impact Assessments (HIA), including knowledge of the Acts, Regulations, and Guidelines that are relevant to Namibian legislation, specifically the National Heritage Act (27 of 2004), as well as regulations and guidelines that have relevance to the proposed activity.
- b. I have performed the work relating to the application objectively, even if this results in views and findings that are not favourable to the proponent.
- c. Although all efforts are made to identify all sites of heritage significance during an assessment of study areas, the nature of heritage resources are as such that it is always possible that hidden or subsurface sites, features or objects could be overlooked during the study.
- d. Clients & Developers should not continue with any development actions until the National Heritage Council of Namibia has provided final comments on this report.

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C. Nekare

World Heritage Specialist (WHS)

## SUMMARY

Mining activities causes immediate impacts on heritage resources. This Heritage Impact Assessment (HIA) was therefore carried out to survey and document all heritage objects, sites of tangible and intangible heritage and paleontological remains in and around the EPL area that may be affected by the proposed explorations. The role of National Heritage Council (NHC) is to administer, preserve and protect heritage resources within Namibia. When HIA is conducted and implemented, it is usually possible to reduce the loss of heritage resource. Further information sources included in this HIA are from the National Museum and the Namibian Scientific Society where the database of all heritage resources in the territory, is kept. The aim of this work is to map all heritage resources located within the direct zone of EPL areas. Thus, we will describe the types of heritage resources located inside and outside of the EPL areas. The cultural landscape contain graves connected to the war of national resistance 1904 to 1908 and also historically significant built heritage. The arid environment in this region enhanced the HIA survey as it afforded a wider scope of observations in regards to identifying heritage resources within the area. The report thus provides an overview of the heritage resources that were mapped in the EPL area.

Previous work in the larger geographical area was utilized in the background study. This report discusses the results of both the background research and field assessment and provides recommendations on the way forward at the end.

From a Heritage Point of View, it is recommended that the proposed development be allowed to continue, taking into consideration the recommendations put forward at the end of the report.

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## 1. INTRODUCTION

World Heritage Specialist (Christian Nekare) was appointed by KoBold Metals Namibia (Pty) Ltd to conduct a Phase 1 Heritage Impact Assessment for the proposed exploration activities on EPL 9048, 9050, 9053, 9060, 9061, located within Ariamsvlei district, //Karas region, Namibia.

As for Namibia, the //Karas region has had an inimitable long romance with diamond heritage that continues on to date. The Orange River is the principal drainage of southern Africa into the Atlantic Ocean and is the major route for the transport of diamonds to the major deposits on the Namibian coastline north of the Orange mouth and Oranjemund (<https://portergeo.com.au/database/mineinfo.asp?mineid=mn685>). Paleontology packages of the Orange River are preserved at different elevations above the present Orange River bed (Gresse, 2003). Therefore, these regional landscape is an important intersection between people throughout history, judging from its numerous inland heritage resources and those along the shorelines of the Orange river, protection of these heritage resources is limited and face the risk from flooding, erosion and human activities.

Like in the case of these EPL areas, graves are enshrined on the cultural landscape, which necessitated the undertaking of the grave survey, which confirmed the locations and descriptions of each grave located in the concerned areas. As an example, these HIA intended to obtain information on the distribution and the preservation of the heritage materials within EPL, in order to develop a detailed Heritage Management Plan (HMP) to protect heritage from the impact that will be caused by the exploration activities. It was observed throughout the EPL areas that some cemeteries within the EPL areas carries national heritage status and the locals are actively involved in the care of them, through routine maintenance and active use.

Background research indicates that there are heritage resources featuring in the area within which the EPL falls. Additionally, the areas surrounding the proposed EPL area is described as a culturally sensitive landscape. Previous work in the larger geographical area was utilized in the background study.

The proponent indicated the location and boundaries of the EPL area and the assessment concentrated on this portion.

## 2. TERMS OF REFERENCE

A Heritage Impact Assessment (including Archaeological, Cultural heritage, Built Heritage and Paleontological Assessment) to determine the impacts on heritage resources within the study area.

The following are the required to perform the assessment:

- A desk-top investigation of the area;
- A site visit to the proposed development site;
- Identify possible archaeological, cultural, historic, built and paleontological sites within the proposed development area;
- Evaluate the potential impacts of construction and operation of the proposed development on archaeological, cultural, historical resources; built and paleontological resources; and
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural, historical, built and paleontological importance.

### 3. LEGISLATIVE REQUIREMENTS

This HIA followed a set of National legislations of which the proponent should accept to safeguard heritage objects from the negative impacts of development activities. The National Heritage Act (No. 27 of 2004) and its guidelines 2021 is empowered to protect both known and unknown heritage sites and related objects in Namibia. The same Act calls for the reporting of heritage resources when discovered to the NHC. All ancient graves are protected by the act. The two complement each other legally in the protection of heritage resources. This regulation is a supplementary to the National Environmental Management Act (No.7 of 2007) and its regulations (2012) that makes it mandatory for developers to facilitate for a HIA, which should be incorporated in the Environmental Impact Assessment process.

### 4. METHODOLOGY

#### 4.1. Survey of literature

A survey of available literature was undertaken in order to place the development area in a heritage context. The sources utilized in this regard are indicated in the bibliography.

#### 4.2. Field survey

The field assessment section of the study is conducted according to generally accepted HIA practices and aimed at locating all possible objects, sites and features of heritage significance in the area of the proposed development. The location/position of all sites, features and objects is determined by means of a Global Positioning System (GPS) where possible, while detail photographs are also taken where needed.

#### 4.3. Oral histories

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all

circumstances. When applicable, the information is included in the text and referred to in the bibliography.

#### **4.4.Documentation**

All sites, objects, features and structures identified are documented according to a general set of minimum standards. Co-ordinates of individual localities are determined by means of the Global Positioning System (GPS). The information is added to the description in order to facilitate the identification of each locality.

#### **4.5.The limitations and assumptions associated with this heritage impact assessment are as follows;**

- ✓ Field investigations were performed on foot and by vehicle where access was readily available.
- ✓ Sites were evaluated by means of description of the cultural landscape, direct observations and analysis of written sources and available databases.
- ✓ It was assumed that the site layout as provided by KoBold Metals Namibia (Pty) Ltd is accurate.
- ✓ We assumed that the public participation process performed as part of the EIA process was sufficiently encompassing not to be repeated in the Heritage Assessment Phase.

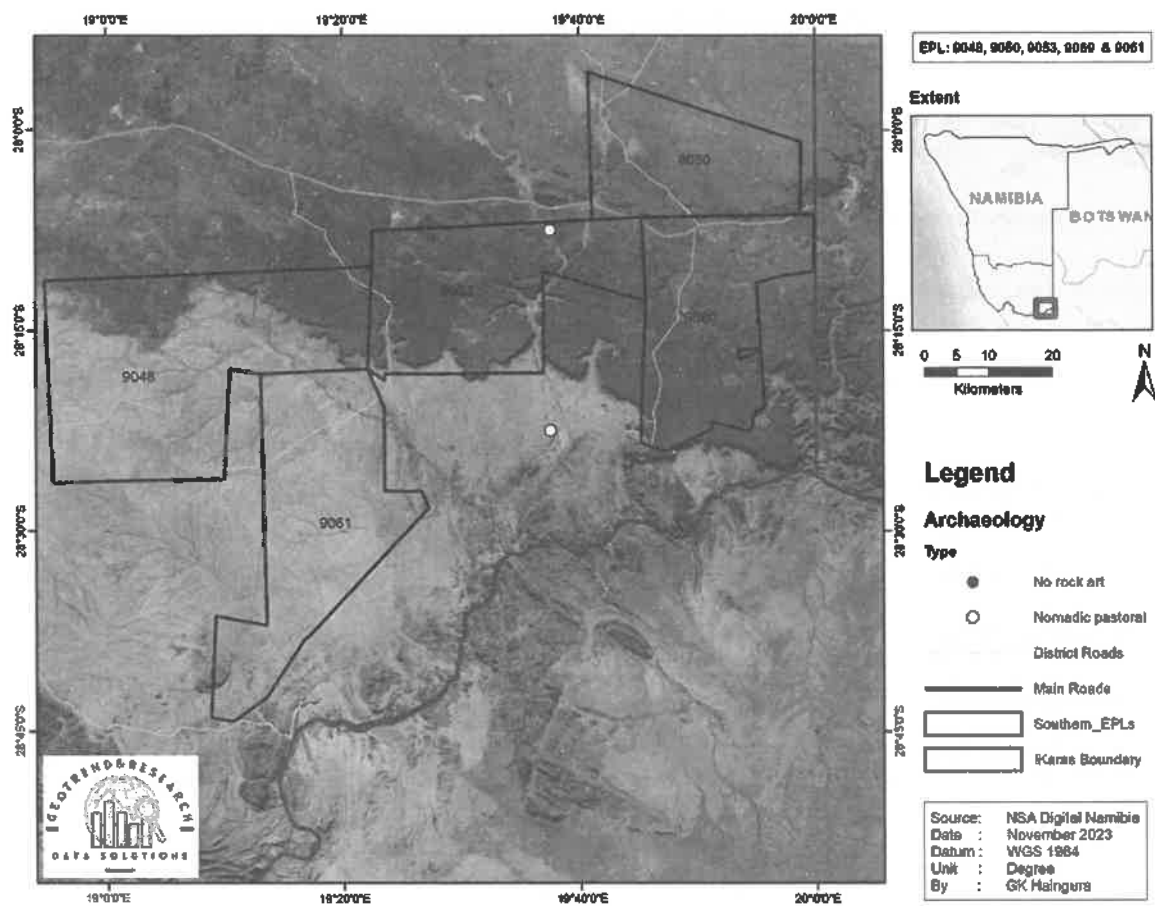


Figure 1: Overview of heritage sites in EPL area: (Credit: Geotrend, 2023).

## 5. THE RECEIVING ENVIRONMENT.

The heritage of the //Karas Region covers long spans of human occupations (Kinahan, 2003). The region is particularly bountiful. Some areas are richer in heritage resources than others, and not all heritage sites are equally significant. The most significant published is the Apollo 11 situated in the upper Nuob River in the Huns Mountains (//Karas Region) (Rifkin, Henshilwood and Haaland, 2015). So far the timelines of Apollo 11 has provided considerable encouragement for discussions concerning prehistoric culture. These art is an attribute widely associated with san worldviews and wide spread across the region of southern African. Although the heritage of this region is not known in detail, studies at a number of

sites have revealed a documented sequence of early hominin and modern human occupation spanning the last one million years (Kinahan, 2011). It is expected that future heritage studies in the region might yield important new evidence relating to the establishment of pastoralist communities during the last two millennia, although no systematic research has yet been carried out to evaluate this. Unfortunately, material archaeological evidence of these communities has disappeared from the cultural landscape. For example, traditional settlements among the Nama-speaking peoples of the region are made from highly perishable materials. Orange River transports sediment to the coast from where it is moved northwards along the coast by the Benguela. The sediments are subsequently deposited into the Namib Sand Sea a UNESCO world heritage site. The region is mine of information with regards to diverse heritage resources. As an example, previous archaeological survey conducted in the area mapped the wide spread herding heritage. In the area the most common and most striking features recorded on the surface of the cultural landscape are scatters of stone tools. According to the archaeologist point of view, this period exists in three eras.

**Earlier Stone Age (ESA)** up to 2 million – more than 200 000 years ago: Characterized by surface scatters of stone tools and artefact debris, usually transported from original context by fluvial action, and seldom occurring in sealed stratigraphic context.

**Middle Stone Age (MSA)** less than 300 000 – 20 000 years ago: Characterized by dense surface scatters and rare occupation evidence in sealed stratigraphic context, with occasional associated evidence of food remains.

**Later Stone Age (LSA)** 40 000 years ago – 2000 years ago: Characterized by increasingly dense

a. and highly diverse evidence of settlement, subsistence practices and ritual art, as well as

grave sites and other remains.

b. Historical (the last ca. 250 years): Characterized by remains of crude buildings, livestock enclosures, wagon routes and watering points, as well as graves, comprising small cemeteries near farm settlements or isolated burial sites.

Ariamsvlei is a settlement located in the Karas region, near the border with South Africa. It is at the foot of a plateau and the Orange River. The environmental conditions have changed but still associated with the living heritage of the Bondelswart. The presence of the Namibian border post en route to South Africa contributes to a large average number of tourists passing through the settlement annually.

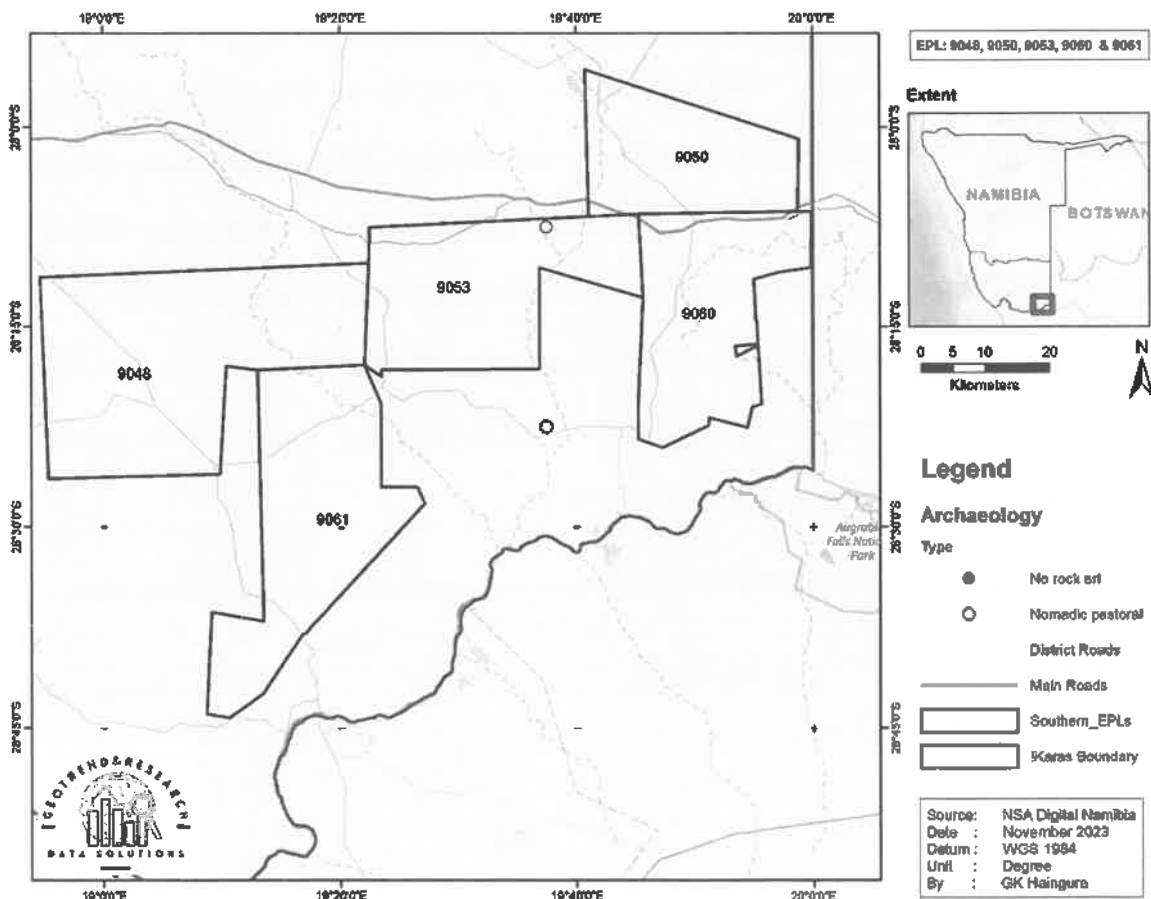


Figure 3: Locality of the proposed EPL 9048, 9050, 9053, 9060, 9061, (Credit: Geotrends, 2023).

## 6. DESCRIPTION OF THE AREA

The EPL area comprises of several farms within the ariamswel district. Very little HIA has been done in the area but the area has been a subject of various geological survey. The area lies on the transitional slope from the flat lying peneplain in the north to the Orange River in the south. The more northerly parts consist of inselberg projecting above residual deposits and windblown sand, but towards the Orange River area becomes exceedingly mountainous and rugged. A number of significant mixed heritage sites are known to occur within the cultural landscape.

## 7. FINDINGS

The field survey lasted for two days through driving and walking. A ground survey, following standard and accepted archaeological procedures, was conducted. The surface was assessed for possible Stone Age scatters as well as exposed Iron Age implements and other archaeological resources. The survey followed investigation of the cultural resources onsite using the best possible technologies for archaeological field surveys. The EPL areas was surveyed, and findings of graves and built heritage were documented through photographs. A Samsung GPS Logger (2018) was used to record the heritage finds on site.

**Table 1. Summary of the identified heritage resources/ sites inside and outside the EPL area.**

Heritage Resources	Coordinate GPS	Status	Protection Afforded
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<p>Site 1 within EPL 9060: A family burial ground on the farm (Witkop), located in the same area with the farm houses. The fence around the graveyard and tombstones are in good state and have clearly visible names. Since some persons were buried in the 1950s, this could be protected in terms NHC act.</p>	<p>S 28.2266 ° E 19.80596 °</p>	<p>Known to the owner, yet to be noted by the NHC and yet to feature on its NHR. Inside the EPL area.</p>	<p>Inactive, no statutory protection.</p>
<p>Site 2 within EPL 9060, built heritage in the form of contemporary farmhouse. Plus, two more houses for farm worker and related infrastructure.</p>	<p>S 28.22907° E 19.80142°</p>	<p>Listed by the local authority, not yet noted by the NHC and yet to feature on its NHR. Outside the EPL area, about 20+ km.</p>	<p>Inactive, no statutory protection.</p>
<p>Site 1 within EPL 9050, mass graves containing remains of fallen Schutztruppe soldiers during the war of national resistance and the broader Ukamas use to be a military base for the Germany colonial forces.</p>	<p>S 28.03456° E 19.73412°</p>	<p>Listed by the local authority and by the NHC and yet to feature on its NHR.</p>	<p>Inactive, no statutory protection.</p>
<p>Site 2 within EPL 9050. Cluster of historical and contemporary built heritage resources. Demonstrate the colonial living heritage of Germany in the territory.</p>	<p>S 28.03599° E 19.73038°</p>	<p>Listed by the local authority and by the NHC and yet to feature on its NHR.</p>	<p>Inactive, no statutory protection.</p>
<p>Site 1 within EPL 9053, contain graves related to the owners of the farm.</p>	<p>At farm Kentucky.</p>	<p>Known to the owner of the farm.</p>	<p>Inactive, no statutory protection.</p>
	<p>At farm Austerliz,</p>	<p>Known to the owner of the farm.</p>	<p>Inactive, no statutory protection.</p>

Site 1 within EPL 9048, contain graves related to the owners of the farm.	Sanderwaler and Van Zylsrus		
Site 1 within EPL 9061, contain graves related to the owners of the farm.	At farm at Duurdrif	Known to the owner of the farm.	Inactive, no statutory protection.
Major heritage resources outside the EPL area at Heirachabis about 10 KM, cluster of built heritage (Closed School, Catholic church, community graveyard and a Germany commander buried in an isolated grave on the site.	S 28.04438 E 19.56332	Listed by the local authority and by the NHC and yet to feature on its NHR.	Inactive, no statutory protection.

**Site 1 within EPL 9060:**

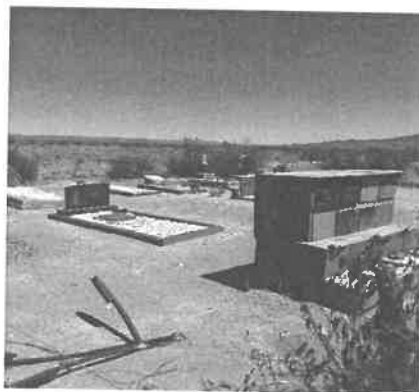


Figure 1: Views of family graveyard at farm Witkop,



Figure 2: View of built contemporary farmhouse.

**Site 1 within EPL 9050:**



Figure 1: View of mass graves of Schutztruppe,  
the same farm was the military base.



Figure 2: View of the historical building,  
many built heritage is clustered at the farm.



Figure 3: View of the historical church build in 1951  
at Heirachabis, surrounded by a cluster of other  
built heritage and an isolated grave of Germany commander.

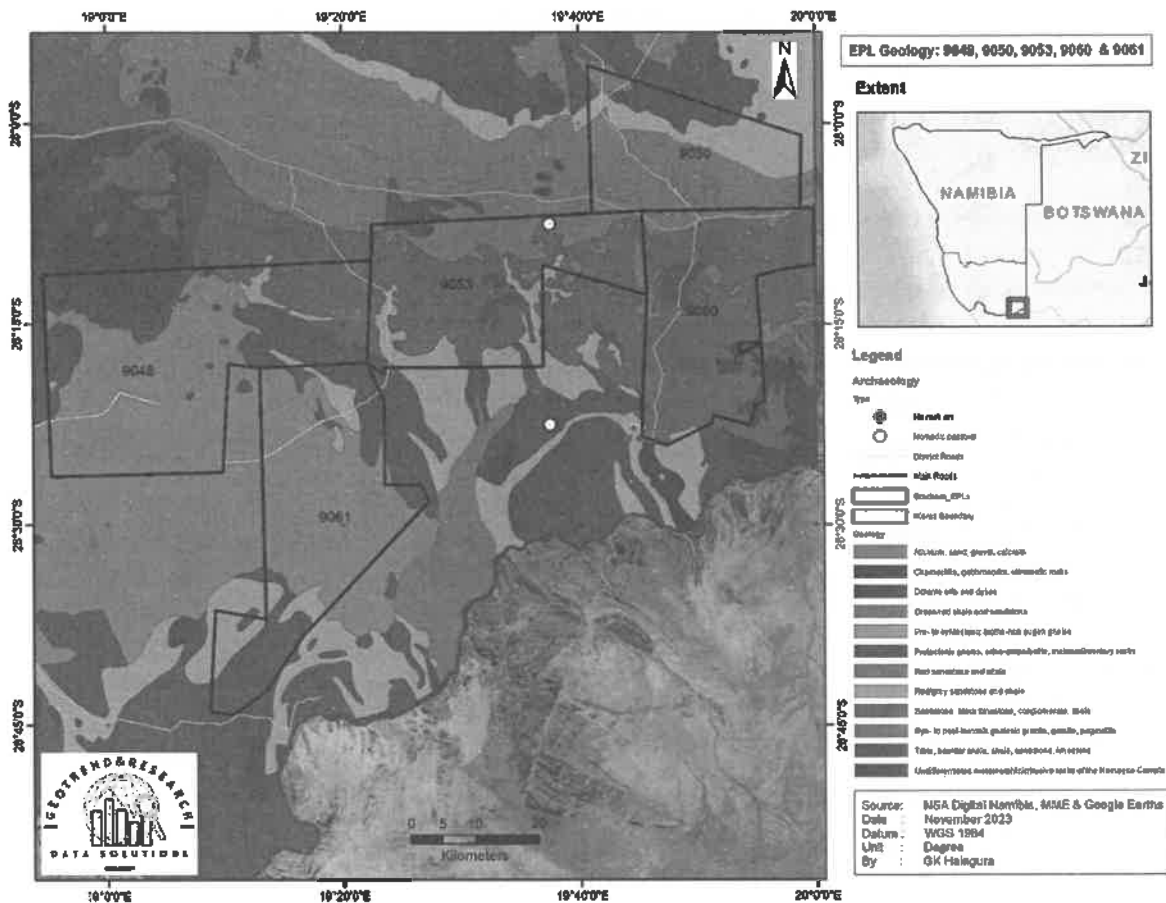


Figure 4: Geology of the proposed EPL 9048, 9050, 9053, 9060, 9061, (credits: Geotrend, 2023).

## 8. GEOLOGY OF THE AREA

The broader region is described by a complex geological heritage that has formed the soils and landforms in the area. The geology profile is controlled by the Namaqua-Natal Mobile Belt (Schreiber, 2014), which encompasses a group of sedimentary and metamorphic rock formations. The soils in the cultural landscape are highly variable, reflecting the diversity of rock types and geomorphic processes that have influenced their development. In general, the soils in the area are poor in organic matter and nutrients, and are highly weathered due to the arid climate. The landforms in the Karas region are diverse, ranging from rugged mountain ranges to broad plains

and sandy deserts. The most prominent landforms in the area are the Naukluft Mountains, a range of rugged peaks and deep canyons that are popular with hikers and wildlife enthusiasts. The geology and soils of the Karas region play an important role in shaping the local ecosystem and influencing the distribution of heritage resources in the area. However, these heritage resources are also vulnerable to human activities such as mining and agriculture, which can have significant impacts on the local environment.

#### 9. IMPACT ASSESSMENT (FIELD ASSESSMENT)

The HIA used an impact assessment matrix to grade all identified heritage resources within the EPL areas. This process was in accordance with NHC grading guidelines of 2021, which provide scale on grading heritage resources. The EPL areas was noted to contain a mine of heritage resources. As a result of this HIA and statements of significance have been developed for the EPL areas and the identified heritage resources has been graded and the outcomes for the identified sites are included in tables below.

**The tables below grades heritage significance for heritage resources in Namibia.**

<b>Level of significance</b>	<b>Grading</b>	<b>Description</b>
Exceptional/upper higher	5	<ul style="list-style-type: none"> <li>• Major national heritage resources.</li> <li>• Rare &amp; outstanding example.</li> <li>• Containing unique evidence of high regional &amp; national significances.</li> </ul>
Considerable high	4	<ul style="list-style-type: none"> <li>• Very important to the heritage of the region.</li> </ul>

		<ul style="list-style-type: none"> <li>• High degree of integrity/ authenticity.</li> <li>• Multi-component site and objects</li> <li>• High research potential</li> </ul>
Moderate	3	<ul style="list-style-type: none"> <li>• Contributes to the heritage of the locality and region</li> <li>• Has some altered or modified elements, not necessarily detracting from the overall significance of the place.</li> <li>• Forming part of an identifiable local distribution or group.</li> <li>• Research potential.</li> </ul>
Low	2	<ul style="list-style-type: none"> <li>• Isolated minor finds in undisturbed primary context, with diagnostic materials</li> <li>• Makes some contribution to the heritage of the locality, usually in the combination with similar places or objects</li> </ul>
Little	1	<ul style="list-style-type: none"> <li>• Makes little contribution to the heritage resources of the locality.</li> <li>• Heritage resources in a disturbed or secondary contexts, without diagnostic or associated heritage.</li> </ul>
Zero/ no significance	0	<ul style="list-style-type: none"> <li>• Absence of heritage resources</li> <li>• Highly disturbed or secondary context, without diagnostic or associated heritage</li> </ul>

## **Paleontology**

No sites of paleontological value are located within this EPL.

Nature of Impacts: No sites are located within the EPL; therefore, no impacts are anticipated.

Extent of Impact: Due to the lack of paleontological sites within this area, the extent of impacts will be zero.

<b>Level of significance</b>	<b>Grading</b>	<b>Description</b>
Exceptional/upper higher	5	<ul style="list-style-type: none"><li>• Major national heritage resources.</li><li>• Rare &amp; outstanding example.</li><li>• Containing unique evidence of high regional &amp; national significances.</li></ul>
Considerable high	4	<ul style="list-style-type: none"><li>• Very important to the heritage of the region.</li><li>• High degree of integrity/ authenticity.</li><li>• Multi-component site and objects</li><li>• High research potential</li></ul>
Moderate	3	<ul style="list-style-type: none"><li>• Contributes to the heritage of the locality and region</li><li>• Has some altered or modified elements, not necessarily detracting from the overall significance of the place.</li></ul>



		<ul style="list-style-type: none"> <li>• Forming part of an identifiable local distribution or group.</li> <li>• Research potential.</li> </ul>
Low	2	<ul style="list-style-type: none"> <li>• Isolated minor finds in undisturbed primary context, with diagnostic materials</li> <li>• Makes some contribution to the heritage of the locality, usually in the combination with similar places or objects</li> </ul>
Little	1	<ul style="list-style-type: none"> <li>• Makes little contribution to the heritage resources of the locality.</li> <li>• Heritage resources in a disturbed or secondary contexts, without diagnostic or associated heritage.</li> </ul>
Zero/ no significance	0	<ul style="list-style-type: none"> <li>• Absence of heritage resources</li> <li>• Highly disturbed or secondary context, without diagnostic or associated heritage</li> </ul>

### **Prehistoric**

This EPL site shows no signs of pre-contact sites in the investigated area.

Nature of Impacts: The development can result in the localized uncovering of sites from the pre-contact era.

Extent of Impacts: Taking into account the lack of sites in the study area these impacts can be seen as minimal.

Level of significance	Grading	Description
Exceptional/upper higher	5	<ul style="list-style-type: none"> <li>• Major national heritage resources.</li> <li>• Rare &amp; outstanding example.</li> <li>• Containing unique evidence of high regional &amp; national significances.</li> </ul>
Considerable high	4	<ul style="list-style-type: none"> <li>• Very important to the heritage of the region.</li> <li>• High degree of integrity/ authenticity.</li> <li>• Multi-component site and objects</li> <li>• High research potential</li> </ul>
Moderate	3	<ul style="list-style-type: none"> <li>• Contributes to the heritage of the locality and region</li> <li>• Has some altered or modified elements, not necessarily detracting from the overall significance of the place.</li> <li>• Forming part of an identifiable local distribution or group.</li> <li>• Research potential.</li> </ul>
Low	2	<ul style="list-style-type: none"> <li>• Isolated minor finds in undisturbed primary context, with diagnostic materials</li> <li>• Makes some contribution to the heritage of the locality, usually in the combination with similar places or objects</li> </ul>

Little	1	<ul style="list-style-type: none"> <li>• Makes little contribution to the heritage resources of the locality.</li> <li>• Heritage resources in a disturbed or secondary contexts, without diagnostic or associated heritage.</li> </ul>
Zero/ no significance	0	<ul style="list-style-type: none"> <li>• Absence of heritage resources</li> <li>• Highly disturbed or secondary context, without diagnostic or associated heritage</li> </ul>

### **Post-Contact Heritage**

In general, EPL area forms part of the general Nama historic landscape associated with the war of national resistance(WNR), white settlers, farming, historical and contemporary built heritage. As a result, the EPL cultural landscape features many graves that belongs to the combatants of the WNR.

Nature of Impacts: No impacts.

Extent of Impacts: None anticipated

### **Impact statement**

#### **Paleontological sites**

No paleontological sites of high value could be identified at this EPL.

#### **Mitigation**

No mitigation is recommended

### **Archeological sites**

No archaeological sites were identified. Possible sub-surface sites could be disturbed by future mining activities.

### **Mitigation**

No mitigation is recommended.

### **Built Environment**

Heritage sites associated with the built environment is located within this EPL area. However, they are away from the targeted EPL area.

### **Mitigation**

No mitigation is recommended.

These HIA report shows that graveyard are in a constant state of decay from the natural process of weathering. It is important therefore to record the location and gather detailed information of every memorial before this data is lost as a result of this natural decaying process.

<b>Scale</b>	<b>Vulnerability Description</b>
0	Not vulnerable
1	No threat posed by current or proposed development activities.
2	Low or indirect threat from possible consequences of development (e.g. soil erosion).
3	High likelihood of partial disturbance or destruction due to close proximity of development.
4	Direct and certain threat of major disturbance or total destruction.

Table 4: The vulnerability rating developed by the Quaternary Research Service, (After Kinahan 2012).

The proposed development will not interfere with the graves located within the EPL areas. There is no existing Heritage Management Plan for the graves in the current state although.

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

Table 5: Definition of reversibility ratings Irreversible developed by the Quaternary Research Service

## 10. CONCLUSIONS AND RECOMMENDATIONS

The cultural landscape exemplifies a hunter-gatherer lifestyle of deep antiquity, designed to survive an extreme environment and live respectfully with nature. The rich heritage resources demonstrate the linkages between material culture and the environment. The identified graves resources should be maintained in situ as far as is feasible. According to the results of the current HIA including the desktop study; the majority of the proposed development is situated within a cultural landscape dotted with human history area and no remains of paleontological significance that require mitigation was mapped during this exercise. The heritage resources of the cultural landscape have been affected by existing and previous land use. This report concludes that the proposed development may be approved by NHC to proceed as planned subject to conditional parallel development of a Heritage Management Plan for the identified heritage resources.

- It is proposed that a Heritage Management Plan for the war graves and memorial sites should be developed and indicated on the development map. The recorded heritage resources must be avoided with a 30 m buffer zone.

- Mechanisms must therefore be put in place to make sure that the development of the area will not affect the identified burial site.
- Relocating is not necessary under the current context.
- Traditional leadership of the area should be engaged as part of the respect for the Intangible Cultural beliefs of the local religious and spiritual custodians.
- As a condition of approval, a Heritage Management Plan (HMP) should be developed for the project. The HMP should be developed in consultation with stakeholder and outline detailed procedures how heritage resources identified in this HIA before, during, and after the development will be managed.
- The identified gravesites (burial grounds) should be registered on the NHR to reflect their existence.
- The EPL area should be monitored by a heritage specialist during all phases of the development and before exploration commencing, the final layout should be subjected to a heritage walkthrough.
- These recommendations will form part of the heritage monitoring measures in the project HMP and chance finds procedures for the development phase.

- **APPENDIX A: Chance find Procedure**

- **A. Responsibility:**

Operator	To exercise due caution if archaeological remains are found
Foreman	To secure site and advise management timeously
Superintendent	To determine safe working boundary and request inspection
Archaeologist	To inspect, identify, advice management, and recovers remains

**B. Procedure:**

Action by the person (operator) identifying archaeological or heritage material

- (a) If operating machinery or equipment: stop work
- (b) Identify the site with flag tape
- (c) Determine GPS position, if possible
- (d) Report findings to foreman

**C. Action by foreman:**

- (a) Report findings, site location and actions are taken to the superintendent
- (b) Cease any works in the immediate vicinity

**D. Action by superintendent**

- (a) Visit the site and determine whether work can proceed without damage to findings;
- (b) Determine and mark the exclusion boundary
- (c) Site location and details to be added to the Archaeological Heritage database system.

**E. Action by archaeologist**

- (a) Inspect site and confirm the addition to AH database system;
- (b) Advise National Heritage Council and request a permit to remove findings;
- (c) Recovery, packaging and labeling of findings for transfer to National Museum

**F. In the event of discovering human remains**

- (a) Actions as above;
- (b) Field inspection by archaeologist to confirm that remains are human;
- (c) Advise and liaise with NHC Guidelines; and
- (d) Recovery of remains and removal to National Museum or National Forensic Laboratory, or as directed.

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