

**DESKTOP STUDY OF THE CULTURAL HERITAGE RESOURCES OF NORTHWESTERN  
RICHTERSVELD, FOR TWO PROPOSED PROSPECTING RIGHTS APPLICATIONS FOR ALLUVIAL  
DIAMOND MINING ALONG THE ORANGE RIVER IN NAMAQUALAND, NORTHERN CAPE,  
SOUTH AFRICA**

**Prepared**

**by**



**Millennium Heritage Pty (Ltd)**

**141 Thabo Mbeki Street**

**Polokwane**

**South**

**Africa**

## EXECUTIVE SUMMARY

Millennium Heritage Group Pty (Ltd) was appointed by Ndi Geological Consultant Services on behalf of Samara Mining (Pty) Ltd to conduct archival and desktop studies for the proposed prospecting rights application in the Namaqualand region of the Northern Cape. The proposed area is located along the Orange River catchment. The area under study lies on the left bank of the Orange River boundary on the portion of remainder Farm 18 which is situated east of the city of Alexander Bay. It forms part of the diamond concessions on Nama community land that has been used as grazing lands for many centuries by the Nama people. Despite being a dryland, the area is renowned for its outstanding biodiversity. The archival data gathered from the desktop research revealed a layering of cultural heritage resources that spans from the deep past to the recent past. These contain original deposits and materials that speak to humanity's interaction with Africa's southwestern extreme point. Given that the Richtersveld is archaeologically rich, there is a high possibility for more heritage resources within the area proposed for alluvial diamond mining, perhaps some needing mitigation. Therefore a standard survey of the area that is guided by protocols recommended for archaeological and anthropological fieldwork is highly recommended so as to ascertain whether there are any cultural resources within the proposed development footprint.

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## 1. INTRODUCTION

Millenium Heritage Pty (Ltd) was appointed by NDI Geological Consultant Services (Pty) Ltd on behalf of Samara Mining (Pty) Ltd to conduct an archival study of the cultural heritage (paleontological, archaeological, and historical) of Namaqualand as part of the desktop studies for two proposed prospecting right applications with bulk sampling to prospect for alluvial diamonds along and within the Orange River situated near the town of Sendlingsdrift in the Richtersveld within the Namaqualand District of the Northern Cape Province of South Africa. Both prospecting right applications areas lie on the left bank of the Orange River bordering Namibia. The proposed prospecting and bulk sampling activities will focus on seven (7) prospecting pockets within the two greater Prospecting Right Application Areas (PRAA). PRAA 1 comprises prospecting pockets 1, 2, 3A & 3B on the left bank of the Orange River, boundary to a Portion of Remainder of the Farm Richtersveld No. 11 (NC30/5/1/1/2/12664 PR). PRAA 2 comprises prospecting pockets 4, 5 and 6, also on the left bank of the river, boundary to a Portion of Remainder of Farm Oena No. 18 (NC30/5/5/1/1/2/12663 PR) which is situated approximately 40km north east of the Alexander Bay (Fig 1 and Fig 2). It forms part of the diamond concessions on Nama community land that has been used as grazing lands for many centuries by the Nama people. Despite being a dryland, the area is renowned for its outstanding biodiversity.

Prospecting pockets 1, 2, 3A and 3B (PRAA 1) all fall within 10km of the protected area, namely the Richtersveld Cultural Botanical Landscape (UNESCO World Heritage Site) and the Richtersveld National Park and prospecting pockets 4, 5 and 6 (PRAA 2) all fall directly within the boundary of these protected areas (Fig 3)

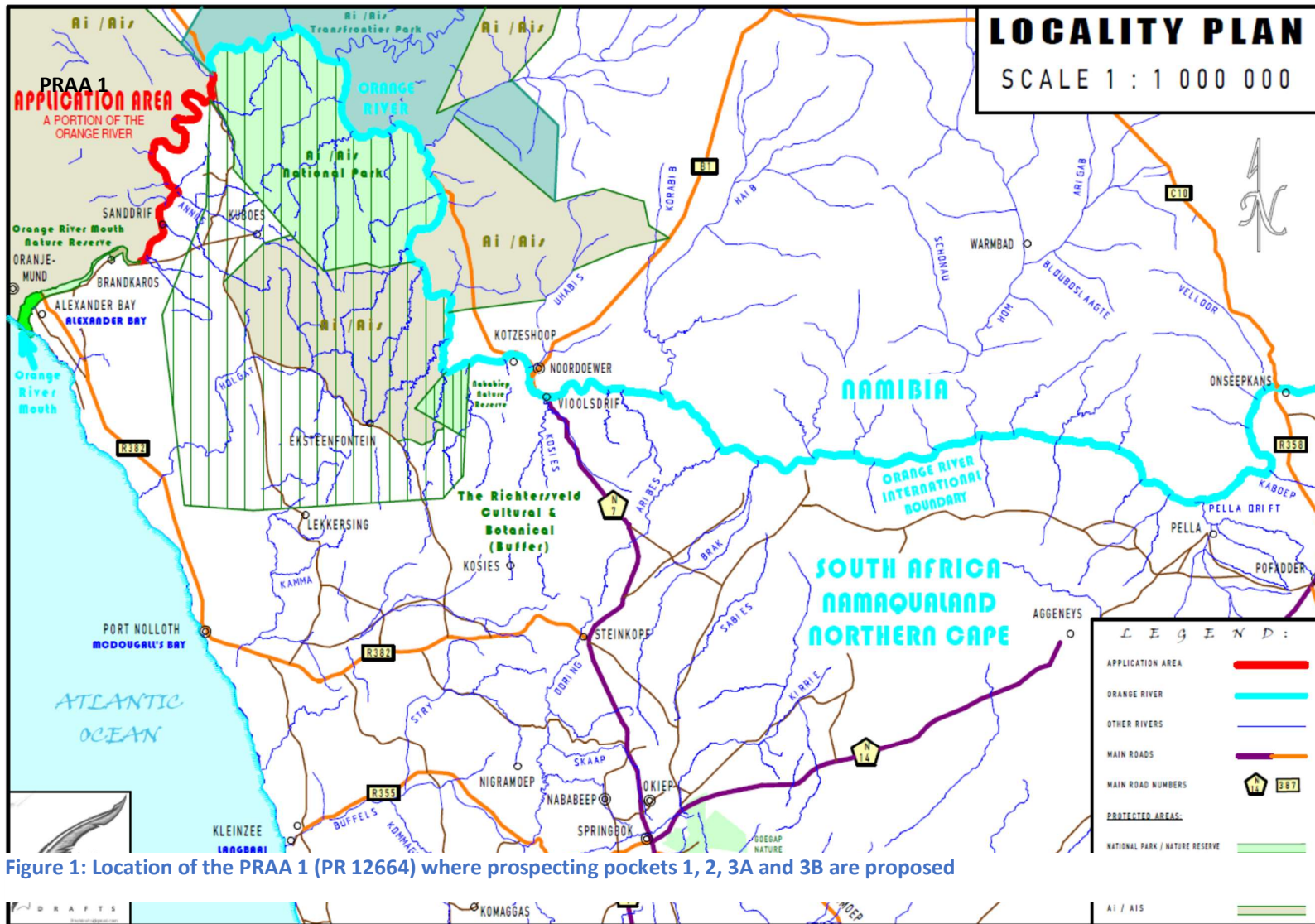


Figure 1: Location of the PRAA 1 (PR 12664) where prospecting pockets 1, 2, 3A and 3B are proposed

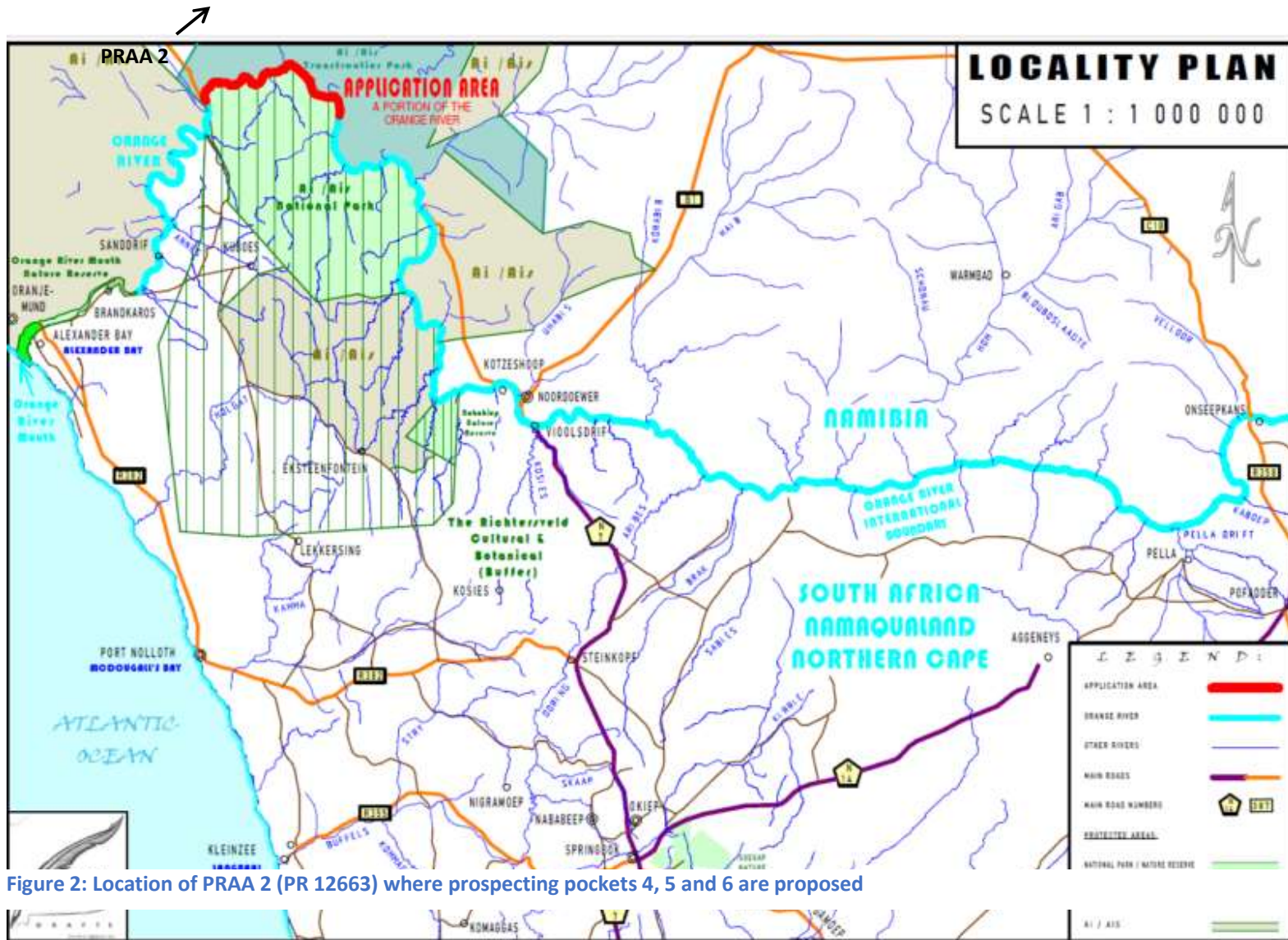


Figure 2: Location of PRAA 2 (PR 12663) where prospecting pockets 4, 5 and 6 are proposed

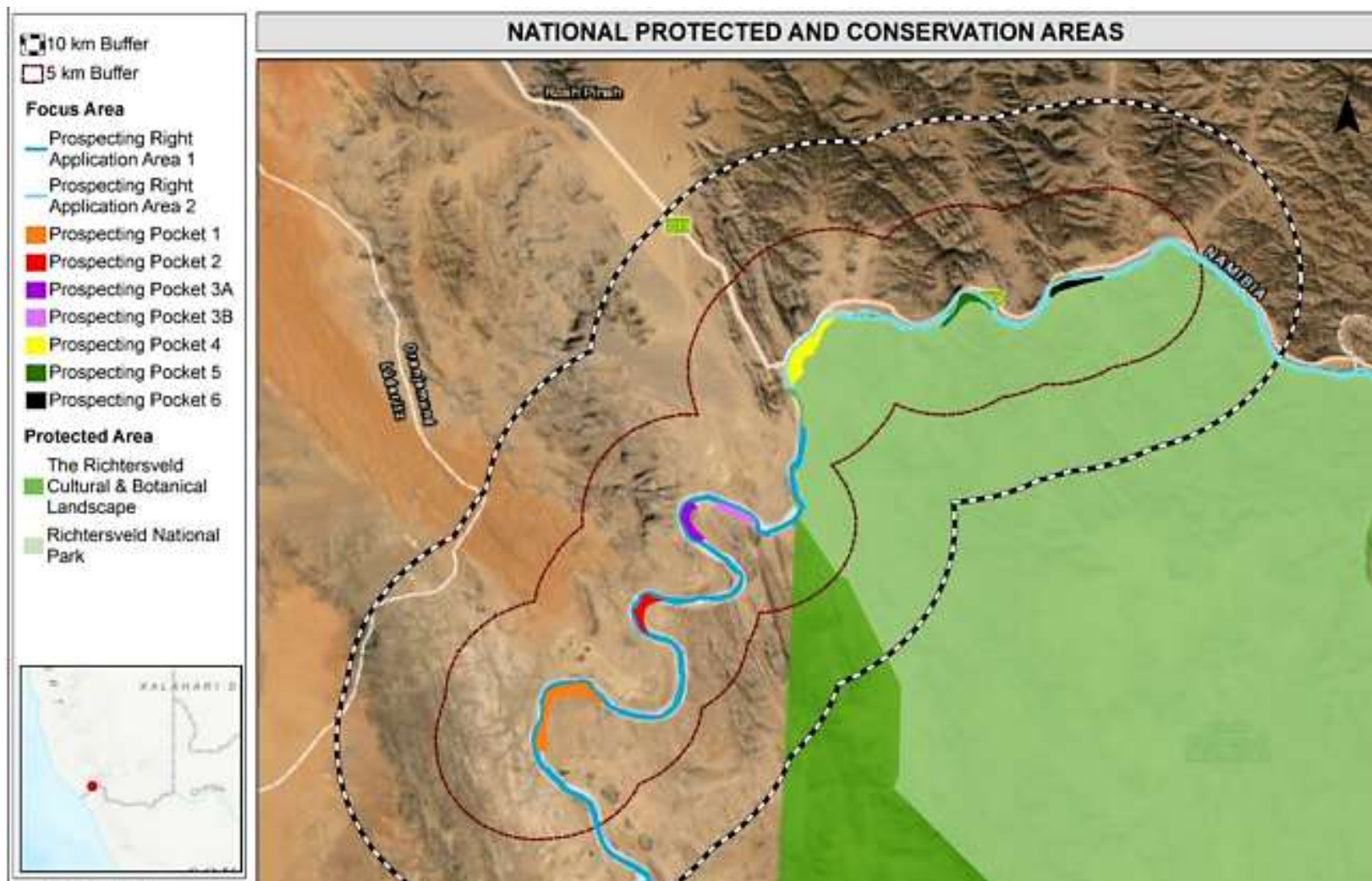


Figure 3: Protected Areas within 5km and 10km radius of the prospecting focus area (pockets), according to the National Protected Areas Register / NPAES (2009) (Map courtesy of Scientific Terrestrial Services, Biodiversity Scoping Report, October 2020)

## 2. PROPOSED DEVELOPMENT

As demonstrated in Fig 1, 2 and 3 above, the proposed prospecting areas are located approximately 250 m west of Sanddrift in the Namaqualand Magisterial District, Northern Cape. The footprint of the PRAA 1 will cover 987.98 Ha of land and PRAA 2 690 Ha of land drained by Orange River. The project will involve non-invasive prospecting activities and invasive bulk sampling activities. Invasive bulk sampling will include excavating ten (10) trenches per PRAA, each 100m x 25m x 4m, to obtain bulk samples required. For PRAA 1 ten trench locations will be selected from prospecting pockets 1 to 3B and another ten trench locations for PRAA 2. A volume of 2500m<sup>3</sup> of overburden/waste and volume of 7500m<sup>3</sup> of alluvial gravel/ore will be abstracted from each trench. Associated infrastructure will include the construction of a ablution facility, access roads, storage area, office site, plant site, and vehicle parking area. Processing of the bulk samples will be conducted in a closed circuit Rotary Pan Processing Plant to recover alluvial diamonds.

Trenching will take place below the 1: 100 year flood line of the Orange River within the riverbed and active channel. No processing will be undertaken within the riverbed only the Orange River active channel embankment or within 50m thereof, still below the 1:100 year floodline. Only machinery and associated pumps will be located within the riverbed.

Eighty percent (80%) of the riverbed will be worked dry. Samara will make small temporary diversions in the river to gain access to the alluvial material (worked in a phased manner with concurrent rehabilitation). No blasting will be required as part of prospecting activities.

As part of the non-invasive preparation, a desktop study has been conducted to generate an understanding of the paleontology, archaeology, history and anthropology of the area targeted by the mining project.

## 3. BACKGROUND

The Richtersveld is situated on the north-western corner of the Northern Cape province in South Africa and the area is popularly known as Namaqualand. It is basically a desert landscape characterised by a rugged terrain with a diverse range of flora and fauna. The scenery is everchanging. It ranges from flat, sandy, coastal plains, to craggy sharp mountains of volcanic rock and the lushness of the Orange River, which forms the border that separates South Africa from Namibia. The Richtersveld is a unique biodiversity hotspot hence part of



this dryland was declared as a UNESCO's World Heritage in 2007. The climate of Richtersveld is characterized by severe summer temperatures which have been recorded to reach approximately 53 °C (Webley 1992; Dewar 2008). On the contrary, nights are cool and bring with them heavy dew. Water is scarce hence life depends on moisture from the early morning fog. During winter, temperatures drop to more temperate levels. Rainfall in the Richtersveld varies from 5 mm per annum in the east to 200 mm per annum in the west. The western mountainous region receives mainly winter rainfall as well as life-giving mists from the ocean. Strong gale-force winds often pick up in the winter and these cause sandstorms (Robertshaw 1978; Dewar 2008). The wind is often cold due to the influence from the Atlantic Ocean in the west. The Richtersveld was claimed by the Nama people as part of their indigenous traditional land hence they set up a conservancy for research and tourism purposes. Thus, the local community, owns the entire area, including the World Heritage Site hence it manages the National Park in conjunction with South African National Parks and is entirely responsible for management of the World Heritage Site. The northern part of the area was proclaimed in 1991 after 18 years of negotiations between the National Parks Board and the local Nama people who continue to live and graze their livestock in the area. It has an area of 1,624.45 square kilometres (627.20 sq mi. The community conservancy is bordered to the north by the Richtersveld National Park. Unlike the National Park, the Richtersveld Community Conservancy, which forms the core zone of the World Heritage Site, is not subject to diamond mining and is as a result the more pristine of the two areas. The Nama language has also been preserved here by the Nama communities more than any other place in the Namaqualand region. The Nama people have made this part of the world their home about two millennia ago and because no one else has been willing or able to survive in this landscape, their lifestyle has not changed much in that time (Dewar 2008). Richtersveld is one of the few areas in southern Africa where transhumance pastoralism is still practised; as a cultural landscape, it reflects long-standing and persistent traditions of the Nama, the indigenous community. Their seasonal pastoral grazing regimes, which sustain the extensive biodiversity of the area, were once much more widespread and are now vulnerable. Today the Nama are found throughout the region, but core areas of settlement are in Steinkopf, Kommagas, Concordia, Leliefontein, Richtersveld, and other so-called rural areas of the reserves.



**Figure 4:** Photographs showing part of the Richtersveld landscape. (courtesy of Richard Veillon - [whc.unesco.org/en/documents/120446](http://whc.unesco.org/en/documents/120446))

#### 4. METHODOLOGY

The desktop study was undertaken as part of the archaeological, and heritage components of the Environmental Impact Assessment report (EIA) for the project. It is common knowledge that a desktop study is an essential component of any primary research. A stepped methodology was employed in the study. Published and unpublished data on the paleontology, archaeology, history and anthropology of Namaqualand was collated from dissertations, heritage institutions, heritage practitioners, archaeologists, anthropologists, historians that have done research in the area, conservation bodies, municipalities, Non-Governmental Organisations, Libraries, and heritage information systems such as SAHRIS. Among the datasets examined included archived manuscripts, blueprints, survey reports, maps, paintings, photographs, books, journal articles, site registers, monographs and autobiographies which were examined from databases held at information repositories such as the South African National Heritage Resources Agency (SAHRA), the Richtersveld Community Conservancy (RCC), SANParks, De Beers, the Heritage Portal, University of Cape Town Libraries, Southern African Historical Society, UNESCO, the National Archives of South Africa (NASA), the South African History Online, and the South African Archaeological Society. Finally, the last stage of the study involved organising the gathered information into a database that captured nature and distribution of the cultural heritage sites. Subsequently,

this was merged to create an excel inventory attached in Appendix 1 which provided insights on the types of heritage resources in the area.

## 5. ASSUMPTIONS AND LIMITATIONS

This desktop study was limited to resources that were available in an environment affected by the covid pandemic. No ground surveys were involved. The recommendations contained in this study are based on leads from archives that were accessible.

## 6. FINDINGS OF THE DESKTOP ANALYSIS

### 6.1 Historical Pasts along the Orange River

Despite being colourful, the history of the Nama people has been largely marginalised. Historical records depict the Nama landscape as populated by pastoralists whose livelihood depended on the Orange River as long as 2000 years ago. The River served as the only source of permanent water for themselves and their livestock (Smith 1995; Webley 2001, 2002; Dewar 2008). Thus, it kind of attracted settlements which were recorded by early European explorers as dotted along the River. As the first explorers travelled northward, they found that the area to the north of the Olifants River was occupied by tribal grouping of Khoekhoen descendent called the Little Namaqua (Smith 1995; Webley 2001; Dewar 2008). In 1779, Robert Gordon explored the west coast towards the mouth of the Orange River. He met groups of Nama people living off shellfish. When he visited the Kamiesberg in 1779 he found the kraal of the chief to have consisted of only nine huts while the entire Namaqua nation was reported to amount to only 400 people (Webley 2002; Orton et al 2005). These historical records also have revealed that there were numerous Nama groups whose everyday life was attached to the Orange River. Upon his further explorations up the Orange River he also met groups of pastoralists whose settlements were set very close to the banks of the River where they grazed their livestock which was mostly characterised by cattle, sheep and goats. In fact, the Nama are reputed to have been extremely wealthy in cattle and sheep (Smith 1995; Webley 2002). For instance, the Namnykoa and the Einiqua are reported to have occupied the area close to the Middle Orange River whilst the Korana occupied the Middle-Upper

Orange River. The Khoe were intermingled with other smaller San communities. Nevertheless, all of these groups are reported to have used a similar language which had two main dialects (Dewar 2008). The politics of the area were complex with groups forming and dissolving alliances frequently, sometimes with antagonism as they competed for the meagre resources that the Orange River and surrounding landscape had to offer. The advent of the late 16<sup>th</sup> century saw trekboers and runaway slaves penetrating Namaqualand. Their influx led to population increase hence (Smith 1995; Webley 2001), the environment became so tense and so began a vicious that a frontier war with these indigenous groups culminated into a full-scale rebellion against the government by 1799. By the early 19<sup>th</sup> century, various missionary groups began to exert their influence along the Orange River and the descendants of the Khoekhoen were limited to mission land in various parts of Namaqualand and the marginal lands of the Richtersveld where their language, Nama is still spoken today. There is little doubt that before Europeans made these observations during historic times, and before the arrival of the Khoekhoen groups into Southern Africa 2000 years ago, prehistoric people were equally attracted to the river.

## 6.2 Archaeological Pasts along the Orange River

Similarly, to the history, though rich, the archaeology of Namaqualand has been largely neglected. As noted by Dewar (2008) it was only around the 1980s where it began to attract the attention of archaeologists and anthropologists working in South Africa. Early research was largely focused on the Kamiesberg mountains (Webley 1992; Halkett 1999, 2003) spreading into Richtersveld. Numerous Stone Age sites were uncovered by Lita Webley along the banks of the Orange River in the Richtersveld that showed the deep past of Namaqualand (Webley 1992. Among these included two dense archaeological sites at Jakkalsberg (near Sendelings Drift). These sites contained a unique collection of artifacts which she attributed to ancestors of Nama herders. Other sites were exposed by the work of Robertshaw (1978) on the confluence of the Fish and Orange River. Finds observed included dense fishbone middens with lots of ceramics and stone artifacts, some of which were archaeologically sampled. Smith (1995) conducted informal surveys within the National Park and on river-bordering farms in the Kakamas area. He excavated at a number of caves including Zoovoorbij, Droegrond, and Waterval which produced sequences containing both Middle and Later Stone age material culture. Burials which contained grave goods such as red ochre and trade beads

were also uncovered in the Kakamas area by Morris (1995). Commissioning of EIAs by Eskom power station projects also promoted further studies (Halkett 1999, 2003) along the Namaqua coast that revealed numerous Late Stone Age sites. A few years later, more than 1000 sites were further uncovered when De Beers commissioned EIAs for proposed mining between Port Nolloth and Mitchell's Bay which were undertaken by Halkett (1999, 2003). The period between 1996 and 2002 saw the pair conducting more archaeological surveys on areas that were proposed for alluvial diamond mining in the Richtersveld by Trans Hex Mining. This created an opportunity for surveying of the southern bank of the Orange River (between Sendelings Drift and Baken) hence revealing numerous sites dating back to the Early, Middle and Late Stone Age eras. Jerardino et al. (1992) published two dates for burials from the Namaqualand coast. Excavations at Spoegrivier confirmed that the lower layers, with dates of 3520750 BP (Pta-6754) and 3580760 BP (Pta-6987), predated sheep and/or pottery (Webley, 2001). During this period the inhabitants were consuming large numbers of shellfish, Cape Fur Seals, coastal birds and hunting small buck and dassie. Thus archaeological research at Spoegrivier Cave confirmed the presence of sheep at 2100 years ago (Webley 2002). Sometime around 2001 the UCT Archaeology Contracts Office excavated four Later Stone Age (LSA) sites on the southern bank of the Orange River (near the small settlement of Sendelingsdrif and just east of Jakkalsberg (Halkett 2003). More recently Dewar and Stewart (2011) uncovered Early stone Age sites whose antiquity of occupations dates back almost a million years ago. The site of Spitzkloof Rockshelter, located in the coastal desert region of the Richtersveld, is currently being excavated by the AMEMSA (Adaptations to Marginal Environments in the Middle Stone Age) archaeological team as part of a larger investigation (Dewar & Stewart 2011). The AMEMSA project was developed to explore how early modern humans adapted to marginal environments (characterised by spatially and temporally unpredictable or variable resources) especially during the ecologically challenging Upper Pleistocene,  $\pm 126$  thousand years ago (Dewar and Stewart 2011). In light of this, Jakkalsberg, an open site on the banks of the Orange River, has been dated to between the 7<sup>th</sup> and 8<sup>th</sup> centuries AD. Basically the archaeology of Namaqualand is characterised by **the following presented in Table 1.**

Early Stone Age Sites	Found on river flood plains and some considerable distance from the rivers	Source
Middle Stone Age Sites	Sites including material remains are usually found scattered on river terraces, on ridges overlooking the river as well as on the higher slopes of hills	Robertshaw 1978; Smith 1995; Webley 1992; Halkett 1999, 2003; Orton et al 2005 Dewar 2008
Late Stone Age Sites	Mostly confined to riverine silt bodies. A number of herder sites were located, some of which have now been radiocarbon dated and sampled. Also present are Mid-Late Holocene sites, one of which contain a microlithic industry and have been radio-carbon dated to circa 3000 BC.	Robertshaw 1978; Smith 1995; Webley 1992; Halkett 1999, 2003; Orton et al 2005 Dewar 2008
Rock engravings	are prolific within the river valley and tributaries. Most of these are Usually they are etched onto blue dolomite. The designs tend to be abstract, yet consistent. Human and animal figure are rare but present. The age of the engravings is unknown in most cases. Some appear to be fresh while others are so worn and patinated that they must be of considerable age – possibly some thousands of years. The meanings of the enigmatic designs remain unknown and their significance is unclear	Robertshaw 1978; Smith 1995; Webley 1992; Halkett 1999, 2003; Orton et al 2005 Dewar 2008
Historic sites	Usually include the foundations of colonial buildings such as mission churches, places on the river where early copper mines in the Richterveld shipped copper ore onto river barges for transport down river. These also include the stone burial mounds of Nama herders	Robertshaw 1978; Smith 1995; Webley 1992; Halkett 1999, 2003; Orton et al

		2005 Dewar 2008
Ethnographic sites	Consist of remains of herder encampments that are not necessarily protected by heritage legislation but are important, as they are the last physical remnants of a traditional lifestyle that is thousands of years old and rapidly changing in the 21st century. These sites are of interest to anthropologists, ethnoarchaeologists and architects who have mapped and documented the layout of these encampments in attempts to understand changes and traditional values within Nama society	Robertshaw 1978; Smith 1995; Webley 1992; Halkett 1999, 2003; Orton et al 2005 Dewar 2008

### 6.3 Conservation Characteristics of the PRAAs based on World Heritage Convention Act (no 43 of 1999)

#### **Outstanding Universal Value (OUV)**

Richtersveld cultural and Botanical landscape was declared a World Heritage site base on its outstanding Universal Value under the following Criterion:

**Criterion (IV)** the rich diverse botanical landscape of the Richtersveld, shaped by the pastoral grazing of the Nama, represent and demonstrates a way of life that persisted many millennia over a considerable part of southern Africa and was a significant stage in the history of this area,

**Criterion (V)** the Richtersveld is one of the few areas in Southern Africa where transhumance pastoralism is still practiced, as a cultural landscape it reflects tradition of the Nama. The indigenous community. Their seasonal pastoral grazing regimes which sustain the extensive biodiversity of the area where once more widespread are now vulnerable.

## 7. LEGISLATIVE REQUIREMENTS / LEGAL IMPLICATIONS

The legislation which protects heritage is broad and includes the following:

National Heritage Council Act 11 of 1999

Heraldry Act, 18 of 1962

Cultural Promotion Act, 35 of 1983

Legal Deposit Act, 54 of 1997

National Archives and Record Service of South Africa, 43 of 1996

National Library for the Blind Act, 91 of 1998

National Library of South Africa Act, 92 of 1998

The South African Geographical Names Council Act, 118 of 1998

Cultural Institutions Act, 119 of 1998

National Council on Library Information Services Act, 6 of 2001

Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA);

The National Environmental Management Act, 1998 (Act 107 of 1998)

Richtersveld landscape form part of the Cultural and Botanical Landscape dominated by mountainous desert declared a World Heritage site, legally protected through the National Heritage Resources Act (No 25 of 1999), the World Heritage Convention Act (no 43 of 1999) and the National Environmental Management Act 107 of 1998. The property is also recognized as a protected area in terms of the National Environmental Management Protected Areas, 2003 (Act 57 of 2003). Richtersveld Cultural and Botanical landscape constitute a cultural landscape, where the overall management and conservation is community based. Due to the location of the proposed work inside the National and World Heritage site it is felt that an approval from SAHRA would be prudent before mining activities proceed.

### **(I) The National Heritage Resource Act (25 of 1999)**



This Act established the South African Heritage Resource Agency (SAHRA) as the prime custodian of the heritage resources and makes provision for the undertaking of heritage resources impact assessment for various categories of development as determined by section 38. It also provides for the grading of heritage resources (Section, 7) and the implementation of a three-tier level of responsibility and functions from heritage resources to be undertaken by the State, Provincial and Local authorities, depending on the grade of heritage resources (Section, 8)

In terms of the National Heritage Resource Act 25, (1999) the following is of relevance:

### **Historical remains**

**Section 34 (1)** No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant Provincial Heritage Resources Authority.

### **Archaeological remains**

**Section 35(3)** Any person who discovers archaeological and paleontological materials and meteorites during development or agricultural activity must immediately report the find to the responsible heritage resource authority or the nearest local authority or museum.

**Section 35(4)** No person may, without a permit issued by the responsible heritage resources authority-

- destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site or any meteorite;
- destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological material or object or any meteorite;

- trade in, sell for private gain, export or attempt to export from republic any category of archaeological or paleontological material or object or any meteorite; or
- bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment which assist with the detection or recovery of metal or archaeological material or object or such equipment for the recovery of meteorites.

**Section 35(5)** When the responsible heritage resource authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or paleontological site is underway, and where no application for a permit has been submitted and no heritage resource management procedures in terms of section 38 has been followed, it may

- serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order
- carry out an investigation for obtaining information on whether an archaeological or paleontological site exists and whether mitigation is necessary;
- if mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph (a) to apply for a permit as required in subsection (4); and
- recover the cost of such investigation from the owner or occupier of the land on which it is believed an archaeological or paleontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks of the order being served.

**Subsection 35(6)** the responsible heritage resource authority may, after consultation with the owner of the land on which an archaeological or paleontological site or meteorite is situated; serve a notice on the owner or any other controlling authority, to prevent activities within a specified distance from such site or meteorite.

**Burial grounds and graves**

**Section 36 (3)** No person may, without a permit issued by SAHRA or a provincial heritage resources authority:

- (i) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- (ii) bring onto or use at a burial ground or grave any excavation equipment, or any equipment which assists in detection or recovery of metals.

**Subsection 36 (6)** Subject to the provision of any person who during development or any other activity discover the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resource authority which must, in co-operation with the South African Police service and in accordance with regulation of the responsible heritage resource authority-

- (II) carry out an investigation for obtaining information on whether such grave is protected in terms of this act or is of significance to any community; and  
if such grave is protected or is of significance, assist any person who or community which is a direct descendant to decide for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangement as it deems fit.

### **Cultural Resource Management**

**38.** (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- (b) the construction of a bridge or similar structure exceeding 50 m in length;
- (c) any development or other activity which will change the character of a site—
  - (i) exceeding 5 000 m<sup>2</sup> in extent; or

- (ii) involving three or more existing erven or subdivisions thereof; or
- (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
- (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000 m<sup>2</sup> in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,

must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

(2) The responsible heritage resources authority must, within 14 days of receipt of a notification in terms of subsection (1)—

- (a) if there is reason to believe that heritage resources will be affected by such development, notify the person who intends to undertake the development to submit an impact assessment report. Such report must be compiled at the cost of the person proposing the development, by a person or persons approved by the responsible heritage resources authority with relevant qualifications and experience and professional standing in heritage resources management; or
- (b) notify the person concerned that this section does not apply.

(3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:

- (a) The identification and mapping of all heritage resources in the area affected;
- (b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;
- (c) an assessment of the impact of the development on such heritage resources;
- (d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the

development;

(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;

(f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and

(g) plans for mitigation of any adverse effects during and after the completion of the proposed development.

(4) The report must be considered timeously by the responsible heritage resources authority which must, after consultation with the person proposing the development, decide—

(a) whether or not the development may proceed;

(b) any limitations or conditions to be applied to the development;

(c) what general protections in terms of this Act apply, and what formal protections may be applied, to such heritage resources;

(d) whether compensatory action is required in respect of any heritage resources damaged or destroyed as a result of the development; and

(e) whether the appointment of specialists is required as a condition of approval of the proposal.

(5) A provincial heritage resources authority shall not make any decision under subsection (4) with respect to any development which impacts on a heritage resource protected at national level unless it has consulted SAHRA.

(6) The applicant may appeal against the decision of the provincial heritage resources authority to the MEC, who—

(a) must consider the views of both parties; and

(b) may at his or her discretion—

(i) appoint a committee to undertake an independent review of the impact assessment report and the decision of the responsible heritage authority;

and

(ii) consult SAHRA; and

(c) must uphold, amend or overturn such decision.

(7) The provisions of this section do not apply to a development described in subsection (1) affecting any heritage resource formally protected by SAHRA unless the authority concerned decides otherwise.

(8) The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent.

(9) The provincial heritage resources authority, with the approval of the MEC, may, by notice in the *Provincial Gazette*, exempt from the requirements of this section any place specified in the notice.

(10) Any person who has complied with the decision of a provincial heritage resources authority in subsection (4) or of the MEC in terms of subsection (6) or other requirements referred to in subsection (8), must be exempted from compliance with all other protections in terms of this Part, but any

**development** 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:

(i) Construction, alteration, demolition, removal or change of use of a place or a structure at a place;

(ii) Any change to the natural or existing condition or topography of land, and

(iii) Any removal or destruction of trees, or removal of vegetation or topsoil;

**place** means a site, area or region, a building or other structure

**structure** means any building, works, device or other facility made by people and which is fixed to the ground.

### **(III) The Human Tissue Act (65 of 1983)**

This act protects graves younger than 60 years, these falls under the jurisdiction of the National Department of Health and the Provincial Health Department. Approval for the exhumation and reburial must be obtained from the relevant provincial MEC as well as relevant Local Authorities.

## 8. SPECIFIC STAKEHOLDERS THAT WOULD NEED TO BE CONSULTED WITHIN EIA PROCESS

Recent work in participatory development and project management has shown that projects which gain stakeholder approval at an early stage have a high chance of being finished in time and within budget. Furthermore, the tendency to consult stakeholders at the end of the project is not sufficient. This desktop study therefore places strong emphasis on the full participation of all stakeholders at an early stage. A stakeholder situational analysis was carried out. Following from this, stakeholder mapping was done to understand the different dynamics. Then, a stakeholder engagement mechanism was developed, to deal with issues such as ways of communication. Public participation is one of the most widely used methods but at times small focus groups meetings will be more appropriate. Interviews and meetings will be done with local community members, interested and affected parties, planners as well as local business owners. The stakeholder engagement mechanism will result in the creation of a stakeholder engagement plan with actors, actions and the desired results. Thus, we see stakeholder engagement as a key element which will be done on a continuous basis for the duration of the project. Some of the identified stakeholders from government agencies such as South African Heritage Resources, Namibia Heritage Council and UNESCO for the review of the heritage report and approval of the proposed project.

## 9. POTENTIAL IMPACTS AND PROPOSED MANAGEMENT MEASURES

### 9.1. Description of the potential impacts associated with the proposed prospecting activities and associated infrastructure

Several archaeological sites dating to the Stone Age to recent past structures have been identified. There are probably a few more sites that could not be located from the desktop study. Most of the archaeological sites well represented by stone tool sites scattered along the Orange River banks are likely to be impacted by the proposed alluvial diamonds mining activities.



## 9.2. Proposed Management Measures

Heritage sites are fixed features in the environment occurring within specific spatial confines. Any impact upon them is permanent and non-reversible. The identified sites do not present much of the problem, as current legislation allows for mitigation measures to be implemented. Those resources that cannot be avoided and that are directly impacted by the proposed development can be excavated/ recorded and a management plan can be developed for future action. Those sites that are not impacted can be written into management Plan.

## 10. PLAN OF STUDY FOR THE FULL HIA AND PALAEOLOGICAL STUDY

The proposed project will be implemented using an inter-disciplinary methodology that considers various types of investigations of heritage sites using the South African Heritage Resources Agency's minimum standards for heritage sites assessments and the ICOMOS Guidelines for Assessing Impact near World Heritage sites. The following elements will constitute the methodology for implementing this project:

### 10.1. Inter-disciplinary Field survey

An interdisciplinary team will carry out inter disciplinary field survey based on combination of stratified and random sampling of the identified areas along the Orange River banks. The aim of the survey is to locate, identify, evaluate and document heritage sites and structures of cultural importance found within the proposed study area. Overall our fieldwork will involve the following aspects:

- Verification of data retrieved from desk-top sources
- Recording of selected heritage sites by means of:
  - GPS recordings
  - Photography
  - Completion of a site recording form which includes a detailed site description to enable future reliable / accurate site monitoring to mining activities

The fieldwork will be carried following ICOMOS Guidelines for assessing heritage sites. This will enable the client to easily deal with UNESCO, SAHRA and the Provincial Heritage Resources Authority speaking the same language.

#### 10.2. Data synthesis and analysis (Drafting of Heritage Impact Assessment Report)

After the fieldwork, data flowing from all sources and techniques will be combined to develop a robust Heritage Impacts Assessments report document.

### 11. ANY RISKS / FATAL FLAWS RELATED TO THE PROJECT BASED ON LEGAL IMPLICATIONS

Already, there are companies with mining rights and operating in the area. This area is located near the Richtersveld World Heritage site. Mining near World Heritage places requires robust assessment based on ICOMOS Guidance.

### 12. CONCLUSION & RECOMMENDATIONS

Although very little is known about the archaeology of Namaqualand, Richtersveld has a lot of cultural heritage resources that date back as far as the Early Stone Age particularly the area drained by Orange River. Among these might include middens, lithic and shell scatters, rock engravings, graves, historic buildings, and places of conflict. Thus, it is worthy to carry out a preliminary field assessment or archaeological survey to check if there are any sites on the area proposed for the alluvial diamond mining. Otherwise commencement of the development without survey will be disastrous as they are chances of uncovering archaeological sites in the process are high.

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