



PGS
HERITAGE

Proposed Searcher West Coast 3D Reconnaissance Project

Project Name: ZA24-010_Orange Basin MC3D MSS

Located offshore extending from approximately 256km offshore of St Helena Bay to 220km offshore of Hondeklip Bay, Off the West Coast, South Africa.

Heritage Impact Assessment

Template Number	Document Number	Revision	Date
PGS PJ REP 007 01	798HIA-001	1.0	12 June 2024



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REVISION HISTORY

Version	Issue Date	Description of Changes
001	23 July 2024	First draft

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Declaration of Independence

- I, Wouter Fourie, declare that –
- General declaration:
- I act as the independent heritage practitioner in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting heritage impact assessments, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in section 38 of the NHRA when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- All the particulars furnished by me in this form are true and correct;
- I will perform all other obligations as expected from a heritage practitioner in terms of the Act and the constitutions of my affiliated professional bodies; and
- I realise that a false declaration is an offence in terms of regulation 71 of the Regulations and is punishable in terms of section 24F of the NEMA.

Disclosure of Vested Interest

- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations;

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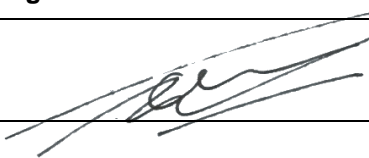
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ACKNOWLEDGEMENT OF RECEIPT

Report Title	The Proposed Searcher ZA24-010_Orange Basin MC3D MSS project			
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EXECUTIVE SUMMARY

PGS Heritage (Pty) Ltd was appointed by Environmental Impact Management Services Consulting (Pty) Ltd (EIMS) on behalf of Searcher Geodata UK Ltd (Searcher) to undertake a Heritage Impact Assessment (HIA) that forms part of the Basic Environmental Assessment (BA) for the proposed Searcher ZA24-010_Orange Basin MC3D MSS Project, located offshore extending from approximately 256km offshore of St Helena Bay to 220km offshore of Hondeklip Bay, Off the West Coast, South Africa. Searcher Seismic is currently undertaking 3D seismic surveys off the West Coast of South Africa. They are submitting a new application to return in the new season starting at the end of 2024 beginning of 2025 to return to the same area.

Site Name

Searcher West Coast 3D Reconnaissance Project

Site Location

The proposed project is located offshore extending from approximately 256km offshore of St Helena Bay to 220km offshore of Hondeklip Bay, Off the West Coast, South Africa.

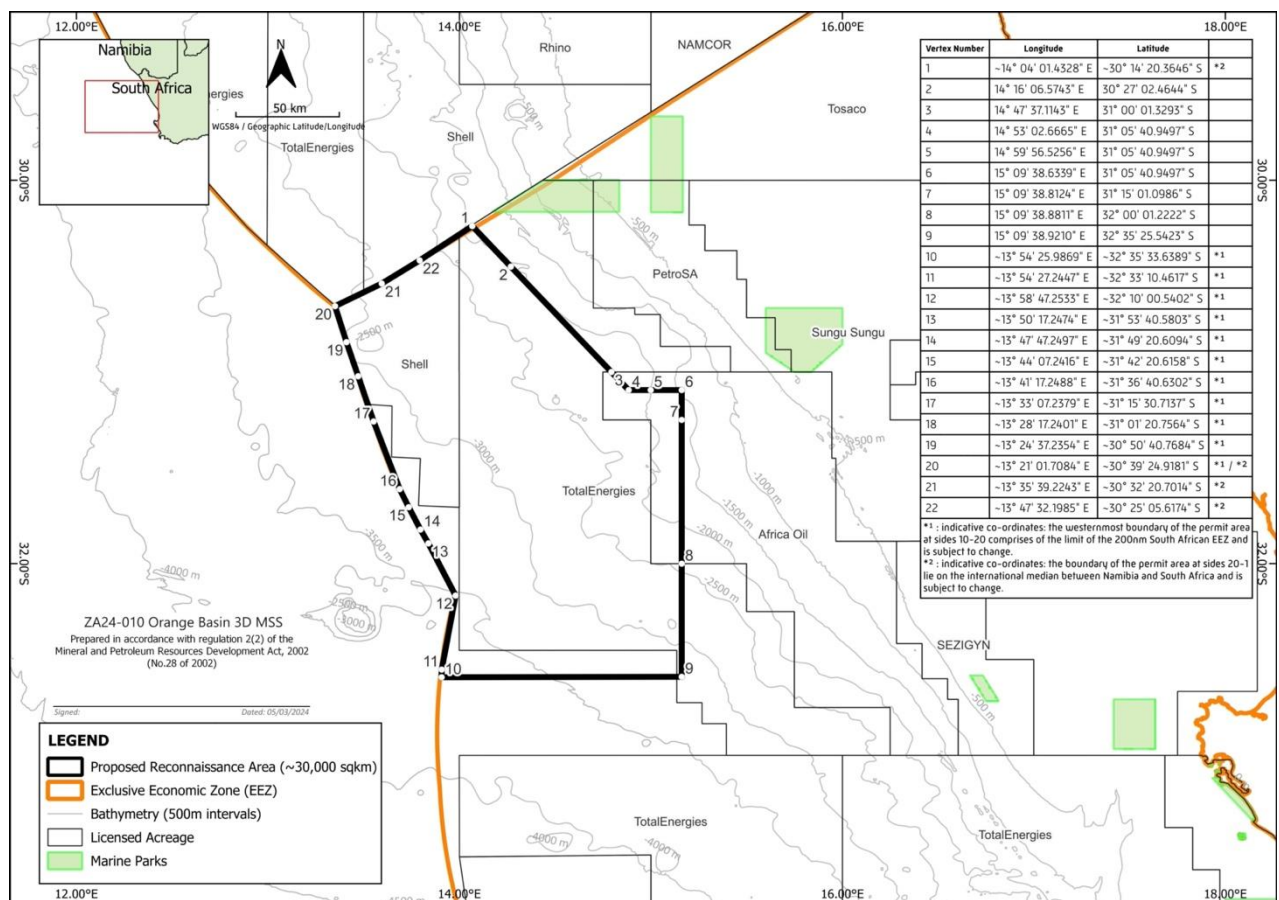


Figure 1 – Map indicating the location of the proposed survey project (green polygon) (source: EIMS).

Heritage Statement

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A large section of the affected communities not only view them as small-scale fishers but also as indigenous people and, as such, are intrinsically linked to the ocean and the land they have lived on for centuries. The resurgence movement through which Khoi and San descendants are reclaiming their identity has, in recent decades, afforded these communities the ability to re-establish their cultural roots and grounding in an ancient landscape. This sentiment is echoed in the founding affidavit submitted (5 Feb 2022) during the appeal submitted to the first Searcher application by CJ Adams. It notes that the ocean is not only important for fishing but also has spiritual meaning and is a place of healing and holds healing powers for the indigenous communities. It further expanded that the ocean and its resources play an important part in their community's history and heritage. Boswell et al (2023) further expanded in detail on this.

Community identity and culture are thus strongly linked to the ocean and what it can provide, physically and spiritually. Communities have coexisted with the ocean for generations. This existence has created a culture and heritage that defines their way of living, community, and kinship unique to the West Coast of South Africa. Cook (2001) describes this as maritimity, a process whereby the sum of cultural adaptations made by coastal populations becomes imbued with meaning and culture. This is evident in community structures, cultural events, and seasonal activities.

The public meetings and focused discussions with communities and their constituents have shown that these communities and groupings are struggling economically due to decades of turmoil in the fishing industry. An industry plagued by the closing of fish processing plants, fishing licence and quota issues, and diminishing catches due to environmental and industrial impacts, to name a few. This economic downturn leads to social issues within the communities. Foremost are poverty, loss of social fabric, substance abuse, teenage pregnancies, and violence. In all the interviews, the above issues were raised as central to their social existence and community experience.

As with Smith (2015), Loulanksi (2006), and Ndoro (2015) emphasised that culture is more than just the tangible but is also shared beliefs, values, language, traditions, functionality, meaning and community connections. Considering the various values and heritage significance as listed in section 3(3) of the NHRA, the cultural and living heritage associated with the communities and indigenous people along the southwestern and west coast of South Africa holds heritage significance. It is part of the national estate and holds importance as a way of life for small-scale fishers and Khoisan descendants alike. The physical and spiritual interaction with the ocean and the shorelines through millennia resulted in a maritimity that developed into the cultural fabric as they experience it today.

Through further research, the significance of such intangible and living cultural heritage features can have a combined heritage grading of Grade II or even Grade I. However, grading inevitably implies investigating and considering a Provincial or Heritage declaration of significance for a largely intangible cultural heritage that is to be taken up by the National and Provincial Governments.

Impact Statement

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The scientific studies conducted for this project identified impacts on the fishing stock as low for all types species.

By inference, a potential impact on fishing yield could be expected and thus potential economic impact on communities due to reduced caught fish volumes.

We considered that the recommended mitigation measures, as listed in the specialist reports for the project, focus on the reduction of impacts on fish species and the projected reduction of the impact on the commercial and small-scale fishery catch yield. These mitigation measures should then indirectly result in low impact on the cultural heritage of the communities.

By using the impact assessment methodology as provided by EIMS, we can project a pre-mitigation negative impact on a regional scale over the long term with a moderate intensity due to the potential indirect impact on the communities and, ultimately, their heritage, with a high probability of this impact occurring. The pre-mitigation impact on heritage resources is rated as MEDIUM. The potential residual impact on heritage resources, with mitigation measures from the scientific studies is projected as LOW with a medium confidence factor.

At this stage, cumulative impacts are purely speculative. Still, the potential for the future increase in cumulative impacts due to current and future seismic surveys and the potential for future Oil and Gas production cannot be excluded but is not quantifiable at this stage for cultural heritage.

Recommendations

The following recommendations are based on the UNESCO ICH guidelines and were presented for implementation during the original studies conducted in 2022 (Fourie, 2022). They are aimed at safeguarding the cultural heritage of the small-scale fishers and cultural groupings in the influence of this project and should now be implemented:

- Re-assess post-project the potential effects on the identified communities and their intangible cultural heritage. This will require consideration of the socio-economic baseline developed **during the previous survey** and this environmental impact process. Based on the outcomes, provide resources and support to enhance the mitigation capacity of communities' intangible cultural heritage by fostering dialogue, mutual understanding and reconciliation between and within communities.
- Based on the outcomes, **provide resources and support for communities** to develop and undertake safeguarding measures or plans to enhance the **mitigation capacity of their intangible cultural heritage** by **fostering dialogue, mutual understanding and reconciliation** between and within communities.
- Additional to the above the recommendations as proposed by Boswell et al (2023) should be implemented:

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- It is suggested that particular proposals be put forth to the cross-sectoral and conventional leadership group, to seek rituals or events that could potentially reduce the adverse cultural consequences of the planned activities on cultural heritage.
- Dedicated resources should be set aside for consultations and the proposed ritual/event, as these may not be once-off ritual processes even if the prosecuting operations are short-term.
- Undertakings ought to be put in place to visibly demonstrate appreciation for regional cultural perspectives, and to work towards realising the indigenous population's entitlement to human dignity, as highlighted by both the Constitution of South Africa, the National Health Act (NHRA), and the Indigenous Knowledge Act.
- Any shipwrecks or pieces thereof noted during the survey must be shared with the SAHRA MUCH Unit for inclusion into the national database.

Considering the assessment based on the fieldwork findings and the scientific studies relating to the impact on fisheries, we are of the opinion that the proposed project's impact on tangible and intangible cultural heritage resources and practices can be mitigated through the implementation of the recommendations in this report.

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TERMINOLOGY AND ABBREVIATIONS

Archaeological resources

This includes:

- material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years including artefacts, human and hominid remains and artificial features and structures;
- rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation;
- wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the republic as defined in the Maritimes Zones Act, and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation;
- features, structures, and artefacts associated with military history which are older than 75 years and the site on which they are found.

Cultural significance

This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic, or technological value or significance

Development

This means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place or influence its stability and future well-being, including:

- construction, alteration, demolition, removal or change in use of a place or a structure at a place;
- carrying out any works on or over or under a place;
- subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
- constructing or putting up for display signs or boards;
- any change to the natural or existing condition or topography of land; and
- any removal or destruction of trees, or removal of vegetation or topsoil

Early Stone Age

The archaeology of the Stone Age between 700 000 and 2 500 000 years ago.

Fossil

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Mineralised bones of animals, shellfish, plants, and marine animals. A trace fossil is the track or footprint of a fossil animal that is preserved in stone or consolidated sediment.

Heritage

That which is inherited and forms part of the National Estate (historical places, objects, fossils as defined by the National Heritage Resources Act 25 of 1999).

Heritage resources

This means any place or object of cultural significance and can include (but not limited to) as stated under Section 3 of the NHRA,

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, and
- sites of significance relating to the history of slavery in South Africa;

Holocene

The most recent geological period which commenced 10 000 years ago.

Late Stone Age

The archaeology of the last 30 000 years associated with fully modern people.

Late Iron Age (Early Farming Communities)

The archaeology of the last 1000 years up to the 1800's, associated with iron-working and farming activities such as herding and agriculture.

Middle Stone Age

The archaeology of the Stone Age between 30 000-300 000 years ago, associated with early modern humans.

Palaeontology

Any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace.

Abbreviations	Description
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AIA	Archaeological Impact Assessment
ASAPA	Association of South African Professional Archaeologists
CRM	Cultural Resource Management
ECO	Environmental Control Officer
EIA practitioner	Environmental Impact Assessment Practitioner
EIA	Environmental Impact Assessment
EIMS	Environmental Impact Management Services Consulting (Pty) Ltd
ESA	Early Stone Age
GPS	Global Positioning System
HIA	Heritage Impact Assessment
HWC	Heritage Western Cape
I&AP	Interested & Affected Party
LSA	Late Stone Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act
NHRA	National Heritage Resources Act
PHS	Provincial Heritage Site
SADC	Southern African Development Community
SAHRA	South African Heritage Resources Agency
Searcher	Searcher Geodata UK Ltd

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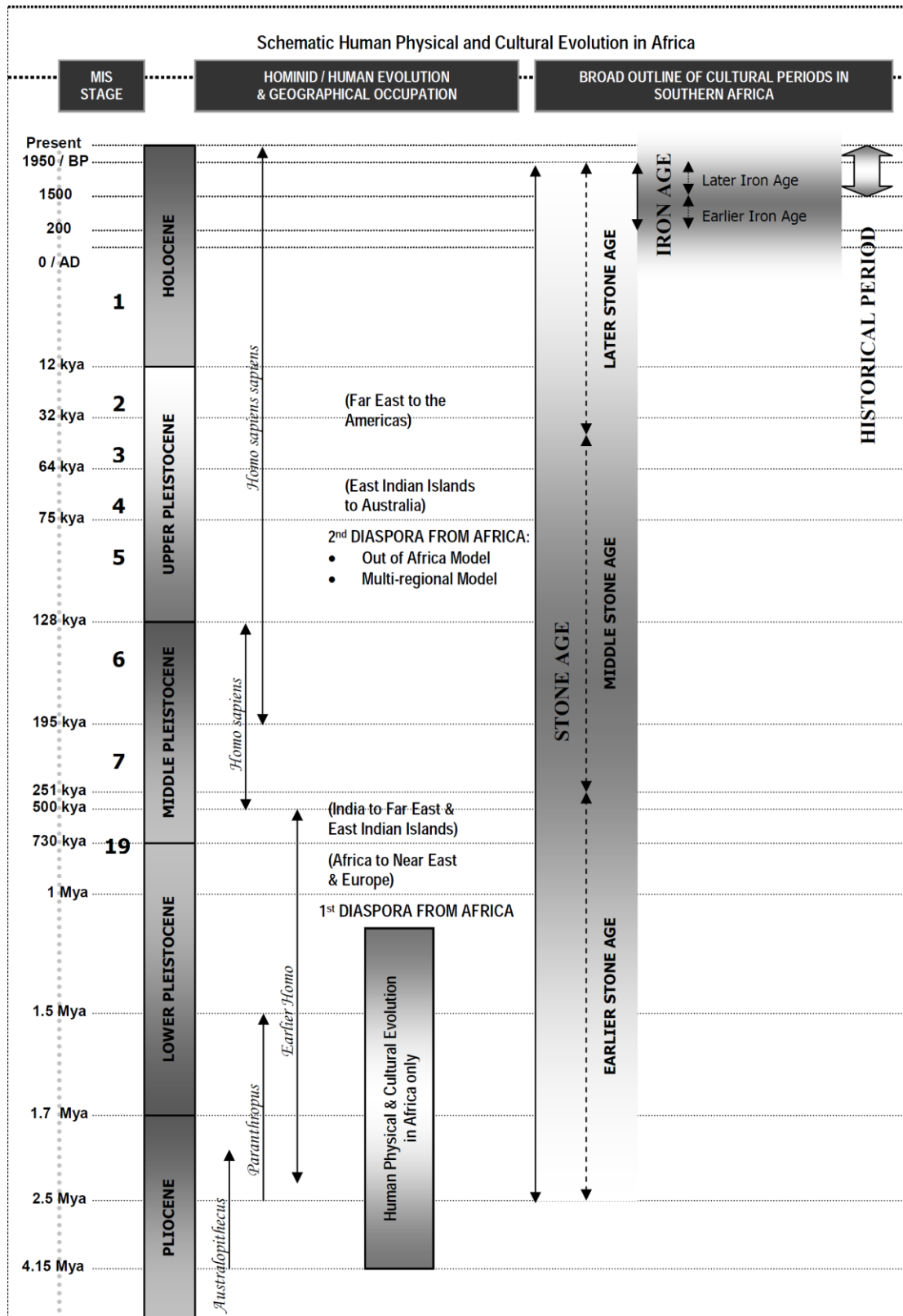


Figure 2 – Human and Cultural Timeline in Africa

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1 INTRODUCTION

PGS Heritage (Pty) Ltd was appointed by Environmental Impact Management Services Consulting (Pty) Ltd (EIMS) on behalf of Searcher Geodata UK Ltd (Searcher) to undertake a Heritage Impact Assessment (HIA) that forms part of the Basic Environmental Assessment (BA) for the proposed Searcher West Coast 3D Reconnaissance Project, located offshore extending from approximately 256km offshore of St Helena Bay to 220km offshore of Hondeklip Bay, Off the West Coast, South Africa.

1.1 SCOPE OF THE STUDY

The study aims to identify heritage resources that may be impacted by the proposed project. The HIA aims to inform the BA and assist the developer in managing the discovered heritage resources responsibly, protecting, preserving, and developing them within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999) (NHRA).

1.2 SPECIALIST QUALIFICATIONS

This HIA Report was compiled by PGS Heritage (PGS).

The staff at PGS has a combined experience of nearly 90 years in the heritage consulting industry. PGS and its staff have extensive experience in managing HIA processes. PGS will only undertake heritage assessment work where they have the relevant expertise and experience to undertake that work competently.

Wouter Fourie, the Project Coordinator and Principal Heritage Practitioner, is registered with the ASAPA as a Professional Archaeologist and is accredited as a Principal Investigator; he is further an Accredited Professional Heritage Practitioner with the Association of Professional Heritage Practitioners (APHP).

Inge Kriel, has spent much of her life using her personal and career experiences to remind people that other ways of being, thinking, and acting in the world are possible – in particular, ways of living more harmoniously with each other, with nature and with ourselves. As a seasoned anthropologist with more than twenty years of research, community engagement, and academic teaching experience, Inge is known for her ability to untangle complexities and to mediate between different players, perspectives, and priorities. Inge holds a master's degree in Anthropology from the University of Pretoria and currently works as a freelance consultant. She has a particular interest in local knowledge systems and practices that impact biodiversity and cultural heritage conservation. During the past two years, Inge was part of a multidisciplinary research team whose

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work culminated in the design of cultural heritage management plans for Anglo American Platinum's operations in South Africa.

1.3 ASSUMPTIONS AND LIMITATIONS

Not detracting from the stakeholder engagement completed, it is necessary to realise that the intangible heritage elements identified during engagements only represent some possible intangible cultural heritage elements present in this region. Various factors account for this, including the layered histories (e.g., memory of conflict, dispossession, and disempowerment through time) associated with the West Coast region, specifically in terms of intangible and living heritage resources associated with the ocean landscape. The values attributed to the ocean by the communities do not necessarily align to provide one definitive single significance to the ocean. Instead, the depth and complexity of values assigned to intangible heritage in this landscape depend on people's relationship to the ocean and their feelings about the proposed project.

1.4 LEGISLATIVE CONTEXT

The identification, evaluation and assessment of any cultural heritage site, artefact or find in the South African context is required and governed by the following legislation:

- Notice 320 of the Government Gazette 45421- general requirements for undertaking an initial site sensitivity verification where no specific assessment protocol has been identified
- National Environmental Management Act (NEMA), Act 107 of 1998 – Appendix 6
- National Heritage Resources Act (NHRA), Act 25 of 1999

1.4.1 NEMA – APPENDIX 6 REQUIREMENTS

The HIA report has been compiled considering the NEMA Appendix 6 requirements for specialist reports, as indicated in the table below. For ease of reference, the table below provides cross-references to the report sections where these requirements have been addressed.

1.4.2 THE NATIONAL HERITAGE RESOURCES ACT

- National Heritage Resources Act (NHRA) Act 25 of 1999
 - Protection of Heritage Resources – Sections 34 to 36; and
 - Heritage Resources Management – Section 38

The NHRA is utilised as the basis for the identification, evaluation, and management of heritage resources and in the case of Cultural Resource Management (CRM) those resources specifically impacted on by development as stipulated in Section 38 of NHRA. This study falls under s38(8) and requires comment from the relevant heritage resources authority.

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Section 24(2) of the NEMA requires environmental authorisation from the environmental authority for certain activities that have been identified and must undergo an EIA or Basic Assessment (BA) process. Similarly, Section 38 NHRA lists specific development activities that require notice to the heritage resources authority to determine if an HIA process is necessary. Approval from the heritage authority is mandatory before proceeding with the development activities.

To avoid redundancy and facilitate coordination between NEMA and NHRA requirements, Section 38(8) of the NHRA states that if the development activities listed in Section 38(1) require an EIA under NEMA, a separate HIA and approval from the heritage resources authority are unnecessary. However, the environmental authority must ensure that the heritage resources authority's requirements for HIA are fulfilled and that its comments and recommendations are considered before granting environmental authorisation.

Therefore, if a NEMA EIA is required for the development activities listed under Section 38 of the NHRA, separate HIA and EIA processes may not be followed, and different decisions may not be issued under NHRA and NEMA. The EIA process will be followed, and if the heritage resources authority requires HIA, it must be conducted as one of the EIA specialist studies.

The environmental authority must ensure that the heritage resources authority's requirements for the assessment are met. A separate heritage approval may not be issued, but the environmental authority must consider the heritage resources authority's comments and recommendations before granting or refusing environmental authorisation.

2 TECHNICAL DETAILS OF THE PROJECT

The following background information is provided by EIMS.

2.1 LOCALITY

Searcher Seismic is currently undertaking 3D seismic surveys off the West Coast of South Africa. They are submitting a new application to return in the new season starting at the end of 2024 beginning of 2025 to return to the same area. The proposed project area is located between approximately 256 km offshore of St Helena Bay, extending north along the western coastline to approximately 220 km offshore of Hondeklip Bay over several petroleum licence blocks (**Figure 3**). The survey area at the closest point is approximately 218 km offshore of the coast of the Western and Northern Cape. The closest towns are Cape Town, Hout Bay, Saldanha, Lamberts Bay, Hondeklip Bay and Port Nolloth.

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The survey area corner coordinate points are as follows:

Table 1 - Coordinates of the proposed survey area.¹

Vertex Number	Longitude	Latitude	
1	~14° 04' 01.4328" E	~30° 14' 20.3646" S	*2
2	14° 16' 06.5743" E	30° 27' 02.4644" S	
3	14° 47' 37.1143" E	31° 00' 01.3293" S	
4	14° 53' 02.6665" E	31° 05' 40.9497" S	
5	14° 59' 56.5256" E	31° 05' 40.9497" S	
6	15° 09' 38.6339" E	31° 05' 40.9497" S	
7	15° 09' 38.8124" E	31° 15' 01.0986" S	
8	15° 09' 38.8811" E	32° 00' 01.2222" S	
9	15° 09' 38.9210" E	32° 35' 25.5423" S	
10	~13° 54' 25.9869" E	~32° 35' 33.6389" S	*1
11	~13° 54' 27.2447" E	~32° 33' 10.4617" S	*1
12	~13° 58' 47.2533" E	~32° 10' 00.5402" S	*1
13	~13° 50' 17.2474" E	~31° 53' 40.5803" S	*1
14	~13° 47' 47.2497" E	~31° 49' 20.6094" S	*1
15	~13° 44' 07.2416" E	~31° 42' 20.6158" S	*1
16	~13° 41' 17.2488" E	~31° 36' 40.6302" S	*1
17	~13° 33' 07.2379" E	~31° 15' 30.7137" S	*1
18	~13° 28' 17.2401" E	~31° 01' 20.7564" S	*1
19	~13° 24' 37.2354" E	~30° 50' 40.7684" S	*1
20	~13° 21' 01.7084" E	~30° 39' 24.9181" S	*1 / *2
21	~13° 35' 39.2243" E	~30° 32' 20.7014" S	*2
22	~13° 47' 32.1985" E	~30° 25' 05.6174" S	*2
<p>*1 : indicative co-ordinates: the westernmost boundary of the permit area at sides 10-20 comprises of the limit of the 200nm South African EEZ and is subject to change.</p> <p>*2 : indicative co-ordinates: the boundary of the permit area at sides 20-1 lie on the international median between Namibia and South Africa and is subject to change.</p>			

¹ The Western boundary of the Reconnaissance Permit lie on the limit of the South African 200nm Exclusive Economic Zone which may be subject to change from time to time and takes precedence to the supplied indicative co-ordinate points.

The Northern boundary of the Reconnaissance Permit lie on the border of the international median between the Exclusive Economic Zones of the South Africa and Namibia which may be subject to change from time to time and takes precedence to the supplied indicative co-ordinate points.

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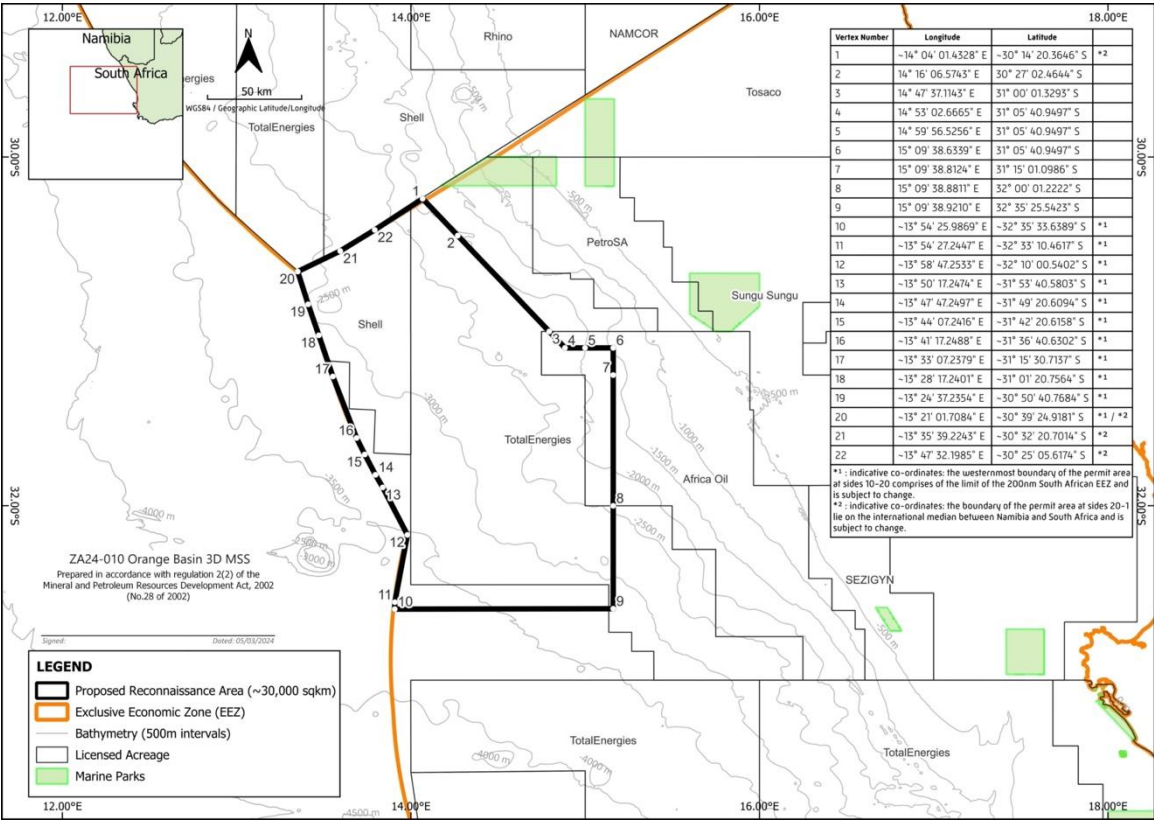


Figure 3 – Map indicating the location of the proposed survey project (thick black polygon) (source: EIMS).

2.2 TECHNICAL PROJECT DESCRIPTION

Hydrocarbon deposits occur in reservoirs in sedimentary rock layers. Being lighter than water they accumulate in traps where the sedimentary layers are arched or tilted by folding or faulting of the geological layers. Marine seismic surveys are the primary tool for locating such deposits and are thus an indispensable component of offshore oil or gas exploration. 3D seismic surveys are conducted on a tight survey grid and provide an image of the seafloor geology along each survey track–line.

The area of interest for the proposed 3D seismic survey is approximately 30 000 km² in extent. The proposed project area is located between approximately 256 km offshore of St Helena Bay, extending north along the western coastline to approximately 220 km offshore of Hondeklip Bay. It is currently envisaged that the survey lines would have a NE-SW or SE-NW orientation. The 3D survey will take in the order of 127 days including downtime.

It is proposed that a single survey vessel equipped with seismic sources and streamers be used. The proposed 3D survey would be supported by one escort vessel. The escort vessel will assist in monitoring for and alerting other vessels (e.g., fishing, transport, etc.) about the survey and the lack of manoeuvrability of the survey vessel. At a minimum, one Fisheries Liaison Officer (FLO) person speaking English and Afrikaans will be on board either the survey or the escort vessel to facilitate

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communication in the local language with the fishing (or other) vessels that are in the area. Additionally, there will be two Marine Mammal Observers on board the survey vessel to monitor for marine mammals and fauna visually and ensure that the survey is conducted in compliance with the specified guidelines as stated in the Environmental Management Programme.

Crew changes will occur by support or survey vessel calling to port. If necessary, a helicopter maybe used to transfer personnel to and from the survey vessel and Cape Town or Saldanha Bay. However, due to the helicopter low carrying capability this is unlikely to occur. The onshore logistics base will be in either the Port of Cape Town or the Port of Saldanha Bay. The preferred alternative is Cape Town. The service infrastructure required to provide the necessary onshore support is already in place in Cape Town and Saldanha. Thus, no additional onshore infrastructure should be necessary for this project.

Actual survey commencement would ultimately depend on the authorization award date and the availability of a survey vessel. Searcher proposes to commence with the seismic surveys in Q1 2023, subject to all approvals being in place.

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3 ASSESSMENT METHODOLOGY

The section below outlines the assessment methodologies utilised in the study.

3.1 METHODOLOGY FOR ASSESSING HERITAGE SITE SIGNIFICANCE

This HIA report was compiled by PGS for the proposed ZA24-010_Orange Basin MC3D MSS Project. The applicable maps, tables and figures are included, as stipulated in the NHRA (no 25 of 1999) and the National Environmental Management Act (NEMA) (No. 107 of 1998). The HIA process consists of three steps:

Step I – Literature Review and initial analysis: The background information to the field survey relies greatly on the Heritage Background Research undertaken for the study area.

Step II – The first phase of stakeholder engagement was part of the Public Participation process conducted by EIMS for the project. These public meetings were attended by a specialist from PGS to identify heritage themes highlighted by attendees to the meetings. Individuals and groups were then identified to engage with in focused meetings and interviews.

Step III – Data was collated from interviews conducted in 2022 (PGS), 2023 and June 2024 (PGS) on intangible heritage resources by focussed interviews (Boswell, 2023) with identified individuals and cultural group representatives. The aim was to build a database of tangible and intangible cultural heritage that the proposed project could potentially impact.

3.2 HERITAGE SIGNIFICANCE

Heritage significance classification standards use is based on the heritage classification of s3 in the NHRA and developed for implementation, considering the grading system approved by SAHRA for archaeological impact assessments. The updated classification and rating system as developed by Heritage Western Cape (2016) is implemented in this report.

Site significance classification standards prescribed by the Heritage Western Cape Guideline (2016), were used for the purpose of this report (**Table 2** and **Table 3**).

Table 2: Rating system for archaeological resources

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Grading	Description of Resource	Examples of Possible Management Strategies	Heritage Significance
I	Heritage resources with qualities so exceptional that they are of special national significance. Current examples: Langebaanweg (West Coast Fossil Park), Cradle of Humankind	May be declared as a National Heritage Site managed by SAHRA. Specific mitigation and scientific investigation can be permitted in certain circumstances with sufficient motivation.	Highest Significance
II	Heritage resources with special qualities which make them significant, but do not fulfil the criteria for Grade I status. Current examples: Blombos, Paternoster Midden.	May be declared as a Provincial Heritage Site managed by Provincial Heritage Authority. Specific mitigation and scientific investigation can be permitted in certain circumstances with sufficient motivation.	Exceptionally High Significance
III	Heritage resources that contribute to the environmental quality or cultural significance of a larger area and fulfils one of the criteria set out in section 3(3) of the Act but that does not fulfil the criteria for Grade II status. Grade III sites may be formally protected by placement on the Heritage Register.		
IIIA	Such a resource must be an excellent example of its kind or must be sufficiently rare. Current examples: Varschedrift; Peers Cave; Brobartia Road Midden at Bettys Bay	Resource must be retained. Specific mitigation and scientific investigation can be permitted in certain circumstances with sufficient motivation.	High Significance
IIIB	Such a resource might have similar significances to those of a Grade III A resource, but to a lesser degree.	Resource must be retained where possible where not possible it must be fully investigated and/or mitigated.	Medium Significance
IIIC	Such a resource is of contributing significance.	Resource must be satisfactorily studied before impact. If the recording already done (such as in an HIA or permit application) is not sufficient, further recording or even mitigation may be required.	Low Significance
NCW	A resource that, after appropriate investigation, has been determined to not have enough heritage significance to be retained as part of the National Estate.	No further actions under the NHRA are required. This must be motivated by the applicant or the consultant and approved by the authority.	No research potential or other cultural significance

Table 3: Rating system for built environment resources

Grading	Description of Resource	Examples of Possible Management Strategies	Heritage Significance
I	Heritage resources with qualities so exceptional that they are of special national significance. Current examples: Robben Island	May be declared as a National Heritage Site managed by SAHRA.	Highest Significance
II	Heritage resources with special qualities which make them significant in the context of a province or region, but do not fulfil the criteria for Grade I status.	May be declared as a Provincial Heritage Site managed by Provincial Heritage Authority.	Exceptionally High Significance

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Grading	Description of Resource	Examples of Possible Management Strategies	Heritage Significance
	Current examples: St George's Cathedral, Community House		
II	Such a resource contributes to the environmental quality or cultural significance of a larger area and fulfils one of the criteria set out in section 3(3) of the Act but that does not fulfil the criteria for Grade II status. Grade III sites may be formally protected by placement on the Heritage Register.		
IIIA	Such a resource must be an excellent example of its kind or must be sufficiently rare. These are heritage resources which are significant in the context of an area.	This grading is applied to buildings and sites that have sufficient intrinsic significance to be regarded as local heritage resources; and are significant enough to warrant that any alteration, both internal and external, is regulated. Such buildings and sites may be representative, being excellent examples of their kind, or may be rare. In either case, they should receive maximum protection at local level.	High Significance
IIIB	Such a resource might have similar significances to those of a Grade III A resource, but to a lesser degree. These are heritage resources which are significant in the context of a townscape, neighbourhood, settlement, or community.	Like Grade IIIA buildings and sites, such buildings and sites may be representative, being excellent examples of their kind, or may be rare, but less so than Grade IIIA examples. They would receive less stringent protection than Grade IIIA buildings and sites at local level.	Medium Significance
IIIC	Such a resource is of contributing significance to the environs. These are heritage resources which are significant in the context of a streetscape or direct neighbourhood.	This grading is applied to buildings and/or sites whose significance is contextual, i.e. in large part due to its contribution to the character or significance of the environs. These buildings and sites should, consequently, only be regulated if the significance of the environs is sufficient to warrant protective measures, regardless of whether the site falls within a Conservation or Heritage Area. Internal alterations should not necessarily be regulated.	Low Significance
NCW	A resource that, after appropriate investigation, has been determined to not have enough heritage significance to be retained as part of the National Estate.	No further actions under the NHRA are required. This must be motivated by the applicant and approved by the authority. Section 34 can even be lifted by HWC for structures in this category if they are older than 60 years.	No research potential or other cultural significance

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3.2.1 Methodology used in Determining the Significance of Environmental Impacts

The methodology used to determine the significance of the environmental impact was provided by EIMS and is explained in **Appendix B**.

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4 DESKTOP STUDY

4.1 OVERVIEW OF THE STUDY AREA AND SURROUNDING LANDSCAPE

For the last 200 000 years, the West Coast has been an attractive region for hunter-gatherers, pastoralist groups and modern-day fisher people, due to its wealth of marine and terrestrial resources. The ocean is an integral part of West Coast's natural and cultural heritage. West Coast residents are proud of their unique 'Weskus' culture. According to Schultz (2010), "a family's association with the West Coast is their claim to Khoisan heritage as constituting a historical bond with the cape West Coast".

4.1.1 PRE-COLONIAL ARCHAEOLOGICAL CONTEXT

Marine resources have a long history of human exploitation. Evidence from archaeological sites suggest that the West Coast region was occupied from the Early Stone Age (ESA) through to the Middle Stone Age (MSA) and Later Stone Age (LSA), up until the arrival of early European settlers from the 18th century onwards. There are numerous sites (including shell middens, stratified cave deposits, rock art, stone tools, and fish traps) recorded along the coast that demonstrate that the rocky shorelines were attractive to hunter-gatherers through time (e.g., Halkett, 2003; Halkett and Dewar, 2007; Sadr *et al.*, 1992; Kaplan, 1993, 1996, 1998, 2008, 2011a, 2014; Morris, 2006; Webley, 2009; Jerardino *et al.*, 2013). Much of what we know about settlement, subsistence strategies and diet along the coast is linked to these shorelines (Parkington 1976; Hart & Miller, 1994). Whilst gorges and stone sinkers are probably the best evidence for technical fishing equipment in the LSA, marine shell middens also demonstrate that the coastal zone was particularly favoured by LSA people (Deacon, 1995).

4.1.2 SHELL MIDDENS

Marine shell middens have been identified within 1km of the coastline, near estuaries and in dune fields which lie adjacent to rock shores. While pre-historic people likely favoured the rocky shorelines for ease of access to marine resources, middens have also been found further inland, where people would have been able to exploit additional resources such as game life and fresh water.

In some instances, these shell middens are associated with domestic artefactual debris which suggests that they in fact represent occupation sites of long duration. Whilst the opposite can be said for midden sites that do not contain a formal stone artefact component, and instead may represent visits of short duration. These pre-historic people were the ancestors of the San and Khoikhoi.

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According to archaeologists, several shell middens in the Vredenburg Peninsula are associated with both San and Khoikhoi groups who were harvesting the shorelines and estuaries of the West Coast in a sustainable and patterned manner (Parkington et al. 1988).

4.1.3 STONE FISH TRAPS

The remains of fish traps (*visvywers*; *stone-walled tidal fish traps*) have been recorded along the South African coastline from St Helena Bay to Mossel Bay (Goodwin, 1946; Avery 1975; Phillip et al., 2010). Along the south-western coastline, these traps, which use “the tidal range to allow fish to enter pre-built enclosures and be trapped at low tide”, provide evidence of early fishing techniques. The preserved fish traps vary in shape, size, and spatial complexity. Identifying the architects of these traps is, however a contentious issue.

Initially, researchers believed that the fish traps on the south coast were ancient maritime resource systems that originated among LSA people after 2000 years ago with the arrival of Khoikhoi herders (Avery, 1975; Gribble, 2006). More recent research suggests that the development of fish traps along the southern and western coasts dates to the 19th century. Furthermore, these structures may have been introduced by European farmers as part of the farming-fishing system when intensive exploitation of inshore fish by local farmers occurred (Hine, 2008, 2009; Hine et al. 2010).

In 1987, Graham Avery recorded a tidal fish trap in Mauritzbaai, south of Jacobsbaai (Kaplan 2004). Hart and Halkett (1992) have also identified the remains of at least six traps in the intertidal zone at Wilde Varkens Valley, St Helena Bay.

4.1.4 INDIGENOUS PEOPLES

4.1.5 INTRODUCTION

Before the colonial era, there were several diverse ancient tribes who traversed the valleys and plains of the present-day West Coast region of South Africa. The origins of the West Coast fishing communities can be traced back to the San and Khoikhoi peoples who lived within this region. Together, the Khoi and the San are the First Peoples of South Africa.

In 1928, a German physical anthropologist Leonard Schultze, created the term ‘Khoisan’, to stress the similarities between the Khoikhoi and the San (Le Fleur and Jansen, 2013; Secorun, 2018).

The settlers used the term ‘Bushmen’ when referring to the San, and many of whom the colonists’ called ‘Bushmen’ were, in fact, Khoikhoi or former Hottentot. Today, this term is considered derogatory, and instead, scholars would rather refer to hunters and herders together as ‘Khoisan’.²

² <https://www.sahistory.org.za/article/khoisan>

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It should be noted that although Khoi and San Peoples may share some experiences, culturally, they remain two distinct groups, and the general preference amongst both Khoi and San people is to be called by their clan names.

4.1.6 THE SAN³

During almost the entire Holocene period, small groups of San hunter-gatherers were present in southern Africa. The San are the direct descendants of the first peoples of southern Africa.⁴ It should be noted that the term “San” is used to cover over a dozen distinct hunter-gatherer groups who speak distinctive “click” languages (incl. the Khwe, !Xun, Ju'hoansi, Naro, !nuu and other groups). These groups lived across Namibia, South Africa, Botswana, and Zimbabwe. The San were small groups of nomadic people who lived by the ethos of “all people are equal”. They hunted and gathered resources and did not keep livestock.

It is generally agreed amongst academics that the San were the first inhabitants of the Cape region. During the latter part of the Holocene, there were hunter-gatherers living on the West Coast who made seasonal use of the coastal resources (Parkington and Hall, 1987). Several archaeological sites, including Duyker Eiland, which is in Britannia Bay, confirmed the importance of shellfish, seals, marine birds, crayfish, and beached whales as a food source for the local inhabitants during this time (Robertshaw, 1979).

4.1.7 THE INTRODUCTION OF KHOIKHOI

For thousands of years, the Khoikhoi⁵ people have occupied and moved around Southern Africa as nomadic herders. The Khoikhoi were large groups of nomadic herders who owned substantial herds (incl. cattle and sheep) and migrated for pasture, water, and food resources. It is understood that Khoikhoi peoples have a spiritual connection to land, where land is perceived as a gift from nature to be cared for.

Note that the Khoikhoi term is an umbrella term which refers to different tribes. The Khoikhoi people comprise four historical groupings: the Griqua, Nama, Koranna and Cape Khoi (incl. further subgroupings). Today, the Nama people are primarily located in the Northern Cape. The Griqua are in the Western Cape, Eastern Cape, KwaZulu Natal and Gauteng, and various other parts of the country. The Korana people, live primarily in Kimberly and the Free State. The Cape Khoi are in the Western and Eastern Cape.

Evidence suggests that around 2000 years ago, the pastoralist Khoikhoi entered South Africa along the West Coast into the Cape region (Smith, 1987, Sealy and Yates 1994; Henshilwood, 1996;

³ The Khoikhoi and the early Dutch settlers called these groups Sonqua (literally ‘San’).

⁴ <https://www.hr-dp.org/files/2015/07/06/G0516746.pdf>

⁵ Note that the use of the terminology of Khoikhoi or Khoekhoe is used by various scholars and writers. This report will be using Khoikhoi as the standard.

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Avery, 1975; Schweitzer, 1979; Deacon et al., 1978;). They brought a new way of life, from its northern origins, to South Africa. The Khoikhoi introduced domesticated livestock and new material culture (incl. pottery) into the region. They relied more on sheep as a meat resource and hunted and gathered (Schapera, 1933). Groups living close to the coast would also exploit shellfish, seals, and other marine resources. The St Helena Bay (Slipper Bay) region appears to have provided the Khoikhoi with invaluable resources, including whale meat obtained via 'cetacean traps'⁶.

One of the most important West Coast pastoralist sites, Kasteelberg, is an open-air archaeological site located 4km from the coast. It provides evidence of occupation by herders between 1800 and 1600 years ago (Klein, 1986). The occupants of the site focused on harvesting seals and the presence of sheep bones also indicated that the inhabitants were most likely herding domestic stock (Klein, 1986; Smith, 2006).

It is thought that the indigenous people in the Cape populated a region from Northern Namibia to the Cape of Good Hope and from the Atlantic Ocean to the Fish River in the East (**Figure 4**). The area between Saldanha and Vredenburg was occupied by the CochoQua and the ChariGuriQua (GuriQua) group occupied the lower Berg River area which included St Helena Bay and regions around Picketberg.

Some researchers choose to use the term "Peninsular Khoikhoi" when referring to the *Gorachouquas*, *Goringhaiquas* and the *Goringhaiconas* ("strandlopers") and "Surrounding Khoikhoi" for the *Cochoqua*, *Chainouqua* and *Hessequa* (see Brink, 2000; Nienaber, 1989; Wilson, 1990).

⁶ "Places where whales often strand themselves along the shore are known as 'cetacean traps'. These are areas where minima in the earth's magnetic field cross the shoreline, and where there are offshore reefs."
(<http://www.sawestcoast.com/history.html>)

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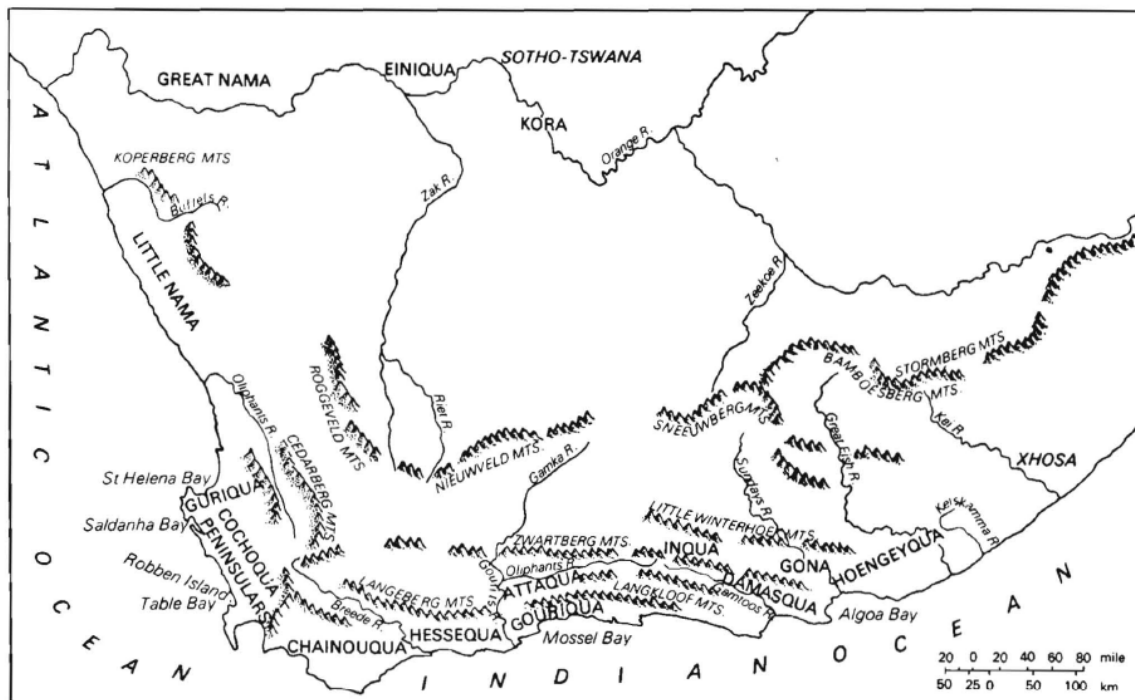


Figure 4 – Map illustrating the approximate locations of Khoikhoi before contact with the Europeans (in the southwest Cape ca. 1650) (Source: Elphick and Giliomee, 1979).

In the pre-colonial era, the relations between the Khoikhoi and the San were relatively stable due to a mutual acknowledgement of territories. Although the San and Khoikhoi seemed to have co-existed for a period, it appears that, to some degree, the San groups were displaced (Elphick, 1977; Parkington *et al.* 1986). It's assumed that the Khoikhoi moved into areas that had previously been utilised by the San, thus forcing the San to move into more isolated coastal regions (Manhire, 1987). The San's "settlement and subsistence strategy changed from one based on the large-band occupation of open areas and the hunting of large game towards the more intensive utilisation of rock shelters, in small groups and a foraging-based economy" (Barnard, 1992). Unfortunately, indigenous groups who lived on the coast were the first people to be severely impacted by colonial oppression (Boezak, 2017).

4.1.8 COLONIAL DISPOSSESSION

First contact between indigenous pastoralist groups and Europeans occurred during the 15th and 16th centuries when Portuguese mariners would sail down the coast. Before the Dutch East India Company's ('VOC') governance over the southernmost tip of Africa, European merchants, and travellers en route to or from Asia would call in at the natural harbour of Saldanha Bay for refreshment. Encampments were also set up along the coast by survivors of shipwrecks, and in their journals, they would recall how they met and traded with indigenous groups (Smith, 1985; Raven-Hart, 1967). Written records reveal that in 1497, the GuriQua and the San (SonQua) witnessed the arrival and departure of Vasco da Gama in St Helena Bay (Raven-Hart, 1967; Axelson, 1998). Although the Saldanha Bay harbour was more sheltered than Table Bay and

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allowed for the crews to trade livestock from the Khoikhoi in the area (Raven-Hart, 1967; Smith, 1985), there was not enough fresh water available to allow for the establishment of large permanent settlements.

It was only in 1652 that the VOC decided to occupy the Cape and establish the first permanent European settlement in South Africa. The VOC established a station at Table Bay to supply Company fleets travelling between Europe and the Indies with refreshments (i.e., meat, wheat, vegetables, and freshwater) (Ward, 2009). When the Dutch colonists arrived, they encountered several Khoikhoi groups. The largest concentration of Khoikhoi lived in the lush pasture lands of the south-western Cape region.

Initially, the relationship between the Dutch and the Khoikhoi was one of cooperation, and the VOC established trading agreements with local chiefs to get regular supplies of fresh meat (Elphick, 1977). As the colony grew, the VOC decided to decrease their dependency on local trade with the Khoikhoi. Their alternative plan was to give land to free burghers to supply meat and grain to the Company.

Khoikhoi and San lives were impacted upon by both internal strife and direct conflict with the Europeans over the disregard of traditional customs, the privatisation of land, and exhausting indigenous resources (i.e., overfishing and farming). As the Dutch took over more of the Khoikhoi's grazing land for farms, much of the Khoikhoi and San peoples' traditional lands were dispossessed (Elphick, 1977; Bredekamp, 1986; Elphick and Malherbe 1989; SAHistory, 2012). In 1657, the Goringhaiqua tribe were ordered to move to the east of the Liesbeeck boundary and this 'eviction' event would be instrumental for the first war against colonial intrusion (Bredekamp and Newton-King, 1984). The First Khoikhoi-Dutch War lasted the whole of 1659 (Elphick, 1977).

According to Sleigh (1993: 148), "In 1672, two sons of the weakened Peninsular Khoisan chiefs signed a contract, which they probably did not fully understand, and sold huge tracts of land from Table Bay to Saldanha Bay in the North and to the Hottentots Hollands mountains in the East to the VOC for an incredible low price (which they did not even fully receive)".

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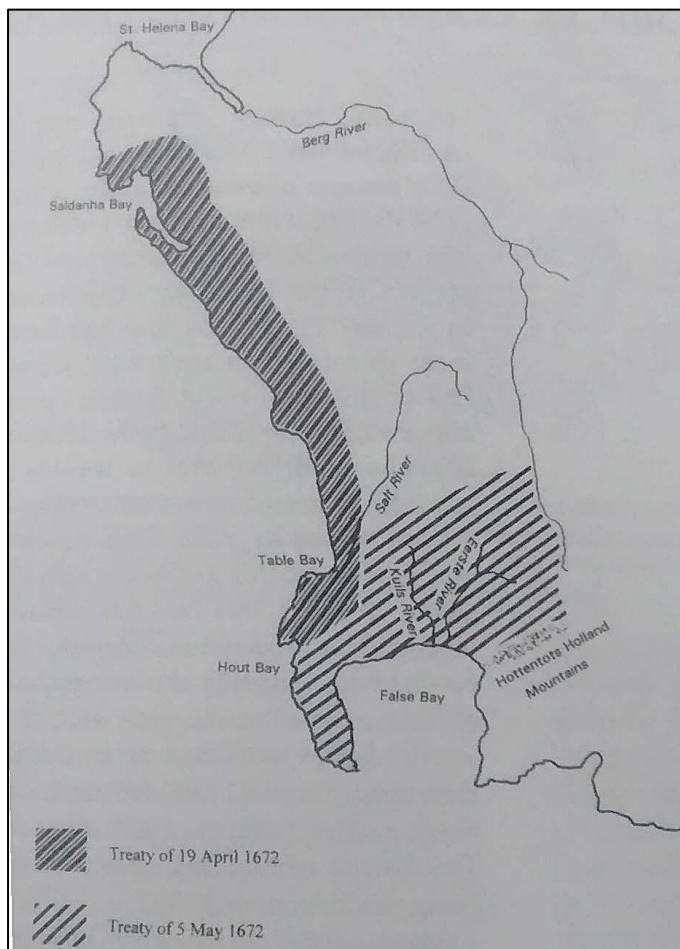


Figure 5 – Map illustrating the 1672 land ‘sale’ (Source: Boonzaier et al., 1996: 79).

After a few more instances of territories being ignored and further land appropriation, another war of resistance was initiated by the Cochoqua, and the Second Khoikhoi-Dutch War commenced (1673-1677). This led to more Khoikhoi groups being forced to relocate to areas further up the coast.

According to writings of early settlers, it appears that some San groups, who pursued a hunting and foraging lifestyle, may have still resided in the mountainous regions of the Cape where they were less likely to clash with the Khoi or Dutch settlers (Parkington et al. 1986). Regions that were less desirable for the colonists, such as Namaqualand, became places of refuge for the San and Khoikhoi who were able to continue many aspects of their traditional ways of life in this area for some time (Raper and Boucher, 1988).

In 1713, the small-pox epidemic led to the death of many Khoikhoi people living in the south-western Cape. The surviving Khoisan became assimilated as domestic/farm workers due to the high demand for labour by the Dutch. In rural areas, the Khoisan were forced into what was referred to as semi-bonded labour (Ward, 2009).

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By the late 18th century, the Cape settler colony's territories *incorporated the Berg* (c. 1700), *Olifants* (1750), and *Buffels* (1798) rivers.

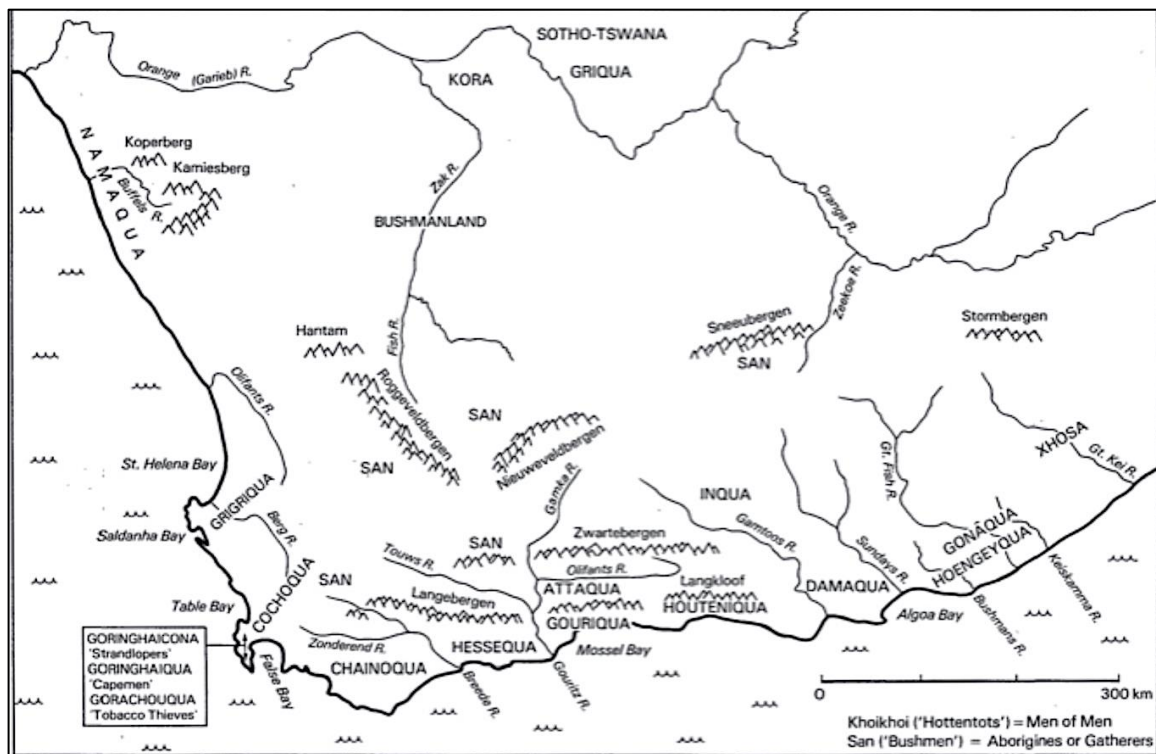


Figure 6 – Map illustrating the Khoikhoi and San groupings in South Africa during the 17th and 18th centuries (Source: Bredekamp and van den Berg, 1986).

4.1.9 THE HISTORY OF FISHING ON THE WEST COAST

4.1.10 17TH CENTURY

During the 17th century, the VOC established an outpost at St Helena Bay (Saldanha Bay Municipality, 2020). From 1670, free burgers started to fish regularly in St Helena Bay (Sleigh, 1993). They introduced methods to the region that were not previously available to indigenous fishermen, such as metal hooks, boats, nets and bulk processing and storage.

4.1.11 18TH CENTURY

During the 18th century, the Cape settler's economy was primarily based on slave labour which was imported from Asia and East Africa. The agricultural sector which was maintained by free burghers (freed from Company service) was not stable and due to the trade of the Khoikhoi's livestock being intermittent, the settlers had to make alternative arrangements for food resources. This led to Robben Island being exploited for seals, penguins, and seabirds (Penn, 1996; Ward, 2009). Large rural landowners established private coastal fishing posts to supply marine resources to the Company; the local region; passing ships and for export (Muller 1942; De Kock 1968). Soon, Dassen Island, Saldanha Bay and St Helena Bay developed as significant centres to supply the

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VOC with additional resources to sustain the growing number of people in the Cape colony, including the substantial number of slaves kept by the Company. According to Sleigh (1993), the slaves were given salted fish, seal meat, penguin, and bird eggs whilst the rest of the colony preferred to consume meat.

According to Marincowitz (1985: 40–46) *“With exclusive land grants closing the north-western frontier, from the 1740s growing numbers of ex-slaves, dispossessed Khoekhoe, failed farmers, evicted tenants and bywoners (tenant farmers), new immigrants and fugitives from colonial and military justice moved onto the beaches of the west coast”*.

Early fishing, sealing and whaling activities, by European and American whalers, around Saldanha Bay, especially near Marcus Island/Outer Bay and at Salamander Point, have been extensively documented in the archival/historical record (Griffiths et al. 2004; David & van Sittert, 2008). Although the inshore whale population declined after 1830, processing continued at Donkergat in Saldanha Bay (Halkett 1998).

4.1.12 19TH CENTURY

By the mid 19th century, scattered subsistence communities had emerged along the West Coast. Before the arrival of industrial fisheries, residents in St Helena Bay employed basic fishing technology (small-scale line fishing, beach seine nets and rowing boats) and fishing activities were informally organized by boat and net owners.

Malay slaves and other residents moved into the region to work as farm labourers. Over time, the unique fishing skills of enslaved Malay people intermingled with the fishing skills of the indigenous people. This led to the establishment of small fishing villages along the West Coast (incl. Saldanha, Langebaan and St Helena Bay).

After the emancipation of slaves, new laws were introduced to control both the freedom of movement and independent livelihoods of people who did not own land. This forced fishermen on the West Coast “to either develop artisanal skills, become wage labourers or squat on coastal government land to eke out a living from small scale production and seasonal work” (Van Sittert 1992: 12-14).

Using business capital in both the local and international markets, entrepreneurs were able to lease Crown land and establish coastal industries along the West Coast (Van Sittert 1992).

By the 1880s, a Cape Town-based trading company, Stephan Brothers, was able to monopolise the West Coast trade. The company bought the main grain shipping points along the West Coast,

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including the southern shore of St Helena Bay, where they established Laaiplek (translates to 'loading place') at the mouth of the Berg River (Van Sittert 2001: 197).

4.1.13 20TH CENTURY

Although the local fishing industry on the West Coast employed a substantial number of locals at the start of the 20th century, the industry is associated with a history of hardship. The industry's collapse in the mid-20th century left numerous West Coast communities impoverished (Van Sittert, 2001). Despite all the obstacles thrown at them, the West Coast fishing communities were resilient and continued their fishing tradition throughout the 20th century.

Historically, small-scale fishers have constantly had to compete against big scale fisheries. For example, Piketberg coastal fisheries used a method of fishing called beach seining to supply inland farmers with cheap ration fish. When there was a decline in snoek sources further south, Italian immigrant fishermen from Cape Town travelled up the West Coast on boats with set nets. Ultimately, their method of fishing impacted the supply of fish for the sedentary fishermen.

By 1900, the Stephan Brothers company were in control of nearly every suitable bay from Saldanha Bay to Lamberts Bay. They also owned numerous farms which were often acquired in exchange for debt. In 1909, the company negotiated an agreement with the State to establish an Exclusive Trek Seine Fishing Zone along the Malmesbury coast (Van Sittert 1992: xxxii). This move meant that the company was able to dominate a new manufacturing industry which further exacerbated resource owners and local fishermen.

During World War One, there was a crayfish canning boom in the Cape. The sourcing of crayfish moved rapidly up the West Coast during this period (Griffiths et al. 2004). By the early 1920s, the overexploitation of crayfish resulted in an exhaustion of crayfish stocks and West Coast factories were forced to close. This meant that the small-scale seine fishermen, and fishermen who netted in the backwaters, were left even more vulnerable to the financial depression of the 1930s.

Then, in 1934, in an act of retaliation, "Saldanha Bay fishermen invaded the Piketberg area on motorboats carrying Italian lampara nets and, with the support of Government, wiped out the non-motorised Berg River inshore fisheries run by consortiums of farmers, fishery owners and canners" (Van Sittert 1992: 211–237).

In 1951, increasing catches along the West Coast, meant that both skippers and fishermen yielded good financial returns. By 1955, South Africa had the largest fishing industry in the southern hemisphere (Griffiths et al. 2004).

With the Apartheid system arriving, the indigenous identity of the Khoisan was further disrupted through the Race Classification Act and the Populations Registration Act. The Khoisan were forcibly categorised as "Coloured" (Boswell and Thornton, 2021). This label further dispossessed the

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people from their heritage. Under the Group Areas Act (1950) the towns of the West Coast were divided into segregated residential and business areas. The forced removals marked yet another era of forced removals from areas that indigenous people occupied. Despite the discrimination, the communities continued their tradition of fishing that had been passed on through the generations of fisher families.

4.1.14 ARCHIVAL AND HISTORICAL MAPS

Relevant historical maps were studied to identify the tribes that historically occupied the West Coast region. Historical maps for various years (1747 and 1850) were available for utilisation in the background study.

4.1.15 MAP OF CAPE OF GOOD HOPE, 1747

(Publisher: Pierre d'Hondt)

The map depicted in **Figure 7** is titled Kaart van de Kaap de Goede Hoop ("Map of Cape of Good Hope"). The map dates from 1747. The land surveyor/mapmaker was Jacques Nicolas Bellin (Publisher: Pierre d'Hondt).

4.1.16 SECTION OF CAPE COLONY, 1812

(David Rumsey Historical Map Collection: Image No. 0028063).

The map depicted in **Figure 8** is titled "Cape Colony". The full title of the map is "Colony of the Cape of Good Hope. ". The map dates from 1812. The map was drawn from Mr. Barrow's survey by A. Arrowsmith and S. Lewis (Publisher: Thomas & Andrews). "Relief shown by hachures".

4.1.17 SECTION OF SOUTH AFRICA (CAPE COLONY), 1832

(David Rumsey Historical Map Collection: Image No. 0247106).

The map depicted in **Figure 9** is titled "South Africa (Cape Colony)". The map dates from 1832. The authors of the map were W.M. Higgins and D. John (Publisher: W.S. Orr & Co.).

4.1.18 CAPE COLONY, 1850

(Publisher: J. & F. Tallis)

The map depicted in **Figure 11** is titled "Cape Colony". The map dates from 1850. The map was drawn and engraved by John Rapkin, and illustrations were by H. Warren (Publisher: J. & F. Tallis).

4.1.19 SECTION OF CAPE PROVINCE, TRANSVAAL, &C. – WESTERN SECTION, 1922

(David Rumsey Historical Map Collection: Image No. 2113082)

The map depicted in **Figure 10** is titled "Cape Province, Transvaal, &c. – western section". The

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map dates from 1922. The author of the map was John Bartholomew and Son (Publisher: The Times).

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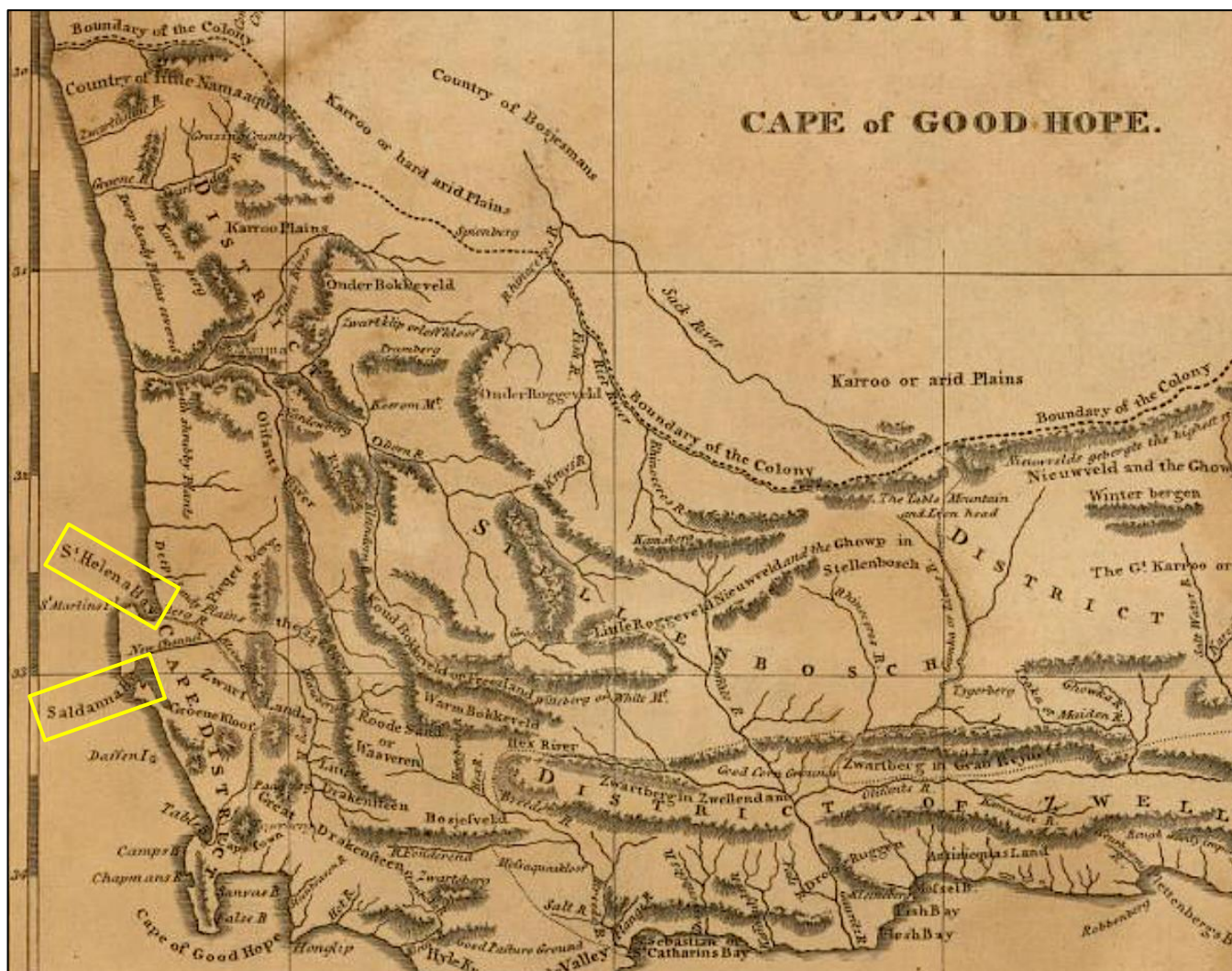


Figure 8 - Section of the 1812 Cape Colony map (yellow polygons: West Coast towns).

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Figure 9 - Section of the 1832 South Africa (Cape Colony) map (yellow polygons: West Coast towns).

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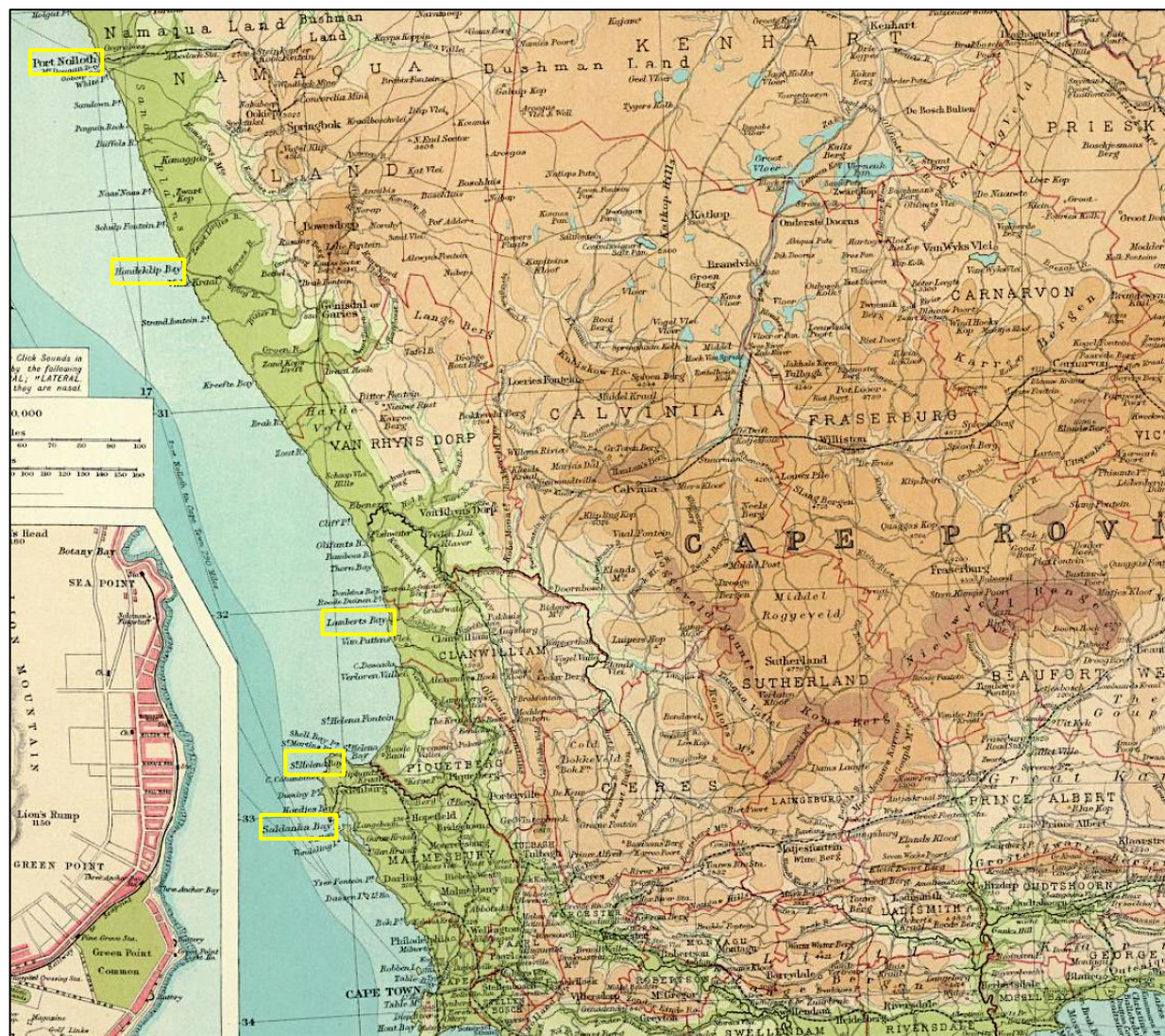


Figure 10 - Section of the Section of Cape Province, Transvaal, &c. – western section, 1922 (yellow polygons: West Coast towns).

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Figure 11 – 1850 historical map titled “Cape Colony”⁸ (yellow polygon: West Coast towns).

⁸ Source: https://commons.wikimedia.org/wiki/File:1850_Tallis_Map_of_the_Cape_Colony.png

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4.2 PREVIOUS HERITAGE IMPACT ASSESSMENT REPORTS FROM THE STUDY AREA AND SURROUNDINGS

A search of the South African Heritage Resources Information System (SAHRIS) database revealed that numerous archaeological and heritage impact assessments had been undertaken within the surroundings of the West Coast. These reports solely focused on tangible heritage and do not fully address the intangible heritage of the West Coast region.

Two HIAs were specifically completed for offshore reconnaissance in 2022 and 2023.

Fourie, W and Mann, N, 2022. Heritage Impact Assessment for the proposed Searcher West Coast 3D Reconnaissance Project, located offshore extending from approximately 256km offshore of St Helena Bay to 220km offshore of Hondeklip Bay, off the West Coast, South Africa.

The study concluded that the findings from the specialist studies carried out for this project suggest that the effects on fishing stocks for all species were minimal. A possible impact on fishing output could result, which would then lead to an anticipated economic effect on communities due to lower volumes of caught fish. The study further acknowledged that the recommended mitigation measures, as detailed in the specialist reports for the project, focus on reducing the impacts on fish species and the predicted decrease in the commercial and small-scale fishery catch yield. These mitigation measures should then indirectly positively influence the potential negative consequences on the cultural heritage of the communities that will be affected. Employing the impact assessment methodology a pre-mitigation adverse impact on a regional scale over a long term with moderate intensity due to the potential indirect impact on the communities and, ultimately, their heritage, with a high likelihood of this impact occurring was projected. The pre-mitigation impact on heritage resources is rated as MEDIUM. The potential residual impact on heritage resources, with the implementation of mitigation measures from the scientific studies as well as the recommended heritage mitigation, is projected as LOW with a medium confidence level.

Boswell, M.J.R. et al. 2023. Cultural Heritage Impact Assessment for the proposed Drilling in Block 3B/4B South Africa. AOSAC - Africa Oil SA Corp, Ricocure (Pty) Ltd and Azinam Limited (a wholly owned subsidiary of Eco Atlantic) (the Joint Venture Partners of the Block 3B/4B Exploration Right - hereafter jointly referred to as the Applicants)

The study methodology included an extensive consultative process on the western coast of the Western Cape. The study detailed the extent to which the Small Scale Fishers, Khoi and San descendants (referred to as the First Peoples), Nguni and Xhosa descendants recognise the extent to which Intangible Cultural Heritage is intrinsically linked to the ocean and coastal margins. It detailed the cultural (tangible and intangible) importance for these cultural groupings and stressed

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the fear that impacts from offshore drilling would add to the impacts already experienced due to the large scale of fishing and activities such as mining further north on the West Coast.

Themes such as living water, ancestral spirits residing in the ocean, ritual activities related to the ocean and archaeological sites on the seaboard are linked to specific receptors such as the ancestral and spiritual, archaeological, sense of place, livelihoods, natural heritage and health. It surmises that while it is crucial to implement mitigation plans to address the effects of normal operations or unforeseen events on the tangible and intangible heritage receptors, which are already experiencing existing and cumulative impacts, it is important to consider the various uses of these locations. These include potential underwater cultural heritage, active small-scale fishing families and communities, and individuals who rely on the sea for cultural, recreational, and business purposes, as well as those who depend on it for their psychosocial health. Additionally, it is essential to prioritise engagement with indigenous and local peoples' cultural valuations of the coast, given the historical legacy of slavery and apartheid and their exclusion from decision-making processes regarding natural resource management.

The study concluded that coastal cultural heritage is a valuable asset for South Africa, both tangibly and intangibly, as it plays an important role in the country's restorative justice process and is vital for both psychological and physical well-being in a country with significant inequality and violence. Companies seeking to develop South Africa's assets must engage with local communities and promote consultative, inclusive, and democratic processes for socioeconomic development.

5 UNDERWATER AND MARITIME HERITAGE

The following section provides the comments and work conducted by maritime archaeologist Vanessa Maitland for the 2022 Searcher application.

The first recorded European voyages down the west coast of Africa were by the Portuguese. When the first Portuguese explorers travelled down the west African coast, they stuck close to the coastline, to map the land. However, occasionally they were swept towards the Americas, as is evident by the fate of the fleet of Pedro Alvares Cabral, in 1500. This was first Portuguese fleet which was to sail annually to the Indies. Twenty days after the fleet left Brazil, which they had “discovered”, it was struck by storms and four ships, including the one under command of Bartolomeu Dias, foundered somewhere in the southern Atlantic. Different researchers put them anywhere between Tristan da Cunha and the Cape.

Bartolomeu Dias and his fleet passed the Orange River Mouth in 1487/1488 (Axelson 1973). Thereafter, the rate of exploration and trade increased exponentially, as is evidenced by the increase in shipwrecks over the centuries. These early voyages were not well documented, and the archives often merely report that a fleet of a certain number of vessels left and only a certain

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on the Wednesday resumes her trip North.
Captain Worster, of the ship Waimata, which arrived at Port Chalmers from London yesterday, reported that on May 22nd, in latitude 17°39 S. longitude 33°40 W., he encountered the hull of the British ship Salsette which caught fire when bound from London to Melbourne and was abandoned by the crew on April 18. The vessel was completely burnt out, nothing but the shell being left, with a mass of ashes still burning in the bottom of the hold. As the hull was lying right in the track of vessels, and was a dangerous obstruction, Captain Worster had a rivet knocked out of the bottom, and it was expected that it would sink in a couple of days.

Figure 13 - Report in The Auckland Star 26-07-1895, by the Waimata on the drifting hulk of the Salsette

3D seismic surveys can locate wrecks on the surface, and sometimes below sediments. Any shipwrecks or pieces thereof noted during the survey must be shared with the SAHRA MUCH Unit for inclusion into the national database. These could then be identified and be incorporated into the EMP.

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6 INTANGIBLE HERITAGE

‘Intangible heritage’ (also referred to as ‘Living Heritage’) is a term which is used to describe “aesthetic, spiritual, symbolic or other social values people may associate with a site, as well as rituals, music, language, know-how, oral traditions and the cultural spaces in which these ‘living heritage’ traditions are played out.”⁹ Through its efforts to safeguard Intangible heritage UNESCO and its member states developed the Convention for the Safeguarding of the Intangible Cultural Heritage (ICHC).¹⁰

The following section is extracted from a UNESCO webpage that explains the importance of Intangible Heritage:

“While fragile, intangible cultural heritage is an important factor in maintaining cultural diversity in the face of growing globalization. An understanding of the intangible cultural heritage of different communities helps with intercultural dialogue and encourages mutual respect for other ways of life.

The importance of intangible cultural heritage is not the cultural manifestation itself but rather the wealth of knowledge and skills that is transmitted through it from one generation to the next. The social and economic value of this transmission of knowledge is relevant for minority groups and for mainstream social groups within a State, and is as important for developing States as for developed ones.

Intangible heritage is:

- **Traditional, contemporary, and living at the same time:** *intangible cultural heritage does not only represent inherited traditions from the past but also contemporary rural and urban practices in which diverse cultural groups take part.*
- **Inclusive:** *we may share expressions of intangible cultural heritage that are similar to those practised by others. Whether they are from the neighbouring village, from a city on the opposite side of the world, or have been adapted by peoples who have migrated and settled in a different region, they all are intangible cultural heritage: they have been passed from one generation to another, have evolved in response to their environments and they contribute to giving us a sense of identity and continuity, providing a link from our past, through the present, and into our future. Intangible cultural heritage does not give rise to questions of whether or not certain practices are specific to a culture. It contributes to social cohesion, encouraging a sense of identity and responsibility which helps individuals to feel part of one or different communities and to feel part of society at large.*
- **Representative:** *intangible cultural heritage is not merely valued as a cultural good, on a comparative basis, for its exclusivity or its exceptional value. It thrives on its basis in*

⁹ Report from meeting to define Intangible Cultural Heritage, Piedmont (Italy), March 2001 (<https://ich.unesco.org/doc/src/00077-EN.pdf>, accessed 22 July 2022).

¹⁰ UNESCO. 2003. Convention for the Safeguarding of the Intangible Cultural Heritage

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communities and depends on those whose knowledge of traditions, skills and customs are passed on to the rest of the community, from generation to generation, or to other communities.

- **Community-based:** *intangible cultural heritage can only be heritage when it is recognized as such by the communities, groups or individuals that create, maintain, and transmit it – without their recognition, nobody else can decide for them that a given expression or practice is their heritage.”*

In this assessment, marine-related intangible cultural heritage and people’s connection to the ocean is relevant. This type of heritage incorporates the unique ethos and identity of specific places linked with fishing villages; oral history; popular memory; cultural traditions; indigenous knowledge systems, rituals, beliefs, and practices (e.g., fishing techniques) associated with the ocean.

In some cultures, the ocean is regarded as a spiritual realm filled with healing powers and a means to connect to one’s ancestors. Gabie (2014) explains how water is the Khoisan’s “...’source of life, a sense of belonging and their permanence to nature’. Water is vital for various rituals and cleansing ceremonies.

According to Boswell and Thornton (2021), the Khoisan “advocate for deep connections and complementarity between humans and nature, recognising the agency and ‘direction’ provided by nature to humanity”.

Considering that the ICHC emphasises the declaration and listing of forms of Intangible Heritage, it can lead to a diminished recognition of intangible heritage not listed or formally recognised (Gimblett, 2004). The ICHC requires a State Party to develop an inventory of intangible heritage within their country or territory and then take measures to safeguard community participation (Article 11(a)) (Deacon and Smeets, 20013). As Smith (2015) argues, the European Authorised Heritage Discourse within UNESCO emphasises the declaration and the importance of heritage and things as defined by experts or those entities and nation states promoting their discourse. The ICHC, however, did provide the opportunity for communities on a sub-national level to promote and give legitimacy to their intangible heritage. Unfortunately, the ICHC and its operational standards place the responsibility of assessment, nomination, and listing on the State Parties. This leads to a gatekeeper process in which these Parties can decide and control what is listed and nominated through their national discourse to the detriment of the community or grouping.

The Khoisan has historical experienced marginalisation and stigmatisation since the onset of colonisation in Southern Africa. **Section 4** of this report provides a narrative of the general history of the Khoisan on the West Coast and Western Cape, indicating a gradual disbanding of communities and cultural fabric of these indigenous groupings due to colonialism and economic influences. The last decade has, however, shown a renewed interest and growth in claiming their

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roots and history through the resurgence movement. Boswell et al. (2023) describe this as “revivals of identity and re-membling”. This “re-membling” is defined not only as a remembrance of the past and a means of shaping cultural identity, but also as a means of regenerating the Khoi community through the addition of new members.

Natural Justice (2016) submitted that strides were made in recognising and legitimising the Khoisan. However, entrenched continuing historic race classifications and the lack of leadership recognition through such issues as the dragging finalisation of the Traditional and Khoi-San Leadership Bill, before its promulgation in 2019, is robbing these communities of a voice and standing within the larger South African landscape. This speaks to the recognition of their culture that is inclusive of tangible and intangible heritage.

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7 STAKEHOLDER ENGAGEMENT

7.1 INTRODUCTION

EIMS conducted public meetings from 24 June 2024 to 5 July 2024 (**Table 4**) to inform Interested and Affected Parties (IAPs) of the proposed project and associated application process and allow them to raise comments/concerns.

Table 4 – Information relating to the public participation meetings

Town and venue	Communities	Date
Port Nolloth, Luvuyo Drop-in Centre	Alexander Bay, Eksteenfontein, Kuboes, Lekkersing, Port Nolloth, Sanddrift	Monday 24 June 2024
Springbok, Hananja Lodge	Buffelsrivier, Concordia, Koiingnaas, Komaggas, Nababeep, Okiep, Steinkopf	Tuesday 25 June 2024
Springbok, Hananja Lodge	Buffelsrivier, Concordia, Garies, Hondeklip Bay, Kamieskroon, Karkams, Kheis, Klipfontein, Soebatsfontein, Tweerivier	Wednesday 26 June 2024
Doring Bay, Community Hall	Doring Bay, Ebenheazer, Papendorp, Strandfontein	Thursday 27 June 2024
Elands Bay, Community Hall	Clanwilliam, Doring Bay, Elands Bay, Graafwater, Lamberts Bay, Leopoldville, Redelinghuys	Friday 28 June 2024
St Helena Bay, Sandy Point Community Hall	Stompneus Bay	Monday 1 July 2024
Langebaan, Seabreeze Hall	Saldanha Bay, Seaview Park	Tuesday 2 July 2024
Yzerfontein, Community Hall	Atlantis, Darling	Wednesday 3 July 2024
Hout Bay, Hout Bay High School	Hout Bay, Red Hill, Masiphumelele	Thursday 4 July 2024
Mitchells Plain, French School	Mitchells Plain, Ocean View	Friday 5 July 2024

The public participation meetings were well-attended (forty persons on average) except for the meeting at St Helena Bay, which started with only two community members. Attendance was negatively affected by forecasts of a cold front that was expected to move into the area the following day. On the day of this meeting, fishermen indicated that they had to go out to sea to compensate for subsequent days during which inclement weather would not allow for fishing.

The meetings started around nine o'clock in the morning and lasted four hours on average. The meetings kicked off with a brief overview of the project process and the progress to date. This was followed by a presentation on the seismic surveys that were conducted in the first four months of this year. The presentation outlined the mitigation measures that were taken to protect marine fauna and included sound recordings and related findings pertaining to underwater noise monitoring.

The second session during the public participation meetings focused on 'intangible cultural heritage'.

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7.1.1 WORKSHOPS ON ‘INTANGIBLE CULTURAL HERITAGE’

The session on ‘intangible cultural heritage’ lasted two hours on average and followed a workshop-style that saw attendees divided into small groups (of ten to fifteen members) to talk about practices and beliefs that they consider to be part of their cultural heritage. This participatory approach ensured that the identification and validation of intangible cultural heritage was grounded in the lived experiences and values of the community.

Each group had to present the key elements of their discussions to the meeting. Some groups gave every member the opportunity to present an aspect of their ideas while the majority of groups decided on a single presenter. All groups used flipchart posters as a visual aid while some also added dancing, and in one instance in Springbok, rapping, to convey their message. The findings of this session are presented below (see **section 7.2**), but it is important to reflect on the following factors that may have affected the quality of the data:

7.1.1.1 INFLUENCE OF THE INTRODUCTION BY THE WORKSHOP FACILITATOR

The workshop facilitator started the session by showing video clips of local traditional dances: the Nama ‘rieldans’ was shown in areas north of Cape Town while footage of the Cape Town Minstrel Carnival (Kaapse Klopse in Afrikaans) and Xhosa traditional dancing was used in Hout Bay and Mitchells Plain. This was followed by an icebreaker that required volunteers to smell unnamed spices and tell the other participants what associations the smells evoked. Charades, a game of pantomimes, was used as another icebreaker. In this instance, volunteers had to ‘act out’ a local idiom without speaking, while the other participants had to guess what the idiom was. The facilitator again employed the images of traditional dances, traditional food, and local expressions in the final part of the introduction to explain the concept of ‘intangible cultural heritage’. Additional aspects of intangible cultural heritage that were mentioned included traditional medicine, folklore, games, crafts, rituals, and sense of place.

While it might seem helpful to unpack the concept of ‘intangible cultural heritage’ before asking individuals to describe their own, this approach may inadvertently have influenced the range of responses. The multisensory impact of the video clips and icebreakers may have resulted in more uniform responses and less authentic and personal interpretations.

7.1.1.2 INFLUENCE OF REPRESENTATIONS OF CULTURAL HERITAGE ON NATIONAL HERITAGE DAY

South Africa’s National Heritage Day, celebrated on 24 September, is intended to recognise and celebrate the nation’s diverse cultural heritage. Instituted in 1995, the day is annually widely supported by local communities and receives extensive coverage by the media. There can be little

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doubt that people's ideas of what constitutes cultural heritage have, over the past twenty-nine years, been shaped by these celebrations.

The day often focuses on traditional clothing, dances, and food or beverages as symbols of cultural heritage. While these elements are significant, the overemphasis on these aspects alone risks oversimplifying cultural heritage, turning it into a performance rather than an engagement with the underlying practices, values, and historical and political contexts. Focusing on traditional clothing, dances, and food can also lead to the reinforcement of stereotypes. It may present a monolithic and static view of 'cultures' that are, in reality, dynamic and fluid.

7.1.1.3 DIFFICULTY OF DESCRIBING ONE'S CULTURAL HERITAGE TO AN OUTSIDER

Defining and describing one's cultural heritage to an outsider presents numerous challenges. These challenges stem from the complexity of culture, the limitations of language, the subjective nature of experience, and the dynamic, evolving nature of cultural practices. Much of cultural knowledge is implicit and taken for granted by insiders. Articulating this implicit knowledge requires not only finding the right words but also providing the necessary background and context.

7.1.1.4 LIMITED TIMEFRAME

The above challenges underscore the importance of nuanced, context-aware approaches in research and impact assessment projects. Due to limited time, it was not always possible to gain insights into people's reasoning behind the inclusion or exclusion of particular aspects as cultural heritage. For example, a group at the Langebaan public participation meeting included spaghetti as traditional food, but there was no time to debate the issue. Determining when aspects of culture can be classified as 'traditional' or part of cultural heritage involves nuanced considerations of historical continuity, social functions, and the meanings attributed by the community itself.

To counter the above limitations, casual conversations were also made with individuals.

7.1.2 CASUAL CONVERSATIONS WITH INDIVIDUALS

The daily programme allowed time during tea- and lunchtime interludes to interact with community members. In addition, the programme after lunch provided more opportunities to talk to people on a one-on-one basis or in a small group. It centred on a display of posters (designed by staff of the environmental management company) that dealt with various project themes, including impacts on cultural heritage. Experts in the different fields of specialisation talked community members through the posters' content and answered questions pertaining to all the themes discussed during the day. In this manner, more individuals were encouraged to talk about particular ideas.

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Casual conversations occurred spontaneously and naturally, at times with strangers or participants who spoke little during the workshops and at other times with individuals who came across as experts in particular fields, for example, traditional healers and seasoned fisherfolk. The latter category of individuals assisted with the clarification of ideas presented during the workshops, but the conversations were typically unstructured and open-ended, allowing for a free flow of ideas and stories. These engagements happened on a personal level, demonstrating genuine interest in community members' lives and opinions as well as emphasising respect for their knowledge and agency. A deliberate effort was made to include individuals from different gender and age groups.

7.2 COMMUNITY MEMBERS' PERCEPTIONS OF THEIR CULTURAL HERITAGE

In describing community members' perceptions of their cultural heritage, it is useful to differentiate between aspects that are directly related to the ocean and coasts (marine cultural heritage), and those that are only indirectly related to the ocean and coasts (non-marine cultural heritage). This is not a distinction drawn by community members, but it assists in focusing on aspects of cultural heritage that are most likely to be impacted by the proposed seismic surveys.

7.2.1 MARINE CULTURAL HERITAGE

'*Die see is ons lewe*' (Afrikaans), literally 'the sea is our life'. This notion was used as the main heading on a poster by one of the groups in Doring Bay. It captures the essence of what has been observed across all public engagements during the ten days of research: the sea occupies a central place in the cultural heritage of West Coast and adjacent in-land communities.

It may be argued that the focus of this project, seismic explorations (and the presentation on marine impacts, see **section 7.1.1.2** above), had resulted in over attention to the sea. Still, it should be borne in mind that the indigenous peoples of the Northern and Western Cape have occupied these regions for thousands of years. Archaeological evidence, including shell middens and fish traps, indicates their long-standing relationship with the sea and their reliance on marine resources. The sea has offered not only sustenance but also a foundation for cultural practices, social cohesion, and spiritual well-being. The sub-sections below provide numerous examples from group and individual discussions that illustrate this argument.

7.2.2 FISHING / FORAGING PRACTICES AND SEAFOOD

Fishing and foraging: Community members possess vast knowledge, skills, and experience related to fishing and foraging. In our discussions, it became clear that many are adept at reading weather conditions and identifying edible seaweeds, shellfish and other marine organisms while some still make their own fishing nets and repair their '*roeibakkies*', i.e. multi-oar flat-bottomed

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rowing boats (some are called ‘elephants’ [*olifante* in Afrikaans] because of their heavy weight). A fisherman from the Elands Bay region also gave an account of how they locate fish and navigate at sea. He explained that fishermen rely on visual cues or beacons from the coast and the water’s surface, as well as the behaviour of marine life, to guide their activities. This visual knowledge is deeply embedded in their cultural heritage and is essential for their livelihoods. Despite external pressures and changes, coastal communities have maintained their cultural practices related to the sea. This resilience is a testament to their strong sense of identity and their deep connection to their coastal environment.

Seafood as traditional food: Community members indicated that the sea offers a diverse array of food sources that are not only integral to their diet and nutrition but also form part of their cultural heritage. These include lobster, kingklip, soul, limpits (*skulpies* or *perdeskoen* in Afrikaans, literally ‘small shells’ or ‘horseshoe’), giant periwinkle (*alikeukel* in Afrikaans), abalone, shellfish, octopus, and snoek. The latter, a type of fish belonging to a species called ‘snake mackerels’, is enjoyed in many ways, attesting to the rich culinary traditions of the region. Snoek can be barbecued or dried or used in seafood stew (*seekospotjie* in Afrikaans) or breyani while baked snoek liver is a real delicacy. Snoek also falls into the category of ‘*babbelaskos*’ (an Afrikaans word derived from *bhabhalazi* for ‘drunk’ in isiZulu) which literally means ‘hangover food’. It is believed to be the best cure for a hangover, together with *bokkoms* (dried fish) and rice stew (*rysbredie* in Afrikaans) made with fish heads and bones. A group in Yzerfontein also taught us about ‘*omkykers*’ (Afrikaans) – literally, ‘backward lookers’ – a category of fish (mainly springers and horse mackerel [*maasbankers* in Afrikaans]) that are normally strung together through the gills, and then they all seem to look backwards in the same direction. The preparation and sharing of seafood dishes as festive food, such as curried fish during Easter, also serve to transmit culinary knowledge and foster community bonds.

7.2.3 ENVIRONMENTAL KNOWLEDGE AND STEWARDSHIP

Environmental knowledge: Several community members demonstrated a profound understanding of marine and coastal ecosystems. This type of indigenous knowledge includes aspects such as ocean currents and tides as well as the habitats and behaviour of various marine species. Fishermen at Doring Bay, for example, referred to seasonal migration patterns that inform their fishing schedules: one can expect ‘hottentot seabream’ (*hotnotsvis* in Afrikaans) from April to May, snoek from February to June, and lobster from October to March. They also said that fish stay on the outer bank (*buitebank* in Afrikaans) in winter but then come to the shore in summer, and when the moon is full, fish graze at night and not during the day. Local environmental knowledge also included coastal flora and its healing properties. Since there was not enough time to differentiate between coastal and in-land flora, the information that communities provided on plant use appears in the section below on non-marine cultural heritage (see **section 7.3**) because most of the data came from the meetings in Springbok.

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Environmental stewardship: Community members stated that their knowledge of marine ecosystems and respect for ‘nature’ enable them to harvest resources sustainably. They explained how techniques such as seasonal fishing and selective or rotational foraging ensure that marine resources are not depleted. Speaking about traditional taboos related to the sea, an isiXhosa-speaking man at the Hout Bay meeting specifically mentioned the use of woven traps and spearfishing as traditional fishing methods designed to minimise overfishing and allow for the regeneration of fish populations.

7.2.4 SPIRITUAL BELIEFS AND RITUALS

Spiritual connection: The ocean is imbued with spiritual significance, featuring prominently in myths and ceremonies. Some members of coastal communities view the sea as the resting place of their ancestors. Several indicated that they offer prayers and gifts to the ocean to seek the guidance and protection of ancestors, or to ensure and celebrate bountiful harvests from the ocean. In Hout Bay, an elderly isiXhosa-speaking woman told us of the practice of ‘*ukuthetha ulwandle*’, literally ‘speaking to the sea’, which is a form of communication with the ancestors and the spiritual realm, reflecting a deep spiritual connection to the ocean. At the meeting in Langebaan, Chief !Khaesen Maart of the Cochoqua Traditional Council also stated that in their recent discussions with Maori indigenous people they learnt that that Maori people value the use of whales for navigation. He indicated that his followers do the same and he advocated for whales to be declared ‘persons’ and be protected. ‘When a whale dies, one of our ancestors dies’, he said.

Rituals: Community members indicated that the ocean is a sacred place of ancestral wisdom and communal rituals. Many referred to rites of passage such as baptism in the sea and scattering of the ashes of the deceased onto sea waters. IsiXhosa-speakers also emphasised that water from the ocean is considered purifying and is still regularly dranked and used in cleansing rituals. Seawater is also used by traditional healers to cure illnesses caused by contact with impure objects or events, neglect of the ancestors, and witchcraft. Bathing in the sea is believed to remove impurities, wash away bad luck, and restore spiritual balance. At the public participation meeting in Elands Bay, a community member from Lamberts Bay stated that ‘the seawater is our heritage’ (in Afrikaans, ‘*die seewater is ons erfenis*’). Speaking about culturally defined benefits from the coast and sea, she elaborated on how the sea even assists to entice babies to start crawling or walking.

7.2.5 SENSE OF PLACE

Connection to the landscape and seascape: The coastal environment provides a sense of place and belonging. People often used the possessive pronoun ‘our’ when referring to the sea. For example, a woman from Seapoint, stated ‘We have a love for our sea, a passion’. During the Port Nolloth meeting, community members from places such as Sanddrift, Alexander Bay, and

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Lekkersing noted the sensory connections between people and the sea. They spoke about how the sights, sounds, smells, tastes, and tactile experiences associated with the ocean awaken strong emotions that sooth the soul and inspire reflection on their own life journeys. They view the sea as a metaphor for life: the sea is unpredictable and ever-changing, and the tides of the ocean constantly ebb and flow, much like the ups and downs of life. A resident from Port Nolloth observed that ‘the sea teaches us about love and respect and acceptance’.

Sacred and special places: Community members referred to places along the coast that hold deep cultural and spiritual significance. In Doringbaai, reference was made to Boegoeberg (situated between Alexander Bay and Port Nolloth) as a sacred burial site that contains the graves of several Nama leaders. The Elands Bay caves with their rock art are also considered sacred because they are spaces where the physical and spiritual worlds intersect. Community members were also asked about other places that they regard as special without necessarily being sacred. Residents of the Springbok region mentioned Hondeklip Bay because of the Spatklip rock formation, dunes, lighthouse and the cooling down effect of the sea.

7.2.6 SOCIAL PRACTICES AND ARTISTIC EXPRESSION

Communal activities: For many community members the sea is a source of joy and recreation. However, activities such as beachcombing and surfing are not only leisure pursuits but also ways to connect with others. A resident of Hout Bay spoke of Dungeons as a popular big wave surfing spot and emphasised that surfing establishes a connection between the sea and spirituality. ‘The sea is inside all of us’, he said.

Artistic expression: The landscape and seascape inspire a rich tradition of artistic expression in music, dance, and storytelling. Discussions with community members revealed a collective memory of interactions with the sea. In myths and stories about communal fishing expeditions, the ocean is depicted as a living entity with its own spirit and personality. In Port Nolloth, people also mentioned stories about mermaids.

7.3 NON-MARINE CULTURAL HERITAGE

Aspects of intangible cultural heritage that are not directly related to the ocean and coasts were mostly discussed in Springbok by people that see themselves as Nama and Khoisan descendants, and in Hout Bay where isiXhosa-speakers were keen to provide information on ‘traditional Xhosa culture’.

7.3.1 TRADITIONAL FOOD AND BEVERAGES

Nama: A wide variety of dishes and food items were mentioned, such as different kinds of bread (*roosterkoek* or *asbrood*, *drombrood*, *potbrood*, and *saurie*, i.e. bread without yeast); venison dishes (made from tortoise and porcupine meat) with veld cabbage (*Trachyandra ciliata*), lard and

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cloves; milk dumplings (melkkluitjies), and koeksisters (deep fried plaited doughnut-like pastry soaked in syrup). Veld food (*veldkos*) included sorrel porridge with goat's milk (referred to as 'old time yoghurt'), ghoenies (Kuni bush, *Searsia undulata*), kambro (*Fockea angustifolia*), *ouroena* or *bokhoringpeul* (*Quaqua incarnata*), and Boetabessie or bietou (bush-tickberry). Beverages that were highlighted were honey-beer and ginger beer. Candy floss, which was called *goemahare*, stood out in the category of sweets.

Xhosa: Many groups at the Hout Bay public participation meeting talked about *umqombothi*, a traditional maize- or sorghum-based beer with a low alcohol content, and *umngquso*, the traditional staple cooked meal consisting of mainly samp and sugar beans.

7.3.2 ENVIRONMENTAL KNOWLEDGE

Medicinal plants: Nama and Khoisan communities possess a wealth of traditional knowledge, particularly in the realms of ecology and medicine. Their understanding of local flora and fauna is extensive, with many plants being used for medicinal purposes. The most prominent examples of *bossiesmedisyne* (plant medicines) that were mentioned are the following: *Jantjie Bêrend* or *kankerbossie* (balloon pea; *Sutherlandia frutescens*) that is used as an infusion for stomach pains and ailments. According to community members, the name *Jantjie Bêrend* is derived from a well-known Nama herbalist from the distant past. *Koekemakranka* or *slaapblommetjie* (*kukumakranka*: *Gethyllis villosa*) is considered an aphrodisiac and is used for insomnia and fatigue. *Wilde-als* (African wormwood: *Artemisia afra*) that are dranked and rolled into plugs that are inserted in the nose for respiratory problems and blocked sinuses. *Kraalbos* (yellow bush: *Galenia africana*) is effective for the treatment of scalp conditions and are sometimes added to tobacco or dagga for smoking. *Boegoe* (buchu: different *Agathosma* species) is used to cure urinary tract problems, fevers, colds, coughs, and high blood pressure. The well-known tincture made of brandy and buchu is viewed as a panacea by many people. *Wynruit* or *wynryk* (common rue; *Ruta graveolus*) is used for women's ailments while *rooi(storm)wortel* (*Pelargonium* species) works for insomnia, abortion and induction of labour. *Wilde knoffel* (wild garlic; *Tulbaghia alliacea*) leaf infusion is good for influenza and recently also for Covid. *Kruidjie-roer-my-nie* or *vyerank* (touch-me-not; *Mellianthus major*) is a toxic plant used as an insect repellent and for treating a variety of wounds, ulcers and abscesses, and snakebite.

Other remedies: Although the terms *dassiepis* (literally 'dassie pee'), *klipsweet* (literally 'rock sweat') and *bomeester* (literally 'upper master' to refer to supreme medicine) are often used interchangeably, we learnt from an elderly man in Springbok that they refer to different substances. *Dassiepis* (*hyraceum*) is the dried, often fossilised faecal and urine deposits of rock rabbits (rock hyraxes) on cave floors and rocks. *Klipsweet* is believed to be the droppings of midgits on cave ceilings and *bomeester* (rock salt) seems to be a variety of coloured minerals and oxides found in split rocks and at the bottom of high cliffs. These substances form part of a wide variety of traditional

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medicines that are used to treat epilepsy, kidney and bladder problems, irregular menstruation, as well as snake and insect bites. Using a donkey's tooth to relieve toothache is a well-known belief in the Springbok area. Other treatments for toothache are donkey manure and scratching with a porcupine quill as well as the bark of fever bush (*koorsbos* in Afrikaans; *Crassula muscosa*) in the Elands Bay region. Keeping a key in one's hand is also believed to cure motion sickness.

It should be noted that several individuals that self-identify as Xhosa also referred to medicinal plants but the interpreter that was used during the Hout Bay meeting was not a mother tongue speaker of isiXhosa and found it difficult to differentiate between plant species.

7.3.3 SOCIAL PRACTICES AND RITUALS

Induction of a daughter-in-law into family traditions: IsiXhosa-speakers mentioned that traditionally, upon marriage, a daughter-in-law (known as *umakoti*) was introduced to the customs and rituals of her husband's family. This included learning specific household duties, understanding familial roles, and learning about the 'household menu'. This induction ensured the preservation of family heritage and the transmission of cultural knowledge and practices within the family unit.

Pipe-smoking (*ukutshaya*) is a traditional Xhosa practice symbolising relaxation and social interaction. It is often performed during gatherings and ceremonies, serving as a means of fostering community ties and sharing stories. The practice also carries a spiritual dimension, as it is sometimes incorporated into rituals to honor ancestors or seek guidance. *Inqawe* was described as the traditional decorated smoking pipe which only men and adult women were allowed to use. The long-stemmed pipes, called *uzalipholile*, could only be used by married women. The longer the stem, the higher the status of a woman. Most pipes and tobacco bags were decorated with beads. Pipes were used in a variety of rituals and the culture of pipe smoking was so important that at the death of a person it was said that he or she has 'laid down the pipe'.

Stick-fighting (*ukuzwana*) traditionally served as a form of physical training and was a demonstration of bravery and skill among Xhosa boys and men.

Rites of passage: In Hout Bay, individuals that self-identify as Xhosa mentioned initiation rites (*ulwaloku*) as an important aspect of their cultural heritage. The initiates (*abakhwetha*) are instructed in the responsibilities of manhood and a person who has not undergone these procedures is considered an *inkwekwe* (boy) regardless of age. After completion of the procedures, they are called *amakrwala* (new men). For girls there is the *intonjane*, a series of procedures marking their passage into womanhood and conferring on them the 'ability' to become mothers.

Traditional clothing: IsiXhosa-speakers mentioned that the traditional skirt (*isikhakha* or *umbhaco*) of Xhosa woman featured elaborate beadwork. It consisted of black strips, beaded belts

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and long tassels. It is considered bad taste to wear shoes with these skirts, especially when dancing. Traditionally men wear long wraparound skirts that run down from the waist to the feet. A blanket or a cloak of animal skin is worn over the shoulder.

7.3.4 SENSE OF PLACE

Connection to the landscape: Community members in the Springbok region spoke proudly of the floral splendour (*blommeprag* in Afrikaans) of their region in August and September. In Doring Bay, people also referred to the tranquility (*rustigheid* in Afrikaans) of the pristine landscape where steenbok graze unincumbered and children play freely. Dirt roads and donkey carts are also regarded as cultural heritage.

Sacred and special places: Mountains in the Kamiesberg that are seen as sacred or special places are Rooiberg, Weeskind, Boesmanskop, Vyemond, Kroonkop, Letterklip and Bethelsklip. Several community members indicated that they have in the recent past participated in the Barnabas Shaw Heritage Walk – a 33km hike from Bethelsklip to Leliefontein. This pilgrimage is named after Barnabas Shaw who established the first Methodist church in Leliefontein. Soebatsfontein (literally ‘begging or pleading fountain’) is renowned for the stones used for sharpening of arrows and Klipfontein for its perennial fountain where a water snake resides. Community members’ knowledge of local histories and natural features attest to the sense of place that they derive from their natural and man-made surroundings.

7.3.5 LANGUAGE AND ORAL TRADITIONS

In Springbok, community members emphasised that the Nama language is important to them. They argued that it should become the language of instruction in local schools. They wrote down words such as *nxa* which means ‘nice’ (*lekker* in Afrikaans) and *xhabo* for balls of bread cooked over the coals (*asbrood* or *roosterkoek* in Afrikaans) as examples, and also said that the origin of place names such as Garies, Kamassies, Koiingnaas, Karkams, and Kheis deserves attention. Oral traditions, encompassing storytelling, songs, and proverbs, also play a crucial role in preserving their heritage.

7.3.6 TRADITIONAL MUSIC, SPORT, AND GAMES

Music: Several different music genres were regarded as cultural heritage namely jazz, kwaito, amapiano, rock & roll, and hiphop. Prominent traditional dancing styles are *langarm*, *boerstryk* and *rieldans* (also known as *Nama-stap*, literally ‘Nama walk’). In Doring Bay, individuals critiqued current representations that strip *rieldans* of its cultural richness and meaning by seeing it as merely a dance. An elderly man emphasised that *rieldans* encompasses much more than its physical movements. The dance movements, rhythms, and songs used in *rieldans* are imbued with symbolic

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meanings that convey stories, social norms, and cultural values. He added that national competitions in *rieldans* lead to a watering down of this custom.

Sport and traditional games: Sport was emphasised for its role in establishing social cohesion. In Springbok, people spoke about local rugby teams such as the Marigolds and Phantoms and soccer clubs such as the Super Eagles, Young Risers, and Secret Warriors). They also referred to cricket and the daisy marathon that used to happen in September. Traditional children’s games include marbles and rope skipping as well as games with Afrikaans names only: *skoeloele*, *drieblik*, and *kennetjie*.

7.4 PROJECT IMPACTS AS PERCEIVED BY COMMUNITY MEMBERS

7.4.1 IMPACT OF SEISMIC SURVEYS ON INTANGIBLE CULTURAL HERITAGE

The final session of the public participation meetings focused on community members’ views regarding the potential impacts of the seismic surveys (that were conducted at the beginning of this year) on their cultural heritage. By far, the majority of participants were of the opinion that the surveys had no impact whatsoever. Some said that they have noticed an increase in the occurrence of storms at sea and on land but argued that it was the result of ‘nature’ and not the seismic surveys. Others contended that a single event (such as a seismic exploration) cannot cause cultural change and that technology and social media will ultimately lead to the demise of ‘our culture’.

In Doring Bay, a participant pointed out that fishermen recently complained about oil on their fishing lines and between seaweed. The question was what causes this type of pollution. Contradictory views were expressed elsewhere: in Port Nolloth people thought the seismic surveys chased the snoek away but in Elands Bay quite the opposite was believed to be the case. Here some argued that the surveys drove the snoek nearer to the shore.

7.4.2 IMPACT OF OIL AND GAS PRODUCTION ON CULTURAL HERITAGE

Formal discussions during the workshops and informal conversations with individuals revealed great uncertainty about the potential impacts of future oil and gas production. Many expressed the hope that jobs would be created, while some were concerned that such developments would increase global warming, destroy marine and coastal habitats, and ultimately undermine the foundation upon which much of their cultural heritage is built. Critics also warned that large-scale industrial activities could monopolise resources and disrupt local economies. They pointed out that fish quotas nowadays limit individuals’ ability to show solidarity with fellow community members by sharing resources and that people struggle to meet social obligations. The ripple effect of state policies is felt throughout the community.

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8 HERITAGE STATEMENT

One of the main issues raised by the communities and groupings interacted with during the Public Meetings is the need for more consultation within the communities to hear their concerns. This interaction needs to be at a level that is understood by the local community. This is further strengthened by the indigenous groupings emphasising the need for FPIC.

The 2022 engagements for the original Searcher application, as well as the 2023 AOSAC study (Boswell et al., 2023), have expanded this engagement effort and revealed a rich heritage through extensive consultations and investigation.

The previous studies has revealed that a large section of the affected communities not only view them as small-scale fishers but also as indigenous people and, as such, are intrinsically linked to the ocean and the land they have lived on centuries. The resurgence movement through which Khoi and San descendants are reclaiming their identity has, in recent decades, afforded these communities the ability to re-establish their cultural roots and grounding in an ancient landscape. This sentiment is echoed in the founding affidavit submitted (5 Feb 2022) during the appeal submitted to the first Searcher application by CJ Adams. It notes that the ocean is not only important for fishing but also has spiritual meaning and is a place of healing and holds healing powers for the indigenous communities. It further expanded that the ocean and its resources are important to their community's history and heritage. Boswell et al (2023) further expanded in detail on this.

Community identity and culture are thus strongly linked to the ocean and what it can provide, physically and spiritually. Communities have coexisted with the ocean for generations. This existence has created a culture and heritage that defines their way of living, community, and kinship unique to the West Coast of South Africa. Cook (2001) describes this as maritimity, a process whereby the sum of cultural adaptations made by coastal populations becomes imbued with meaning and culture. This is evident in community structures, cultural events, and seasonal activities. Their culture and heritage historically had a physical manifestation in village layouts, boat building and the unique west coast architectural vernacular. This vernacular was appropriated by the rich to develop quasi-cultural village expressions in the modern expansions of West Coast towns such as Paternoster.

This uptake of the cultural heritage manifestations or elements of the indigenous communities by the public at large provides a manner of legitimacy to their culture that is deeply entwined with the ocean and coastal landscape. It, unfortunately, does not translate into economic providence and brings no relief to their plight as subsistence communities. The changes in the fishing economies around the South African coast in the past four decades have resulted in a loss in income and livelihoods. It has inevitably impacted their community structures and activities which are a large part of their cultural heritage.

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The public meetings and focused discussions with communities and their constituents have shown that these communities and groupings are struggling economically due to decades of turmoil in the fishing industry. An industry plagued by the closing of fish processing plants, fishing licence and quota issues, and diminishing catches due to environmental and industrial impacts, to name a few. This economic downturn led to social issues within the communities. Foremost are poverty, loss of social fabric, substance abuse, teenage pregnancies, and violence. In all the interviews, the above issues were raised as central to their social existence and community experience.

Considering the Article 8(j) and 10(c) Convention on Biological Diversity (29 December 1993), of which South Africa has been a signatory since 1995, the need to “...*respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices*” must be considered within the available South African legislation. As such, the NHRA (section 3) (2)) considers heritage resources that are part of the national estate to include:

- “places to which oral traditions are attached or which are associated with living heritage:
- Or as per subsection 3, has cultural significance or other special values because of –
 - a) its importance in the community or pattern of South Africa’s history;
 - b) its possession of uncommon, rare or endangered aspects of South Africa’s natural or cultural heritage;
 - c) its potential to yield information that will contribute to an understanding of South Africa’s natural or cultural heritage;
 - d) its importance in demonstrating the principal characteristics of a particular class of South Africa’s natural or cultural places or objects;
 - e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
 - f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
 - g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
 - h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa;

As with Smith (2015), Loulanksi (2006), and Ndoro (2105) emphasised that culture is more than just the tangible but is also shared beliefs, values, language, traditions, functionality, meaning and community connections. Considering the various values and heritage significance as listed in section 3(3) of the NHRA, the cultural and living heritage associated with the communities and

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indigenous people along the southwestern and west coast of South Africa holds heritage significance. It is part of the national estate and holds importance as a way of life for small-scale fishers and Khoisan descendants alike. The physical and spiritual interaction with the ocean and the shorelines through millennia resulted in a maritimity that developed into the cultural fabric as they experience it today.

Through further research, the significance of such intangible and living cultural heritage features can have a combined heritage grading of Grade II or even Grade I. However, grading inevitably implies investigating and considering a Provincial or Heritage declaration of significance for a largely intangible cultural heritage that is to be taken up by the National and Provincial Governments.

9 IMPACT STATEMENT

The impact assessment rating is based on the rating scale in **Appendix B**

The cultural heritage and living heritage related to the communities linked to fisheries and ocean subsistence and further identified as indigenous communities can potentially be impacted by the proposed project. This impact is indirect and is in the community perceived to be primarily linked to their economic existence, as a result of the loss of fishing yield. Investigation and discussion have shown that the historic economic decline of fisheries has resulted in the loss of social cohesion, activities, and traditions.

To deliberate the potential impact, we evaluated the Commercial and Small-scale Fisheries report completed by Capricorn Marine Environmental (2024) for this application. The report summarises that *“With the implementation of the project controls and mitigation measures, the residual impact due to seismic noise is considered to be of LOW NEGATIVE significance for large pelagic longline sector. There is no impact expected on the demersal trawl, midwater trawl, demersal longline, small pelagic purse-seine, tuna pole-line, linefish, west coast rock lobster, netfish and small-scale fishing sectors.”*

The scientific studies conducted for this project thus identified impacts on fishing stock as low for all types species.

By inference, a potential impact on fishing yield could be expected and thus potential economic impact on communities due to reduced caught fish volumes.

We considered that the recommended mitigation measures, as listed in the specialist reports for the project, focus on the reduction of impacts on fish species and the projected reduction of the impact on the commercial and small-scale fishery catch yield. These mitigation measures should

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then indirectly positively impact the potential negative impacts on the cultural heritage of the communities to be impacted.

By using the impact assessment methodology as provided by EIMS, we can project a pre-mitigation negative impact on a regional scale over the long term with a moderate intensity due to the potential indirect impact on the communities and, ultimately, their heritage, with a high probability of this impact occurring. The pre-mitigation impact on heritage resources is rated as MEDIUM. The potential residual impact on heritage resources, with mitigation measures from the scientific studies is projected as LOW with a medium confidence factor.

9.1 CUMULATIVE IMPACTS

This section evaluates the possible cumulative impacts (IC) on heritage resources concerning the current application and other proposed applications that are ongoing in the Orange Basin.

The following must be considered in the analysis of the cumulative effect of development on heritage resources:

- **Fixed datum or dataset:** There is no comprehensive heritage data set for the Offshore and onshore impact region and thus we cannot quantify how much of a specific cultural heritage element is present in the region. The region has never been covered by a heritage resources study that can account for all heritage resources. Further to this, none of the heritage studies conducted can with certainty state that all heritage resources within the study area has been identified and evaluated;
- **Defined thresholds:** The value judgement on the significance of a heritage site will vary from individual to individual and between interest groups. Thus, implicating that heritage resources' significance can and does change over time. And so, will the tipping threshold for impacts on a certain type of heritage resource;
- **Threshold crossing:** In the absence of a comprehensive dataset or heritage inventory of the entire region we will never be able to quantify or set a threshold to determine at what stage the impact from developments on heritage resources has reached or is reaching the danger level or excludes the new development on this basis. (Godwin, 2011)

The scientific studies conducted for this project make the following comments relating to cumulative impacts:

- **Capricorn Marine – Commercial and Small-Scale Fisheries report (2022)**
Concurrent activities such as other planned speculative or proprietary seismic surveys in the Orange Basin could add to the cumulative impact on fisheries, especially if the activities are concurrent. The cumulative impact on any one fishery is expected to be of VERY LOW to LOW significance. Once completed there is not expected to be any residual impact. This would thus further mitigate any cumulative impact across fishery

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sectors. The potential that cumulative impacts of other hydrocarbon exploration activities on the fishing industry arise is considered to be possible to likely.

▪ **Pices Environmental Services – Biodiversity and Ecosystem Services Assessment (2022)**

While it is foreseeable that further exploration and future production activities could arise if the current Environmental Clearance Certificate is granted, there is not currently sufficient information available to make reasonable assertions as to nature of such future activities. This is primarily due to the current lack of relevant geological information, which the proposed exploration process aims to address. While there are many other rights holders in the South African offshore environment, most of these are not undertaking any exploration activities at present or would be concurrently with the proposed 3D survey, particularly not in the far offshore environment. Thus, the possible range of the future prospecting, mining, exploration, and production activities that could arise will vary significantly in scope, location, extent, and duration depending on whether a resource(s) is discovered, its size, properties, and location, etc. As these cannot at this stage be reasonably defined, it is not possible to undertake a reliable assessment of the potential cumulative environmental impacts. It is also possible that the proposed, or future, exploration fails to identify an economic petroleum resource, in which case the potential impacts associated with the production phase would not be realised.

The report further notes that...”Similarly, potential cumulative impacts on individuals and populations as a result of other seismic surveys undertaken either previously, concurrently or subsequently are difficult to assess.”

At this stage, cumulative impacts are purely speculative. Still, the potential for the future increase in cumulative impacts due to current and future seismic surveys and the potential for future Oil and Gas production cannot be excluded but needs to be quantifiable at this stage for cultural heritage.

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Table 5 - Impact table

IMPACT DESCRIPTION		Pre-Mitigation							Post Mitigation								Priority Factor Criteria			
Impact	Phase	Nature	Extent	Duration	Magnitude	Reversibility	Probability	Pre-mitigation ER	Nature	Extent	Duration	Magnitude	Reversibility	Probability	Post-mitigation ER	Confidence	Cumulative Impact	Irreplaceable loss	Priority Factor	Final score
Impact on cultural heritage	Operation	-1	4	4	3	3	4	-14	-1	4	3	1	3	3	-8.25	Medium	1	1	1,13	--8.25

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10 CONCLUSIONS AND RECOMMENDATIONS

The background research and initial public participation in the available consultation days given to PGS have shown that the affected communities are largely linked to subsistence and small-scale fisheries along the west coast of the Western and Northern Cape Provinces of South Africa.

These communities have expressed their concerns about the effect that the proposed 3D reconnaissance project will have on the fishing stock, which will ultimately impact their livelihoods. They also do not place much faith in the findings of the scientific fishing stock studies for this and other similar projects.

10.1 HERITAGE STATEMENT SUMMARY

The affected communities not only view them as small-scale fishers but also as indigenous people and, as such, are intrinsically linked to the ocean and the land they have lived on centuries. The resurgence movement through which Khoi and San descendants are reclaiming their identity has in recent decades afforded these communities the ability to re-establish their cultural roots and grounding in an ancient landscape. This sentiment is echoed in the founding affidavit submitted (5 Feb 2022) during the appeal submitted to the first Searcher application by CJ Adams. It notes that the ocean is not only important for fishing but also has spiritual meaning and is a place of healing and holds healing powers for the indigenous communities. It further expanded that the ocean and its resources play an important part in their community's history and heritage.

Community identity and culture are thus strongly linked to the ocean and what it can provide, physically and spiritually (Boswell, et al, 2023). Communities have coexisted with the ocean for generations. This existence has created a culture and heritage that defines their way of living, community, and kinship unique to the West Coast of South Africa. Cook (2001) describes this as maritimity, a process whereby the sum of cultural adaptations made by coastal populations becomes imbued with meaning and culture. This is evident in community structures, cultural events, and seasonal activities.

The public meetings and focused discussions with communities and their members have shown that these communities and groupings are struggling economically due to decades of turmoil in the fishing industry. An industry plagued by the closing of fish processing plants, fishing licence and quota issues, and diminishing catches due to environmental and industrial impacts, to name a few. This economic downturn led to social issues within the communities. Foremost are poverty, loss of social fabric, substance abuse, teenage pregnancies, and violence. In all the interviews, the above issues were raised as central to their social existence and community experience.

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As with Smith (2015), Loulanksi (2006), and Ndoro (2105) emphasised that culture is more than just the tangible but is also shared beliefs, values, language, traditions, functionality, meaning and community connections. Boswell et al. (2023) have shown this through extensive studies conducted over ten months along the Northern and Western Cape coastline. Considering the various values and heritage significance as listed in section 3(3) of the NHRA, the cultural and living heritage associated with the communities and indigenous people along the southwestern and west coast of South Africa holds significant heritage value. It is part of the national estate and is important as a way of life for small-scale fishers, Khoi, and San descendants alike. The physical and spiritual interaction with the ocean and the shorelines through millennia resulted in a maritimity that developed into the cultural fabric they experience today.

Through further research, the significance of such intangible and living cultural heritage features can potentially have a combined heritage grading of Grade II or even Grade I. However, grading inevitably implies investigating and considering a Provincial or Heritage declaration of significance for a largely intangible cultural heritage.

10.2 IMPACT STATEMENT SUMMARY

The scientific studies conducted for this project identified impacts on fishing stock as low for all species.

By inference, a potential impact on fishing yield could be expected and thus potential economic impact on communities due to reduced caught fish volumes.

We considered that the recommended mitigation measures, as listed in the specialist reports for the project, focus on reducing impacts on fish species and the projected reduction of the impact on the commercial and small-scale fishery catch yield. These mitigation measures should then indirectly reduce the potential negative impacts on the communities' cultural heritage.

By using the impact assessment methodology as provided by EIMS, we can project a pre-mitigation negative impact on a regional scale over the long term with a moderate intensity due to the potential indirect impact on the communities and, ultimately, their heritage, with a high probability of this impact occurring. The pre-mitigation impact on heritage resources is rated as MEDIUM. The potential residual impact on heritage resources, with mitigation measures from the scientific studies, is projected as LOW with a medium confidence factor.

At this stage, cumulative impacts are purely speculative. Still, the potential for the future increase in cumulative impacts due to current and future seismic surveys and the potential for future Oil and Gas production cannot be excluded but needs to be quantifiable at this stage for cultural heritage.

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10.3 RECOMMENDATIONS

The following recommendations are based on the UNESCO ICH guidelines and were presented for implementation during the original studies conducted in 2022 (Fourie, 2022). They are aimed at safeguarding the cultural heritage of the small-scale fishers and cultural groupings in the influence of this project and should now be implemented:

- Re-assess post-project the potential effects on the identified communities and their intangible cultural heritage. This will require consideration of the socio-economic baseline developed **during the previous survey** and this environmental impact process. Based on the outcomes, provide resources and support to enhance the mitigation capacity of communities' intangible cultural heritage by fostering dialogue, mutual understanding and reconciliation between and within communities.
- Based on the outcomes, **provide resources and support for communities** to develop and undertake safeguarding measures or plans to enhance the **mitigation capacity of their intangible cultural heritage** by **fostering dialogue, mutual understanding and reconciliation** between and within communities.
- Additional to the above the recommendations as proposed by Boswell et al (2023) should be implemented:
 - It is suggested that particular proposals be put forth to the cross-sectoral and conventional leadership group, to seek rituals or events that could potentially reduce the adverse cultural consequences of the planned activities on cultural heritage.
 - Dedicated resources should be set aside for consultations and the proposed ritual/event, as these may not be once-off ritual processes even if the prosecuting operations are short-term.
 - Undertakings ought to be put in place to visibly demonstrate appreciation for regional cultural perspectives, and to work towards realising the indigenous population's entitlement to human dignity, as highlighted by both the Constitution of South Africa, the National Health Act (NHRA), and the Indigenous Knowledge Act.
- Any shipwrecks or pieces thereof noted during the survey must be shared with the SAHRA MUCH Unit for inclusion into the national database.

Considering the assessment based on the fieldwork findings and the scientific studies relating to the impact on fisheries, we are of the opinion that the proposed project's impact on tangible and intangible cultural heritage resources and practices can be mitigated through the implementation of the recommendations in this report.

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APPENDIX A

ENVIRONMENTAL IMPACT METHODOLOGY

The impact significance rating methodology, as provided by EIMS, is guided by the requirements of the NEMA EIA Regulations 2014 (as amended). The broad approach to the significance rating methodology is to determine the environmental risk (ER) by considering the consequence (C) of each impact (comprising Nature, Extent, Duration, Magnitude, and Reversibility) and relate this to the probability/ likelihood (P) of the impact occurring. This determines the environmental risk. In addition, other factors, including cumulative impacts and potential for irreplaceable loss of resources, are used to determine a prioritisation factor (PF) which is applied to the ER to determine the overall significance (S). The impact assessment will be applied to all identified alternatives. Where possible, mitigation measures will be recommended for the impacts identified.

11.4 DETERMINATION OF ENVIRONMENTAL RISK

The significance (S) of an impact is determined by applying a prioritisation factor (PF) to the environmental risk (ER). The environmental risk is dependent on the consequence (C) of the impact and the probability (P) of the impact occurring. The consequence is determined through the consideration of the Nature (N), Extent (E), Duration (D), Magnitude (M), and reversibility (R) applicable to the specific impact.

To this methodology, the consequence of the impact is represented by:

$$C = \frac{(E+D+M+R) \times N}{4}$$

Each individual aspect in the determination of the consequence is represented by a rating scale as defined in **Table 6** below.

Table 6 - Criteria for Determining Impact Consequence

Aspect	Score	Definition
Nature	- 1	Likely to result in a negative/ detrimental impact
	+1	Likely to result in a positive/ beneficial impact
Extent	1	Activity (i.e. limited to the area applicable to the specific activity)
	2	Site (i.e. within the development property boundary),
	3	Local (i.e. the area within 5 km of the site),
	4	Regional (i.e. extends between 5 and 50 km from the site)
	5	Provincial / National (i.e. extends beyond 50 km from the site)
Duration	1	Immediate (<1 year)
	2	Short term (1-5 years),
	3	Medium term (6-15 years),
	4	Long term (the impact will cease after the operational life span of the project),

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Aspect	Score	Definition
	5	Permanent (no mitigation measure of natural process will reduce the impact after construction).
Magnitude/ Intensity	1	Minor (where the impact affects the environment in such a way that natural, cultural and social functions and processes are not affected),
	2	Low (where the impact affects the environment in such a way that natural, cultural and social functions and processes are slightly affected),
	3	Moderate (where the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way),
	4	High (where natural, cultural or social functions or processes are altered to the extent that it will temporarily cease), or
	5	Very high / don't know (where natural, cultural or social functions or processes are altered to the extent that it will permanently cease).
Reversibility	1	Impact is reversible without any time and cost.
	2	Impact is reversible without incurring significant time and cost.
	3	Impact is reversible only by incurring significant time and cost.
	4	Impact is reversible only by incurring prohibitively high time and cost.
	5	Irreversible Impact

Once the C has been determined, the ER is determined in accordance with the standard risk assessment relationship by multiplying the C and the P. Probability is rated/ scored as per Table 7.

Table 7 - Probability Scoring

Probability	1	Improbable (the possibility of the impact materialising is very low as a result of design, historic experience, or implementation of adequate corrective actions; <25%),
	2	Low probability (there is a possibility that the impact will occur; >25% and <50%),
	3	Medium probability (the impact may occur; >50% and <75%),
	4	High probability (it is most likely that the impact will occur- > 75% probability), or
	5	Definite (the impact will occur)

The result is a qualitative representation of relative ER associated with the impact. ER is therefore calculated as follows:

$$ER = C \times P$$

Table 8 - Determination of Environmental Risk

Consequence	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
	0	1	2	3	4	5
Probability						

The outcome of the environmental risk assessment will result in a range of scores, ranging from 1 through to 25. These ER scores are then grouped into respective classes as described in **Table 9**.

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Table 9 - Significance Classes

Environmental Risk Score	
Value	Description
< 9	Low (i.e., where this impact is unlikely to be a significant environmental risk).
≥9 - <17	Medium (i.e., where the impact could have a significant environmental risk),
≥17	High (i.e., where the impact will have a significant environmental risk).

The impact ER will be determined for each impact without relevant management and mitigation measures (pre-mitigation), as well as post-implementation of relevant management and mitigation measures (post-mitigation). This allows for a prediction in the degree to which the impact can be managed/mitigated.

11.5 IMPACT PRIORITISATION

Further to the assessment criteria presented in the section above, it is necessary to assess each potentially significant impact in terms of:

1. Cumulative impacts; and
2. The degree to which the impact may cause irreplaceable loss of resources.

To ensure that these factors are considered, an impact prioritisation factor (PF) will be applied to each impact ER (post-mitigation). This prioritisation factor does not aim to detract from the risk ratings but rather to focus the attention of the decision-making authority on the higher priority/significance issues and impacts. The PF will be applied to the ER score based on the assumption that relevant suggested management/mitigation impacts are implemented.

Table 10 - Criteria for Determining Prioritisation

Cumulative Impact (CI)	Low (1)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is unlikely that the impact will result in spatial and temporal cumulative change.
	Medium (2)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is probable that the impact will result in spatial and temporal cumulative change.
	High (3)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is highly probable/ definite that the impact will result in spatial and temporal cumulative change.
Irreplaceable Loss of Resources (LR)	Low (1)	Where the impact is unlikely to result in irreplaceable loss of resources.
	Medium (2)	Where the impact may result in the irreplaceable loss (cannot be replaced or substituted) of resources but the value (services and/or functions) of these resources is limited.

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	High (3)	Where the impact may result in the irreplaceable loss of resources of high value (services and/or functions).
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The value for the final impact priority is represented as a single consolidated priority, determined as the sum of each individual criteria represented in Table 11. The impact priority is therefore determined as follows:

$$\text{Priority} = \text{CI} + \text{LR}$$

The result is a priority score which ranges from 3 to 9 and a consequent PF ranging from 1 to 2 (Refer to **Table 11**).

Table 11 - Determination of Prioritisation Factor

Priority	Ranking	Prioritisation Factor
2	Low	1
3	Medium	1.125
4	Medium	1.25
5	Medium	1.375
6	High	1.5

To determine the final impact significance, the PF is multiplied by the ER of the post-mitigation scoring. The ultimate aim of the PF is an attempt to increase the post-mitigation environmental risk rating by a full ranking class if all the priority attributes are high (i.e., if an impact comes out with a medium environmental risk after the conventional impact rating, but there is significant cumulative impact potential and significant potential for irreplaceable loss of resources, then the net result would be too upscale the impact to a high significance).

Table 12 - Final Environmental Significance Rating

Environmental Significance Rating	
Value	Description
< -17	High negative (i.e., where the impact must have an influence on the decision process to develop in the area).
≥ -17 ≤ -9	Medium negative (i.e., where the impact could influence the decision to develop in the area).
> -9, <0	Low negative (i.e., where this impact would not have a direct influence on the decision to develop in the area).
0	No impact
<0, <9	Low positive (i.e., where this impact would not have a direct influence on the decision to develop in the area).
≥ 19 ≤ 17	Medium positive (i.e., where the impact could influence the decision to develop in the area).
≥ 217	High positive (i.e., where the impact must have an influence on the decision process to develop in the area).

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The significance ratings and additional considerations applied to each impact will be used to provide a quantitative comparative assessment of the alternatives being considered. In addition, professional expertise and opinion of the specialists and the environmental consultants will be applied to provide a qualitative comparison of the alternatives under consideration. This process will identify the best alternative for the proposed project.

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APPENDIX B
PGS TEAM CVS

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WOUTER FOURIE

Professional Heritage Practitioner

PROFILE

Project Manager and Principal Heritage Specialist holds a post-graduate degree in Archaeology and is registered with the Association of Southern African Professional Archaeologists as a Professional Archaeologist and is accredited as a Principal Investigator; he is further an Accredited Professional Heritage Practitioner with the Association of Professional Heritage Practitioners in South Africa.

My work focuses on heritage management through Heritage Impact Assessments, implementation of recommendations and large-scale heritage mitigation projects. I have worked, completed and implemented heritage projects in South Africa, Botswana, Mozambique, Mauritius, Zambia, Lesotho, and the Democratic Republic of the Congo.

CONTACT

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EDUCATION

University of Pretoria

1993-1996
BA Degree - Majors in Archaeology, Anthropology and Geography

University of Pretoria

1997
BA Hon Archaeology, with further specialisation in environmental management.

University of Cape Town

2016 – present
MPhil Conservation of the Built Environment

WORK EXPERIENCE

PGS Heritage Group of Companies

(South Africa, Lesotho, Mozambique, and Portugal)

Director – Heritage Specialist

2003- present
I am actively involved in the management of the business and focus on marketing and new business for PGS, specifically the broader SADC region. Acting as heritage specialist in multidisciplinary teams

The University of the Witwatersrand - Project Manager – Archaeological Contracts Unit

2007-2008
Responsible for conducting heritage and archaeological impact studies, archaeological excavations and general management of the unit

Matakoma Consultants – Director – Heritage Specialist

2000 – 2008
Heritage specialist and Director responsible for heritage and archaeological impact studies

Randfontein Estate Gold Mine – Environmental Coordinator

Oct 1998- Feb 2000
Coordinating all environmental Rehabilitation work

Department of Minerals and Energy Environmental Officer

Oct 1997– Sept 1998

PROFESSIONAL AFFILIATION

Accredited Professional Heritage Practitioner

Association of Professional Heritage Practitioners
Since 2014

Accredited Professional Archaeologist

Association of Southern African Professional Archaeologists –
Since 2001

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INGE KRIEL

Curriculum Vitae

Inge Kriel has spent much of her life using her personal and career experiences to remind people that other ways of being, of thinking, and of acting in the world are possible – in particular, ways of living more harmoniously with each other, with nature, and with ourselves. As a seasoned anthropologist with more than twenty years of research, community engagement, and academic teaching experience, Inge is known for her ability to untangle complexities and to mediate between different players, perspectives, and priorities. Inge holds a master's degree in Anthropology from the University of Pretoria and currently works as a freelance consultant. She has a particular interest in local knowledge systems and practices that impact biodiversity and cultural heritage conservation. During the past two years, Inge was part of a multidisciplinary research team whose work culminated in the design of cultural heritage management plans for Anglo American Platinum's operations in South Africa.

EDUCATION

Highest qualification

Magister Artium (Anthropology), University of Pretoria. 1996. Graduated cum laude. Dissertation topic in Development Studies: *Food garden projects in the Giyani District as touchstone for the community development approach.*

Selected certificate courses

- Nyukela Public Service Senior Management Service Pre-entry Programme. 2020. The National School of Government (course included modules on citizenship and social cohesion; the machinery of government; administrative law, planning and delivery; ethical leadership; and innovative approaches to wicked problems).
- Qualitative and Quantitative Research Methods. 2000. University of Pretoria.
- Project Planning and Facilitation. 1995. The Rural Foundation.
- Techniques of Project Planning. 1994. German Foundation for International Development (DSE) and the Rural Foundation.

EMPLOYMENT HISTORY

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Currently works as a freelance consultant

Since January 2017

The Herman Charles Bosman Living Museum, Groot Marico

January 2018 – October 2019

Social consultant: Part-time contract appointment as a mentor for local heritage guide Lucas Ntsimako during the research and writing-up process for his book *Sefalana: Granary of Batswana Wisdom from the Marico*. The project was funded by the National Heritage Council.

University of Venda, Thohoyandou

January 2017 – December 2018

External reviewer and examiner: Part-time contract appointment in the Department of Development Studies to assess the honours degree course and to act as external examiner of undergraduate modules.

University of Pretoria, Pretoria

January 2000 – December 2016

Lecturer: Full-time permanent appointment in the Department of Anthropology and Archaeology: introduced degree programmes in Community Development (name later changed to Development Studies); designed and taught undergraduate and postgraduate courses in Anthropology and Development Studies; also acted as supervisor for postgraduate students and as researcher/community engagement facilitator in diverse projects.

Stocks and Stocks Construction Company, Olifantsfontein

January 1998 – December 1999

Social consultant: Full-time contract appointment to design a socio-economic development strategy for communities adjacent to a proposed national toll road.

University of the Free State, Bloemfontein

January 1996 – December 1997

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Lecturer: Full-time permanent appointment in the Department of Anthropology: designed and taught undergraduate courses in Anthropology at the main campus and at the satellite campus in Kimberley.

Rural Foundation, Pella (near Groot Marico)

January 1994 – December 1995

Community Development Officer: Full-time permanent appointment sponsored by the then German Technical Cooperation Agency (today GIZ): Facilitated needs and capacity analyses and planning workshops; assisted with the implementation, monitoring, and evaluation of projects in fields ranging from early childhood development and adult education to agriculture and small business development as well as infrastructure development.

SELECTED RESEARCH AND CONSULTANCY PROJECTS

Digby Wells Environmental, Johannesburg

Since March 2022

Associate

- Works as an independent contractor on projects in the field of cultural heritage, focusing on the design cultural heritage management plans (recent clients include Anglo American Platinum and South32).

Marico Biosphere Reserve, Groot Marico

Since April 2015

Development adviser and grant writer

- Part of a team of local enthusiasts that are constantly creating opportunities to strengthen community development and biodiversity conservation projects.

Tshwane Homelessness Forum, Pretoria

November 2014 – December 2016

Co-researcher

- Worked in an interdisciplinary team comprised of academics from the University of Pretoria and the University of South Africa, government officials, staff members of local NGOs, and homeless people to draft a new policy on homelessness for the City of Tshwane. Also resulted in two peer-reviewed articles in the journal *Development Southern Africa*.

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Human Sciences Research Council, Pretoria

December 2013 – July 2014

Co-researcher

- Worked in an interdisciplinary team of the Democracy, Governance and Service Delivery research programme that was commissioned by the Royal Bafokeng Nation (of South Africa's Rustenburg region) to document customs, laws, values, and principles with a view to guiding future generations in preserving and developing 'the Bafokeng way'.

Helio Alliance, Pretoria

July 2002 – October 2002

Social consultant

- Identified and guided close to two-hundred families in the relocation of approximately nine-hundred graves from the property of Tavistock Collieries outside eMalahleni, South Africa.

SANPAD (South Africa-Netherlands research Programme on Alternatives in Development), Pretoria

July 2001 – January 2004

Co-researcher

- Worked in an interdisciplinary team comprised of academics from the University of Pretoria, the University of Limpopo and the Technical University of Eindhoven as well as government officials from the Department of Transport and employees of TRC Africa Consultancy to determine the applicability of stated preference survey techniques among commuters in Mamelodi, South Africa