PHASE 1 ARCHAEOLOGICAL HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED CONSTRUCTION OF AN OVERHEAD POWERLINE TO LKCF001 (FRS 143) ON THE FARM SAMEKOMS 392, CRADOCK DISTRICT.

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Note: This report follows the minimum standard guidelines required by the South African Heritage Resources Agency for compiling Archaeological Heritage Phase 1 Impact Assessment (AHIA) reports.

SUMMARY

Proposal

The original proposal was to conduct a survey of possible archaeological heritage sites along the proposed construction route of an overhead power line to LKCF001 (FRS 143**)** on the farm Samekoms 392, Cradock District, to establish the range and importance of the exposed and *in situ* archaeological heritage features, the potential impact of the development and to make recommendations to minimize possible damage to these sites.

The investigation

Several concentrations of rock engravings were found located mainly at one area along the proposed construction route for the power line. The locations of the individual sites were recorded by GPS and a series of photographs were taken. No other archaeological material was found.

Cultural sensitivity

The rock engravings are extremely important and a sensitive archaeological heritage resource and are protected by the South African Heritage Resources Act of 1999. Great care must be taken to protect these engravings from any potential damage during construction work in the vicinity and after the completion of the project.

Recommendations

1. The proposed route for the power line must be re-routed to prevent damage to the rock

engravings. It is suggested that the line be shifted at least a hundred metres to the south.

2. A specialist be appointed to record the engravings and to compile a site management plan before construction of the proposed power line starts.

3. The engraved sites be treated as a 'no-go' area, or at least no visits without supervision during the construction phase. The Site Manager and construction personnel briefed to the importance of the engravings.

4. When maintenance on the completed power line is conducted in the future, personnel also be informed of the importance of the engravings.

PROJECT INFORMATION

Status

The report is part of an Environmental Impact Assessment.

The type of development

Construction of a power line

The Developer:

ESKOM Distribution
Land Development
Southern Region
Private Bag X1
Beacon Bay
5205

Terms of reference

Conduct a survey of possible archaeological heritage sites along the proposed construction route of an overhead power line to LKCF001(FRS 143**)** on the farm Samekoms 392, Cradock District, to establish the range and importance of the exposed and *in situ* archaeological heritage features, the potential impact of the development and to make recommendations to minimize possible damage to these sites.

BRIEF ARCHAEOLOGICAL BACKGROUND

Literature review

In general little systematic archaeological research and regional surveys/recordings have been conducted in the Graaff-Reinet/Cradock area. The closest and one of the most complete archaeological surveys in South Africa was conducted in the Agter Sneeuberg region in the central and upper Seacow River Area some 180 km north-west (Sampson 1985). The only

systematic survey and recording in the immediate vicinity was conducted in the Mountain Zebra National Park (Brooker 1974) and Deacon (1976) excavated Highlands Rock Shelter some 60 km to the north-east. Sampson's, Brooker's, and Deacon's research and surveys, together with records/collections of the Albany Museum, provide the background information for compiling an archaeological time sequence for the region.

The oldest evidence for occupation of the region are stone artefacts (small hand axes, sidescrapers and flakes) from the Earlier Stone Age, known as the 'final' Acheulian Industry which date older than 200 000 years. Sampson (1985) located a large number of sites and there is also a collection in the Albany Museum from the Cradock area. Middle Stone Age (MSA) artefacts (long blades and points) are found throughout the region, but because these are found in the open it is difficult to know where they fit into the cultural time sequence. At Highlands Rock Shelter MSA stone tools, possibly a Howieson's Poort Industry, was dated older than 30 000 years (Deacon 1976). Sampson on the other hand reported many open-air MSA sites which he assigned to the Orangian Industry (dating between 128 000 - 75 000 years old), Florisbad and Zeekoegat Industries dating between 64 000 and 32 000 years old.

Early efforts by archaeologists to establish classification schemes for the inland stone tool assemblages were made difficult without the aid of radiocarbon dating. All LSA assemblages were classified into three phases using mainly scrapers shape and size, namely, Smithfield A, large circular scrapers, Smithfield B, long, narrow end scrapers (both manufactured of black hornfels) and Smithfield C, small thumbnail scrapers (manufactured of chalcedonies and agates) (Goodwin and Van Riet Lowe 1929). When radiocarbon dating became available many years later it indicated that there were no sites which date between 9 500 and 4 600 years old for the drier inland plateaux (Deacon 1974). The LSA deposits at Highlands Rock Shelter date to 4 500 years old (Deacon 1976). Today the term Smithfield is only used for stone tool assemblages with backed bladelets and long end scrapers dating within the last 1000 years and replaces the term Smithfield B (Sampson 1988). The term Smithfield A has been replaced by Oakhurst and Smithfield C by Interior or Post-Wilton. Oakhurst is similar to the Albany Industry in the adjacent Cape Mountains, dating between 10 500 and 8 000 years old and also replaces the previously term Lockshoek Industry (Sampson 1985).

The survey of the Mountain Zebra National Park (Brooker 1974) confirmed that the area is rich in archaeological remains and that some of the LSA time sequence for the region was present, as well as rock art. Unfortunately no rock engravings were found to compare with that of Samekoms, but there is another engraved and painted site listed in the Albany Museum records, only a few kilometres away. Unfortunately, apart from the stone tools, little else is preserved and it is not possible to reconstruct subsistence patterns. Better preservation of organic material at Highlands Rock Shelter provides some insight into hunter-gatherer subsistence in the area. Collecting of underground plant remains such as *Cyperus usitatus* and *Freezia corymbrosa* would appear to have been an important food source together with the hunting of mountain zebra/quagga, mountain reedbuck, warthog and various small antelope such as duiker, klipspringer and steenbok. Also listed in the museum records are freshwater shell middens along the banks of the Great Fish River and small quantities of crab and freshwater mussel were also found in the excavations. Many stock enclosures with stone walls and fragments of sand-tempered ceramic vessels are found throughout the Seacow River area and are most probably associated with Khoi pastoralists

who settled in the area during the past 1 000 years.

References

Brooker, M. 1977. The archaeology of the Mountain Zebra Park. Koedoe 20:77-93.
Deacon, H,J, 1976. Where hunters gatherered: a study of Holocene Stone Age people in the Eastern Cape. South African Archaeological Society Monograph Series No. 1.
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Goodwin, A.J.H. & Lowe, C. van Riet. 1929. The Stone Age cultures of South Africa. Annals of the South African Museum.
Sampson, C.G. 1985. Atlas of Stone Age settlements in the Central and Upper Seacow Valley. Memoirs van die Nationale Museum Bloemfontein No.20.
Sampson, C.G. 1988. Stylistic boundaries among mobile hunter-foragers. Washington: Smithsonian Institution Press.

DESCRIPTION OF THE PROPERTY

Area visited

Location data

Inxuba Yethembamo Municipality, Amatole District Municipality, Cradock Magisterial District, Eastern Cape.

Map

1:50 000 3225 AD Post Chalmers

Methodology

The area investigated for the construction of the power line is approximately 2390 metres in length and was investigated on foot (see maps 1 & 2). It starts from farm yards (disturbed terrain) at the bottom of a hill, crosses a river and follows the relatively gentle slope to the top of the hill in a straight line (Fig. 1). The area is covered by grass and occasional patches of low trees which made it very difficult to find any archaeological material. It was decided to rather concentrate on the large dolerite boulders and the large exposed floors on the hill side along the proposed power line route (Fig. 2). No engravings were found on any of the boulders investigated, but several small areas with engravings were found on the floors. GPS readings were taken of individual concentrations of engravings and the better preserved ones were digitally recorded. The nearby hillside was also investigated and a few engravings were also found there.

Description of sites

Rock engravings

Rock engravings are found mainly in the dryer inland plateau of southern Africa on dolerite rocky riverbeds, rocky outcrops, loose rocks and flat floors. Dolerite has a dark brown/black weathered outer surface, called patina. Due to natural processes, i.e. heating and cooling, the outer surface over time cracks or peals off in thick 'skins' and eventually breaks up into small fragments and also destroy the engravings.

Engravings are created by scratching, scraping and pecking the dark patina with sharp objects to expose the lighter under surface. It is very difficult to date the engravings, but engraved stone found in archaeological excavations have been dated to some 10 000 years old. A wide variety of images is depicted and includes humans, animals and geometric symbols. Similar to rock paintings, engravings are also regarded in general as the artists' experiences of their spiritual and religious world (Dowson 1992).

Seven concentrations (4 and more images) of engravings were found in a relatively small area (approximately 100 x 100 m) in the immediate vicinity of the proposed route and two outside. A reddish peg (32.09. 092 S; 25.16.251E), which presumably marks the route for the power line is situated in the centre of the engraved area. The rock engravings comprised mainly of small fine line and a few scraped images.

1. Site 1 (32.09.076S: 25.16.247E)

This was the largest concentration of engravings and included fine line and scraped images (Fig. 3). The fine line engravings mainly composed square and elongated grid filled boxes with 'legs and heads' and other 'leave shaped' geometric designs (Fig. 4). There were only a few scraped images of 'animals' and human figures. Some of the scraped images were done over fine line engravings and may suggest that they are younger than the latter. A scraped image of a 'horse' and rider at least suggest a relatively late date for the scraped images.

2. Site 2 (32.09.061S: 25.16.250E)

Only a few fine line engravings of animals with no filled-in grids were found here (Fig. 5).

3. Site 3 (32.09.067S: 25.16.247E)

A few scraped and 'grid animals' were found on the very edge of a badly cracked surface (Fig. 6). Most of the adjacent surface has cracked and 'pealed' off and probably destroyed many engravings.

4. Site 4 (32.09.084S: 25.16.258E)
5. Site 5 (32.09.094S: 25.16.253E) - 6 metres from the Eskom peg (32.09.092S: 25.16.251E)
A few engravings were found at both sites similar to other sites.

6. Site 6 (32.09.107S: 25.16.246E)

The surface of this site is badly cracked and engravings have been destroyed due to pealing. The images were mainly fine line 'grid animals' (Figs 7 & 8).

7. Site 7 (32.09.055S: 25.16.271E)

Only a few 'leaf' shaped engravings were found.

8. Sites 8 & 9 (32.08.945S: 25.16.220E)

These two sites were outside the proposed route further to the north. A few grid and scraped animals were found.

Current threats to the sites

At the moment the proposed power line runs through the rock engraved sites.

Significance and rating

The rock engravings are protected by the National Heritage Resources Act (Act No. 25 0f 1999) and may not be disturbed or destroyed without the necessary permits from the South African Heritage Resources Agency.

These sites should be rated as local Grade IIIA heritage sites and should not be disturbed. The reason is that very little is known about rock engravings of the Eastern Cape Karoo areas because no systematic study/survey and recordings has been conducted to date.

RECOMMENDATIONS

1. It is recommended that the proposed route for the power line must be re-routed to prevent damage to the rock engravings. It is suggested that the line be shifted at least a hundred metres to the south.

2. A specialist in the field of rock engravings be appointed to record the engravings and to compile a site management plan before construction of the proposed power line starts. This is to have a record of the engravings for archival purposes should any damage occur to the art. It is suggested to approach the client, Vodacom for possible financial support in this regard. Further recommendations may follow from the investigation and may include.

    2.1. The engraved sites be treated as a 'no-go' area, or at least no visits without supervision during the construction phase. The Site Manager and construction personnel briefed to the importance of the engravings.

    2.2. When maintenance on the completed power line is conducted in the future, personnel also be informed of the importance of the engravings.

3. If any concentrations of heritage material are uncovered during development, it should be reported to the Albany Museum and/or the South African Heritage Resources Agency immediately so that systematic and professional investigation/excavations can be undertaken. Sufficient time should be allowed to remove/collect such material (See

appendix A for a list of possible archaeological sites that maybe found in the area).

References

Dowson, T.A. 1992. Rock engravings of southern Africa. Johannesburg: Witwatersrand University Press.

GENERAL REMARKS AND CONDITION

Note: This report is a phase 1 archaeological heritage impact assessment/investigation **only** and does **not** include or exempt other required heritage impact assessments (see below).

The National Heritage Resources Act (Act No. 25 of 1999, section 35) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources, that is, all places or objects of aesthetics, architectural, historic, scientific, social, spiritual linguistic or technological value or significance are protected. Thus any assessment should make provision for the protection of all these heritage components, including archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

It must be emphasised that the conclusions and recommendations expressed in this archaeological heritage sensitivity investigation are based on the visibility of archaeological sites/features and may not therefore, reflect the true state of affairs. Many sites/features may be covered by soil and vegetation and will only be located once this has been removed. In the event of such finds being uncovered, (during any phase of construction work), archaeologists must be informed immediately so that they can investigate the importance of the sites and excavate or collect material before it is destroyed. The *onus* is on the developer to ensure that this agreement is honoured in accordance with the National Heritage Act No. 25 of 1999.

It must also be clear that Archaeological Specialist Reports (AIAs) will be assessed by the relevant heritage resources authority. The final decision rests with the heritage resources authority, which should give a permit or a formal letter of permission for the destruction of any cultural sites.

Copies to: ESKOM
SAHRA Cape Town
SAHRA East London

APPENDIX A: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM INLAND AREAS: guidelines and procedures for developers

1. Caves and shelters

Often these features were inhabited by people in the past, such as the San and KhoiSan, and contain valuable archaeological deposits. These deposits and the remains such as stone artefacts, bone, pot shards and ornaments are protected by legislation and must not be damaged by digging or may artefacts be collected. Contact the nearest archaeologist for information and advise regarding the protection and conservation of these features.

2. Rock art - paintings and engravings

Rock paintings are often found in caves, rock shelters and also in the open on boulders. They are easy to recognize and must be treated with care. No water or any other substances must be applied to the paintings. Rock engravings are pictures scratched, scraped and pecked into the dark surface of rocks with sharp objects to expose the lighter under surface. Contact the nearest archaeologist to provide information and advice regarding the protection and conservation of rock art.

3. Human Skeletal material

Human remains, whether the complete remains of an individual buried during the past, or scattered human remains resulting from disturbance of the grave, should be reported. In general the remains are buried in a flexed position on their sides, but are also found buried in a sitting position with a flat stone capping and developers are requested to be on the alert for this.

4. Stone artefacts

These are difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately and archaeologists notified

5. Fossil bone

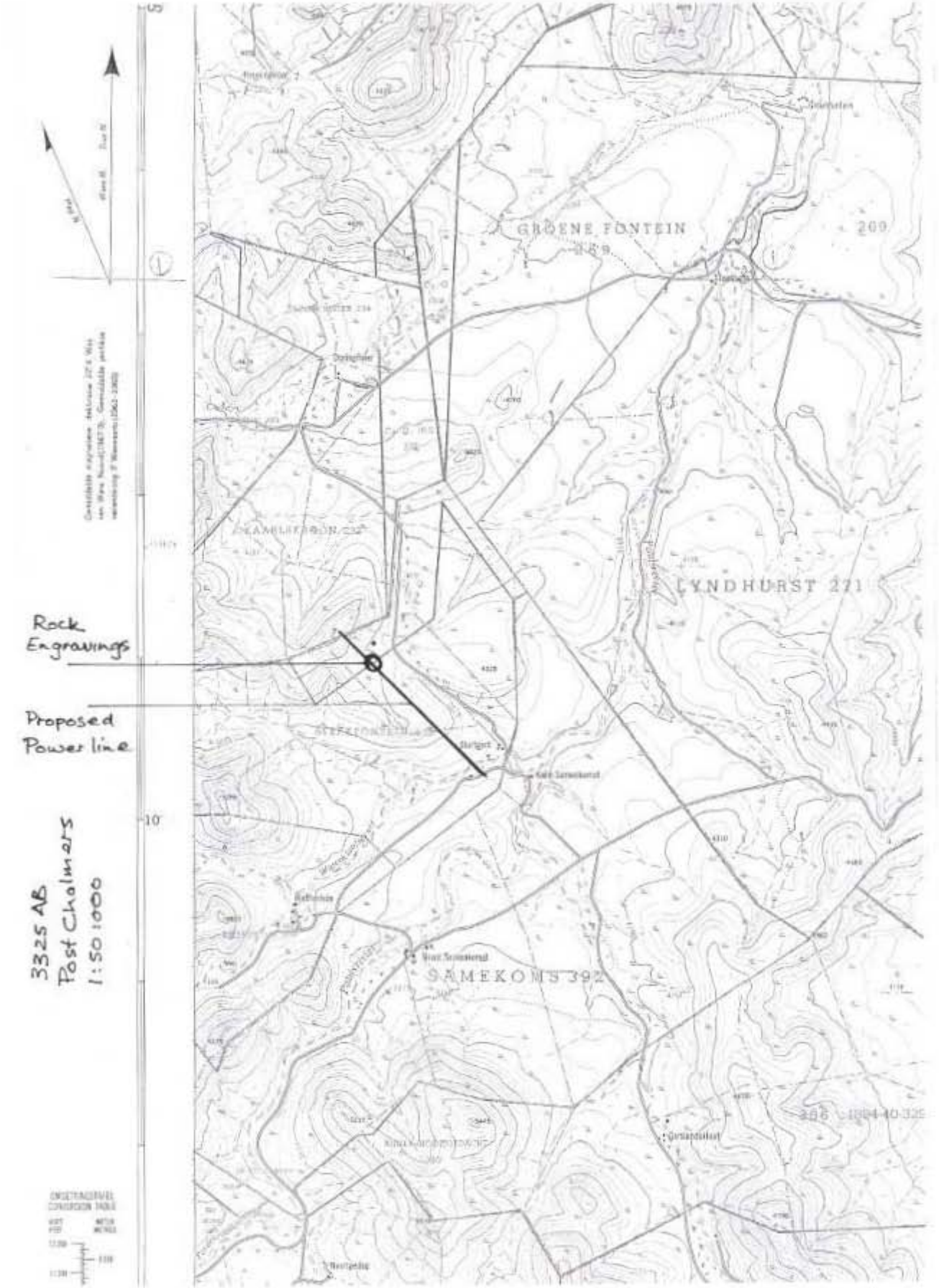
Fossil bones may be found embedded in geological deposits. Any concentrations of bones, whether fossilized or not, should be reported.

6. Stone features

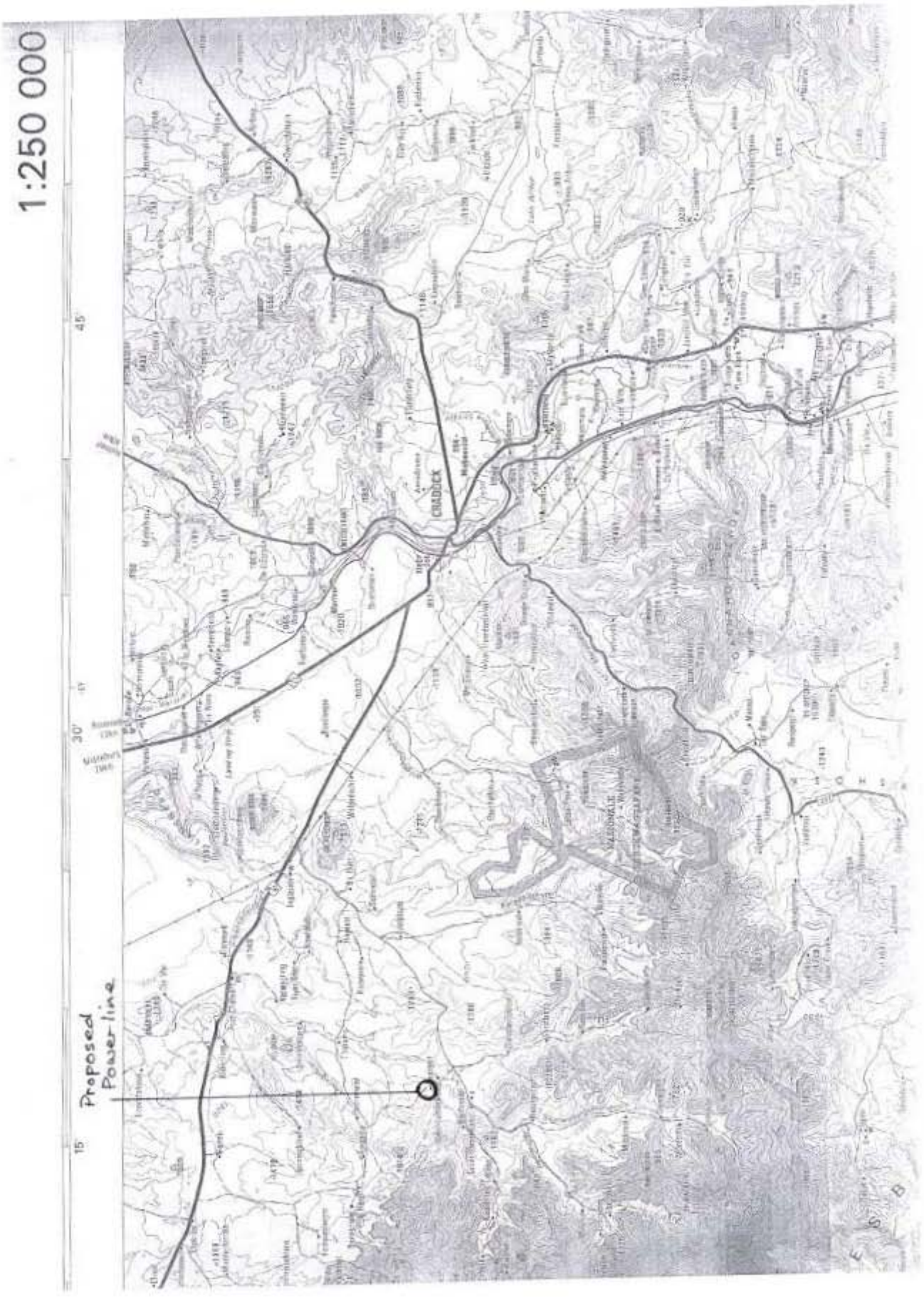
They come in different forms and sizes, but are easy to identify. The most common are roughly circular stone walls (mostly collapsed) and may represent stock enclosures, remains of wind breaks or cooking shelters.

6. Historical artefacts or features

These are easy to identified and include foundations of buildings or other construction features and items from domestic and military activities.


Rock Engravings
Proposed Power line
3325 AB
Post Chalmers
1:50 1000
GROENE FONTEIN
LYNDHURST 221
SAMEKOMS 392

Map 2. General location of the proposed power line and rock engravings.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Proposed Powerline
CRADDOCK

Map 1. Location of the proposed power line.

Fig. 1. A view of the hillslope.

Fig. 2. The exposed dolerite floors with engravings.

Fig. 3. Rock engravings at site 1.

Fig. 4. 'Grid filled box animals' and 'leaf shaped' images.

Fig. 5. Fine line engravings at Site 2.

Fig. 6. Engravings at Site 5. Note the natural damage.

Fig.7. Engravings at Site 6, note the cracks on the surface.

Fig. 8. Site 6. Note the natural damage to the engravings.