INTRODUCTION

African Nickel Namibia (Pty) Ltd holds exclusive prospecting licences (EPL’s) over an area of 63 459 ha in the northern part of Kunene Region, in the vicinity of Okangwati (see Figure 1). Renewal of Environmental Clearance Contracts for the prospecting licence areas requires an environmental assessment (EA) and EnviroDynamics has been commissioned to conduct the relevant study. EnviroDynamics has requested QRS to carry out an archaeological desk assessment of the likely sensitivity of the area and its cultural heritage resources as defined under the National Heritage Act (27 of 2004).

Archaeological remains in Namibia are protected under the National Heritage Act (27 of 2004) which makes provision for archaeological impact assessment of large development projects. Previous field surveys and assessments in the upper Kunene River valley have identified a large number of archaeological sites, and the area in general is considered to be archaeologically sensitive. The area is also considered to have a high cultural heritage sensitivity due to the possible impact of various development initiatives on the traditional life and historical sites of the OvaHimba people. This report addresses the archaeological heritage in particular.

BACKGROUND

The Kunene Region is not well explored archaeologically. Early investigations by MacCalman (1972) and MacCalman and Grobbelaar (1965) drew attention to the presence of late Pleistocene evidence from the area, and more spectacularly, observations on stone tool use by contemporary hunter-gatherer groups. More recent investigations have documented a late Holocene occupation sequence (Albrecht et al 2001) and some of the detailed archaeological characteristics of nomadic pastoral settlement patterns in the area (Kinahan 2001). Limited information is available from the adjacent parts of southern Angola (Ervedosa 1980).

These investigations can only be described as preliminary, but they have indicated something of the area’s archaeological potential, particularly with respect to the history of the OvaHimba, the last remaining traditional pastoralist society in southern Africa. The interest of the OvaHimba archaeology lies partly in the history of the people themselves, and partly in the comparative value of such archaeological evidence for the understanding of pre-colonial pastoralist societies in other parts of Africa (Mason 1984).
The archaeological evidence available so far indicates that the Kunene Region will have abundant traces of Pleistocene occupation but that much of this evidence will have been displaced by sheet erosion on high angle slopes. Holocene age material is also present, including some examples of rock art in the form of engravings on outcrops near the Epupa Falls (Sherz 1975) and in the adjacent parts of southern Angola (Kinahan 1997). The evidence of recent pastoralist settlement is particularly abundant and includes a large number of grave sites, some close to the river itself.

A detailed survey of the inundation area of the proposed Epupa hydropower dam site (Kinahan 1997, 2001) located a total of 155 archaeological sites, spanning the early or mid-Pleistocene, to the recent pre-colonial period. The Pleistocene sites, mainly surface artefact scatters, were present throughout most of the area surveyed, with some individual sites of over 1 000m² in extent. Some of the sites showed clear evidence of sheet and gully erosion, with benchmark erosion indicators of surface reduction in the region of 0.03m/yr⁻¹. It is nonetheless important that the area contains some intact and stratified deposits suitable for more detailed investigation.

The most detailed site investigation carried out thus far is that of Vogelsang and Eichhorn (2011) at Ovizorombuku 96/1, a large rock shelter located on the northern margin of EPL4361. The site has yielded a discontinuous occupation sequence spanning the last approximately 10 000 years, and contains relatively well preserved botanical remains in the more recent layers. The earlier occupation layers have few stone artefacts and their cultural affinity is therefore difficult to establish. The excavators note that the site is still occasionally used by local herders, an observation which points to the relative continuity of the archaeological and recent traditional settlement of this area.

In general, Holocene archaeological sites are poorly represented in this area, with the small number of rock art sites suggesting that conditions in the Kunene Region were sub-optimal during the recent past. Indeed, the archaeological evidence from this area indicates that this environment was also of marginal importance for recent pastoralist settlement. The available evidence (Kinahan 2001) is that OvaHimba occupation of the Epupa area might be much more recent than previously assumed, and that current settlement patterns might reflect the recovery and expansion of the pastoral economy in the early 20th century.

PHYSICAL SETTING AND EXPECTED ARCHAEOLOGICAL CHARACTERISTICS

The African Nickel exploration lease areas (EPL’s 3300, 3301 and 4361) are situated in the rugged Kunene Hills landscape (cf. Mendelsohn et al. 2002), characterized by areas of prominent outcrop interspersed with chromic cambisols derived by weathering of the prevailing rock types. The area receives between 200 and 300 mm average annual rainfall, although variation in annual rainfall averages around 50%, and both agriculture and livestock raising are subject to high risk of failure. These relatively marginal conditions have in
the past required high mobility of human settlement, militating against fixed settlements of any size beyond that of a few homesteads. The archaeological implications of this include very low site density and a general absence of stratified occupation sequences other than in rock shelters.

Previous archaeological surveys in the Kunene Region have shown a correlation between archaeological site location and landscape. Viewed as a simplified land system (cf. Johansson & Strömquist 1978; Strömquist et al 1999), the northern Kunene Region includes five component landscape units. Steep hillslopes (Unit I) with exposed rock and skeletal soils make up 11% of the area; colluvial footslopes (Unit II) with outwash fans and small isolated hills comprise 72% of the area; seasonal streams (Unit III) with associated bush make up a further 13%; the riparian zone of major drainage lines (Unit IV) such as the Omuhonga, the Ombuku and the Oheuva accounts for 4% of the area. All of these environmental components are of importance to the OvaHimba, so that although the colluvial footslopes are essential grazing areas, the riparian zone forms a vital resource base in times of drought, as well as a prime area of cultivation when soil water levels are high enough to sustain maize and millet through the growing season.

In view of the general correlation between human settlement and landscape setting it is possible to predict that within EPL 4361, the Unit II areas would have some archaeological potential. These areas comprise approximately 60% of the lease. Also of archaeological interest would be a small section of Unit V, represented by the Ombuku River. Within EPL 3300, Unit II areas comprise about 55% of the extent, with a section of Unit V represented again by the Ombuku River. EPL 3301 consists mainly of Unit II areas all within the upper reaches of the Ombuku River drainage. Altogether, the area of highest archaeological potential on the combined exploration lease area represents approximately 350 km².

On the basis of previous surveys in this area, the archaeological density is expected to be in the region of 1.46 archaeological sites per 1 km². However, due to the clustering effect of localized water and terrain constraints, this figure is likely to vary by up to 50%. Within the exploration lease areas, archaeological sites attributable to OvaHimba settlement will comprise approximately 35% of the total. These will include remains of homestead sites ozonganda as well as grave sites. An archaeological survey of the exploration lease area should treat all abandoned sites as potentially archaeological and therefore protected in terms of the National Heritage Act. This means that all such sites would be recorded and treated as sensitive.

ASSESSMENT

In summary, the African Nickel exploration lease areas (EPL’s 3300, 3301 and 4361) are considered on the basis of previous surveys and existing archaeological knowledge to be sensitive and to require field assessment. The risk of damage to archaeological and more
recent cultural sites could be greatly reduced by timeous survey and assessment which should be integrated within the development plan for the area. It should be noted, however, that an archaeological survey would not substitute for direct consultation with local communities regarding impact on traditional sites including pastures, routes of movement and other significant components.

RECOMMENDATIONS

a) It is recommended that an archaeological reconnaissance survey of the exploration lease areas should be carried out as soon as the developer’s footprint extends outside that of existing tracks and cleared areas.

b) If the reconnaissance survey locates any archaeological sites or areas that are likely to be affected by exploration and mining activities these should be subject to mitigation measures.

c) It is recommended that contractors working on the site are made aware that under the National Heritage Act any items protected under the definition of heritage found in the course of development should be reported to the National Heritage Council.

d) It is further recommended that the standard “chance finds” procedure attached to this report as Appendix 1 is included in the developer’s EMP.
Figure 1: The layout of the African Nickel exploration lease areas in northern Kunene Region, in relation to known archaeological sites (yellow squares) and unconfirmed reported archaeological sites (green squares).
REFERENCES


APPENDIX 1

CHANCE FINDS PROCEDURE

The “chance finds” procedure covers the actions to be taken from the discovery of a heritage site or item, to its investigation and assessment by a trained archaeologist or other appropriately qualified person. The “chance finds” procedure is intended to ensure compliance with the relevant provisions of the National Heritage Act (27 of 2004), especially Section 55 (4): “a person who discovers any archaeological …. object ……must as soon as practicable report the discovery to the Council”. The procedure of reporting set out below must be observed so that heritage remains reported to the NHC are correctly identified in the field.

RESPONSIBILITIES

Operator: To exercise due caution if archaeological remains are found

Foreman: To secure site and advise management timeously

Superintendent: To determine safe working boundary and request inspection

Archaeologist: To inspect, identify, advise management, and recover remains

PROCEDURE

Action by person identifying archaeological or heritage material:

a) If operating machinery or equipment stop work

b) Identify the site with flag tape

c) Determine GPS position if possible

d) Report findings to foreman

Action by foreman:

a) Report findings, site location and actions taken to superintendent

b) Cease any works in immediate vicinity

Action by superintendent:

a) Visit site and determine whether work can proceed without damage to findings

b) Determine and mark exclusion boundary
c) Site location and details to be added to GIS for field confirmation by archaeologist

Action by archaeologist:

a) Inspect site and confirm addition to GIS

b) Advise NHC and request written permission to remove findings from work area

c) Recovery, packaging and labelling of findings for transfer to National Museum

In the event of discovering human remains:

a) Actions as for 5.1 to 5.3 above

b) Field inspection by archaeologist to confirm that remains are human

c) Advise and liaise with NHC and Police

d) Recovery of remains and removal to National Museum or National Forensic Laboratory, as directed.