



# National Heritage Council of Namibia

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Secretariat

Receipt No. **6088**

CASH RECEIPT

Customer

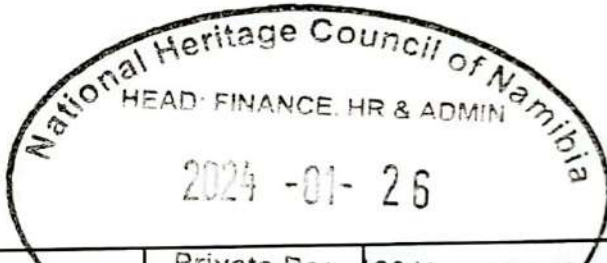
Date: 26/01/2024

Full Name: KOBOLD METALS NAMIBIA PTY LTD

Postal Address: BOX 3300

City: WINDHOEK

Phone: +264813083774



Quantity	Description	Private Bag 12043 Ausspannplatz Windhoek, Namibia Unit Price	TOTAL
1X	APPLICATION FEES - HIA CONSENT LETTER FOR EPL NO's 9054, 9058, 9056, 9063, & 9064, LOCATED AT WARMBAD DISTRICT, KARAS.		N\$ 150 -00

Amount in Words: ONE FIVE ZERO N\$ ONLY

Receipt Issued by: [Signature]

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# 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

REXOLD 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 NEKARE



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

M.A. 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 9054, 9058, 9056, 9063, 9064  
located within the communal district  
Karas Region, Namibia  
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 NEKALE (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 [Signature] dated 26/10/2023



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

CONSENT

**A PHASE 1 REPORT ON HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED  
EXPLORATION ACTIVITIES ON EPL 9054,9058,9056, 9063, 9064, LOCATED WITHIN  
THE WARMBAD 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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**Christian Nekare**

**(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

The aim of this Heritage Impact Assessment (HIA) study was to determine the presence of heritage resources such as archaeological, historical sites, graves and places of spirituality and cultural significance, and to submit appropriate strategies with regard to the Heritage Management Plan (HMP) that may be required. One of the most dominant and important heritage features in this EPL area are the graveyards that are distributed across the cultural landscape, especially in the valley, where human settlement is located. It is vital therefore that graves should never be moved from their original position within the EPL areas, as doing so will violate the customary code and values that governs social norms with respect to human remains. Since 1990, human remains and body parts have featured significantly in debates in Namibia and disputes over how aspect of these heritage should be remembered and how this heritage is relevant to the land questions. In the same period, the presence of these heritage remains contributes greatly to the historic character of the cultural landscape. Erosion of the graves is inevitable; therefore, it is important that HIA be undertaken as this will ensure protection of these heritage resources during explorations. Most graves are relatively small in physical structure, it is important therefore to map the location and gather detailed information of every graves before this data is lost.

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 9054,9058,9056, 9063, 9064, located within the Warmbad district, //Kara region, Namibia.

The recent peopling of the region dates back to the Stone Age (Williams,1981). The cultural landscape is part of an existing natural resources endowed land. In essence, commercial oriented farming system, currently dominate the //Karas Region. These system is generally based on a broad variety of activities like livestock and grape farming. Efforts to protect heritage in Namibia are escalating, yet mining is recognized for its leading role as a catalyst for economic growth. These region, like every Namibian region, is a cultural landscape where previous HIA outlined the availability of diverse heritage resources (Eliot, 2023). All burial grounds and graves are protected by law irrespective of their age in Namibia. Furthermore, these are the regulations, which control handling and management of human remains and grave goods. Colonialism left behind footprints of legacies and heritages on the cultural landscape.

Under the new dispensation, heritage protection has progressed so much and heritage is considered as a lever for sustainable development. Despite all these reasons to protect heritage, heritage sites are often threatened by human activities. In the context of the EPL Areas, there are war graves and the cultural landscape is recognised as places steeped in heritage and legacy connected to Namibia's past.

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

The purpose of the National Heritage Act (No. 27 of 2004) is to recognize and promote heritage resources by outlining principles for conservation and development. The main objective of this Act is to identify and conserve heritage resources which are of cultural heritage significance. The Act sets out processes for the management of the State Register of Heritage resources, including the establishment of a National Heritage Council. The purposes of this Council include

safeguarding heritage resources, advising the Minister, guiding the public authorities on best practice, promoting public awareness and administration of the heritage resources.

The National Environmental Management Act (No.7 of 2007) and its regulations (2012) addresses matters of National Environmental Significance under the Act include heritage items listed under the National Heritage List. Ministerial approval is required under the Act for proposals involving significant impacts to National heritage resources.

#### **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.

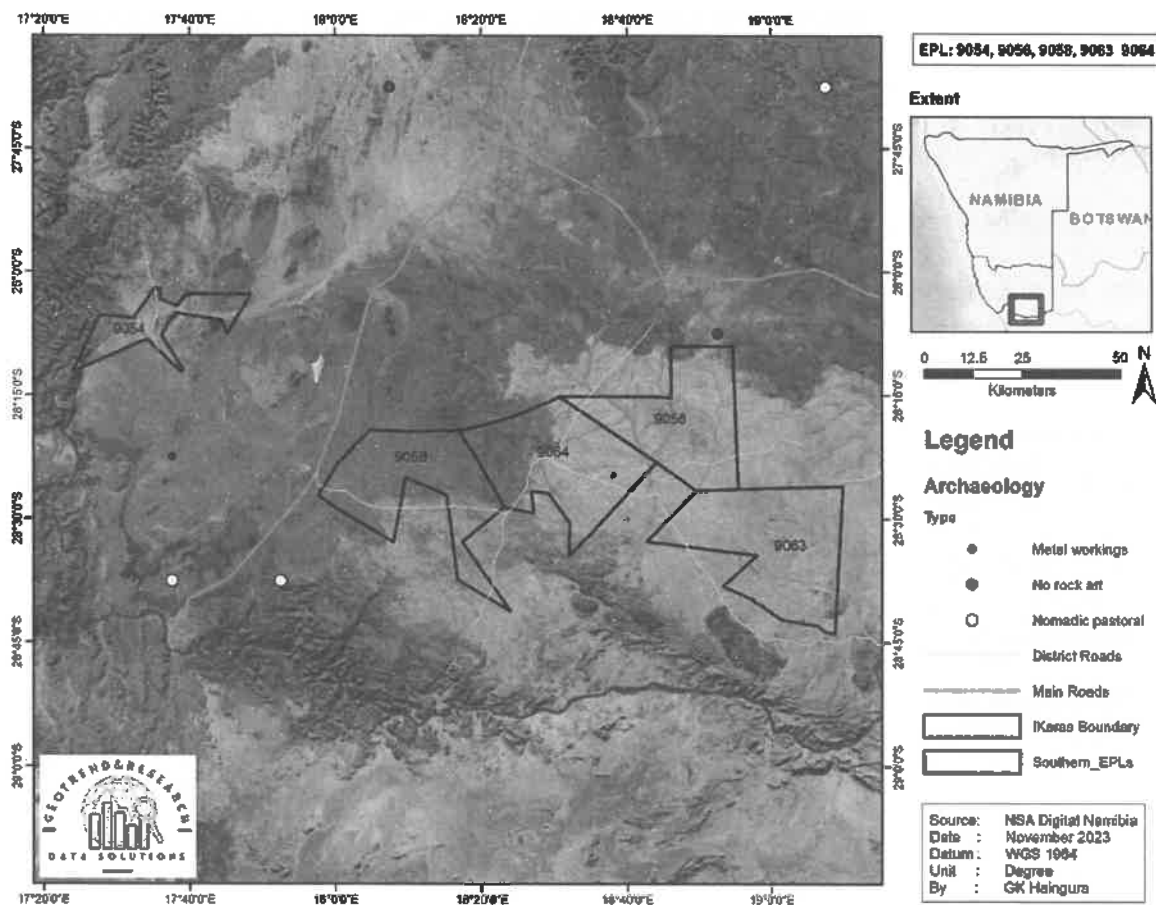


Figure 2: Overview of heritage sites in the EPL area: (Credit: Geotrend, 2023).

## 5. THE RECEIVING ENVIRONMENT.

Given the evidence that fully modern man emerged in sub-Saharan Africa. Apollo 11 Cave was first elaborated by Wendt in the early 1970s. The findings from the cave brought globally attention onto Namibia as a potential cradle for man, situated along the upper Nuob River in the Huns Mountains, Karas region. Accounts of archaeological work are invariably highlighted by the carbon 14 dates obtained from samples of charcoal in the region, the dates received from various excavations in the region, pinpointed an unprecedented time sequence for climatic changes (Kinahan, 2003). Supplemented by the fossils, found at Arrisdriфт, an ancient site on the Orange river, which revealed that animals requiring humid conditions had

lived there some 30 million years ago (Sandelowsky, 2004). The observations that had been made so far only allowed the reconstruction of river courses, which once upon a time carried surface water to the sea until their flows were blocked by sand dunes. The findings of stone tools in the region had to be pushed back that much further and the same early human species may have made the well-shaped hand axes and cleavers discovered in the region (Kinahan, 2005). Therefore, the prehistoric horizon is subdivided into three eras according to archaeologists working in Namibia.

**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.

Warmbad is one of the oldest towns in Namibia. It was first occupied by traders, hunters, and missionaries of different congregations and the hot springs from which the settlement's name is derived were first explored at the beginning of the 20th century. In 1805 two missionaries

from the London Missionary Society, Abraham and Christian Albrecht, initiated the erection of a church and a pastor's house, thereby establishing the first mission station in South West Africa. The local Orlam community under the leadership of Jager Afrikaner soon became angry about the European influence and destroyed both buildings in 1811. In 1834 the missionary Edward Cook entered the area and erected a new missionary building on the foundations of the destroyed buildings. After Germany declared its territorial rights over South West Africa, barracks was built in Warmbad in 1905, and Schutztruppe soldiers were stationed at the settlement to counter the Herero and Nama uprising.

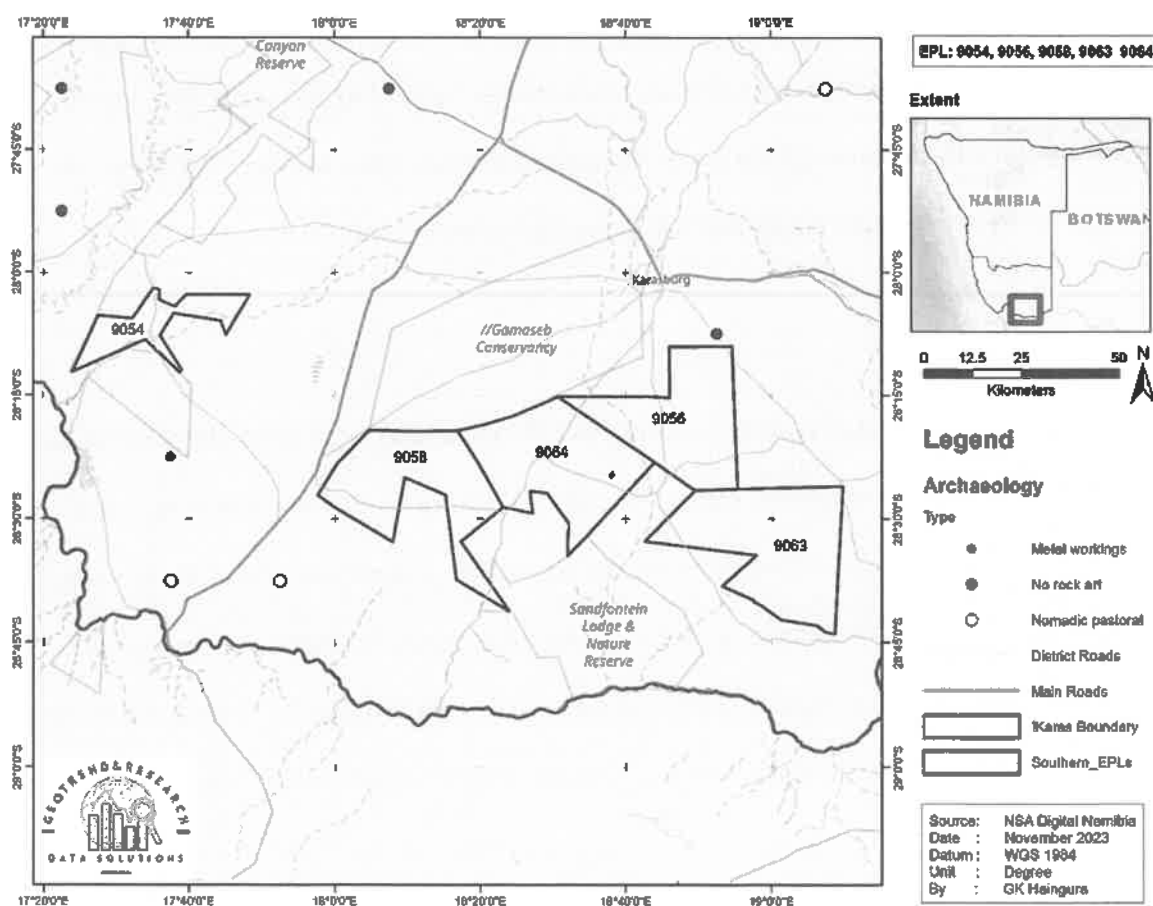


Figure 3: Locality of the proposed EPL 9054, 9056, 9058, 9063, 9064 (Credit: Geotrend,

2023).

## 6. DESCRIPTION OF THE AREA

The EPL areas lies in the Warmbad district, located between two climatic zones: the coastal desert climate and the cold Karoo. The EPL areas can be easily accessed from Karasburg through well-sealed gravel road from Karasburg to the farms. In the middle of the EPL areas there are further gravel roads giving access to the entire EPL areas. All of these roads are perfectly drivable. The altitude of the licence area varies from around 200 metres near the Orange River to over 1000 metres on top of some of the hills. The topography heritage is best described as moderate to high topographical relief. The EPL areas have clusters of built heritage. Although, some of the built heritage are abandoned and dilapidated (*The hot springs of Warmbad*). These heritage resources are of significant values like the grave for Christian Abraham and remembrance site for Jacob Marenga. There are also a number of WWI graves of both Allied and German troops that fell during the battle of Sandfontein.

## 7. FINDINGS

There are valuable heritage resources recorded in EPL area and most of these identified heritage resources are graves. These graves present diverging stories connected to the broader cultural landscape. The surface was scanned for possible stone tools scatters and utilized the best possible technologies for HIA. The findings were documented through photographs. A Samsung GPS Logger (2018) was used to record the heritage finds on site (Nekare, 2023). Table 1 shows the coordinates and descriptions of the heritage resources located within the EPL area.



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

<b>Heritage Resources</b>	<b>Coordinate GPS</b>	<b>Status</b>	<b>Protection Afforded</b>
Site 1 within EPL 9056: A family burial ground on the farm (Gootkails), located in the same area with the farm houses. Still in use.	S 28.38908° E 18.85887°	Known to the owner, yet to be noted by the NHC and yet to feature on its NHR. Inside the EPL area.	Inactive, no statutory protection.
Site 2 within EPL 9056: A family burial ground on the farm (Khais noord), located in the same area with the farm houses. Still in use.	S 28.38895° E 18.85565°	Known to the owner, yet to be noted by the NHC and yet to feature on its NHR. outside the EPL area.	Inactive, no statutory protection.
Site 3 within EPL 9056: Farm family graveyard	At farm Luizelhohe	Known to the owner, yet to be noted by the NHC and yet to feature on its NHR.	Inactive, no statutory protection.
Site 4 within EPL 9056: A family burial ground on the farm.	At farm Dategabis.	Known to the owner, yet to be noted by the NHC and yet to feature on its NHR.	Inactive, no statutory protection.
Site 5 within EPL 9056: A family burial ground on the farm.	At farm Ortmansbaum oos.	Known to the owner, yet to be noted by the NHC and yet to feature on its NHR.	Inactive, no statutory protection.
Site 1 within EPL 9064: A family burial graveyard. located in the same area with the farm houses	At farm Nieuwefontein West	Known to the owner, yet to be noted by the NHC and yet to feature on its NHR.	Inactive, no statutory protection.

Site 2 within EPL 9064: A family burial graveyard. located in the same area with the farm houses	At farm Haldenwang.	Known to the owner, yet to be noted by the NHC and yet to feature on its NHR.	Inactive, no statutory protection.
Site 1 within EPL 9058: A family burial graveyard. located in the same area with the farm houses	At farm Bruinheuwel	Known to the owner, yet to be noted by the NHC and yet to feature on its NHR.	Inactive, no statutory protection.
Site 1 within EPL 9054: A family burial graveyard. located in the same area with the farm houses	At farm Kanebeam	Known to the owner, yet to be noted by the NHC and yet to feature on its NHR.	Inactive, no statutory protection.
Site 1 in Warmbad, Grave of Chief Abraham Christian ( <i>A celebrated Namibian hero</i> ) and surrounded by major built historical building in the area.	S 28.44728° E 18.72426°	Noted by the NHC and feature on its NHR. Outside the EPL area	Inactive, no statutory protection.
Site 2 Remembrance shrine of Jacob Marenga ( <i>A celebrated Namibian hero</i> ). Surrounded by mass graves of fallen Germany soldiers and allied forces of WWII.	S 28.44195° E 18.73204°	Noted by the NHC and feature on its NHR. Outside the EPL area	Inactive, no statutory protection.

**Site 1 within EPL 9056:**



**Figure 1: Views of family graveyard. Well maintained and fenced.**



**Figure 2: View of grave still in good condition.**



**Figure 3: View of Remembrance shrine of Jacob Marenga.**

**Outside the EPL area**



**Figure 4: View of the grave of Abraham Christian.**

**Outside the EPL area**

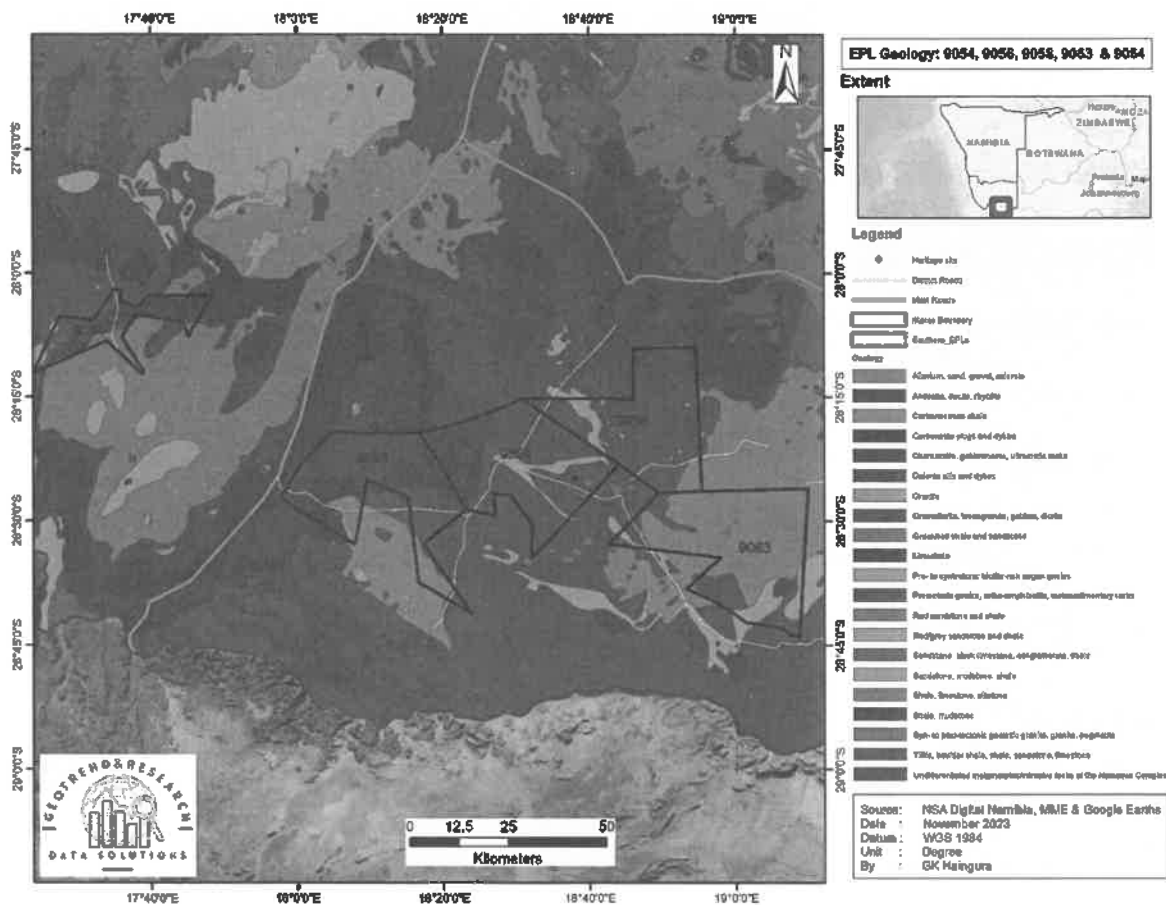


Figure 4: Geology of the proposed EPL 9054, 9056, 9058, 9063, 9064, (credits: Geotrend, 2023).

## 8. GEOLOGY OF THE AREA

The highly deformed Namaqua Metamorphic Complex, which covers an extensive part of southern Namibia, and the volcano-sedimentary Sinclair Sequence of central Namibia were formed between 1,800 Ma and 1,000 Ma. Major shear zones, or large fault zones, such as the Tantalite Valley shear may be over 500 km long and were the loci for the emplacement of mafic intrusions and pegmatites (Kartun,1979). In the south-eastern Karas Region, to the south of the town of Karasburg and extending to the Orange River, expansive outcrops of Mokolian basement rocks occur. The town of Warmbad is centrally situated in this area. An area stretching generally

north-east from the Orange River boundary of the /Ai-/Ais Park past the Grünau–Holoogberg area to farm Naauwpoort 304 is also predominantly underlain by basement.

## 9. IMPACT ASSESSMENT (FIELD ASSESSMENT)

The HIA used the guidelines below to assess the significance of each identified heritage resources in the EPL areas. This was done by subjecting each heritage resources to grading and applied to determine the significance of the mapped heritage resources. Significance is described as follows:

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

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> </ul>

		<ul style="list-style-type: none"> <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.

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> </ul>



		<ul style="list-style-type: none"> <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**

The many graves feature across the cultural landscape of the EPL areas, most graves have formal dressings such as names and dates. The graves are in a good state and well maintained. Most are fenced off. In the EPL areas historical and contemporary structures are found in the valleys within the EPL walking distance from the mountains that are of mineral values, forming a natural exclusion zone.

Nature of Impacts: No impacts are anticipated.

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 the larger cultural landscape of the EPL area is already experiencing greater vulnerability. The study concluded that the located burial grounds are in good condition while many built heritage are in a dilapidated condition. However, these potential heritage resources are located far from the proposed targeted area, as a result, posing no threat to the existence of heritage resources situated inside and outside location of the EPL area.

<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 impact of the proposed development on the graves is rated as minimum as most of these resources are located in the valleys and will be mapped on development maps, so that they are avoided during the exploration phases. All the graves sites will not be impacted on by mining activity as they occur distant from the targets for exploration.

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

In conclusion the cultural landscape around Warmbad settlement serves as an important source of built heritage database in Namibia. A variety of outstanding heritage sites are known to occur in the larger region. These range from antiquity to historic heritage materials, this HIA identified heritage resources with different heritage significance ratings within the concerned areas. The nature of the identified sites are mainly burial sites and historical structures. Where coordinates are missing, occurring of graves information was obtained from the owner of the farms telephonically. During the development phase, it is important to recognize any significant material being unearthed, making the correct judgment on which actions should be taken:

- 200-meter Radius buffer zone be observed around the coordinates of the mapped potential heritage sites.
- A heritage practitioner should be appointed to develop a HMP for the EPL areas as well as team leaders in the identification of heritage resources and artefacts during development phase. It is proposed that the graves and memorial sites should be indicated on the development map.
- Should a heritage resources be discovered during exploration, the area should be demarcated and the qualified heritage practitioner will then need to come out to the site and evaluate the extent and importance of the heritage resources and make the necessary recommendations for mitigating the find and impact on the heritage resource.
- The recorded heritage resources must be avoided with a 30 m buffer zone.
- 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.

It is recommended that the following chance find procedure should be implemented.

- **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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