

**ARCHAEOLOGICAL IMPACT ASSESSMENT FOR THE DE AAR PROJECT,
NORTHERN CAPE**

A Phase I report prepared for Seaton Thompson & Associates

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Executive Summary

A Later Stone Age site on the west boundary of the project area needs Phase-2 mitigation before development begins.

INTRODUCTION

Tintswalo De Aar Property Development (Pty) Ltd intends to establish a commercial and residential park on a 5 hectare plot on the edge of De Aar, Northern Cape. Tintswalo De Aar owns the property, Erf 3094, on the old farm De Aar 180.

To comply with environmental (National Environmental Management Act No. 107 of 1998) and heritage legislation (National Heritage Resources Act No. 25 of 1999), Seaton Thompson and Associates (the coordinators for the project) commissioned Archaeological Resources Management (ARM) to examine the project area. Before permission can be granted, the South African Heritage Resources Agency (SAHRA) requires an impact assessment that identifies and maps the location of all heritage resources which will be impacted in a project area. It was ARM's task to produce an assessment that satisfies this requirement. It was important to identify all archaeological and historical sites of interest, as well as to examine the area for graves.

BACKGROUND

The Cape Government Railways established a rail link between Cape Town and Kimberley in about 1872 that ran through the Farm De Aar. Later, in 1881, the farm became a major junction with other lines to the east. This junction was of strategic importance to the British during the Second Anglo Boer War. Just before the war, the Friedlander brothers, who owned a store and hotel, bought the farm and had the present town established in 1902.

For prehistory, Sampson's (1972, 1974) survey of the Seacow drainage near Hanover (part of his Orange River Scheme) is the most important archaeological project in the Karoo environment of the Northern Cape. His team recorded sites and quarries, ranging from the Earlier, Middle and Later Stone Ages, to proto-historic pastoralist camps and Historic farmyards. Among other things, the research noted a correlation between age and the patina on hornfels (also called lydianite and indurated shale): dark brown to yellow = Earlier Stone Age; red = Middle Stone Age; grey to grey brown = Lockshoek; light brown/tan = Interior Wilton; and black = Smithfield (the last three belonging to the Later Stone Age). This culture-history sequence forms a basis for identifying stone tool industries and historic occupations over the entire district.

There have been several investigations in the De Aar district itself because of the ammunition disposal plant to the west (Van Ryneveld 2009), transmission lines (e.g. Fourie 2012) and various solar panel projects (e.g. Kaplan 2010; Kruger 2012; Morris 2011). Generally, archaeologists found scatters of stone tools dating to the Middle and Later Stone Ages. In addition, the ammunition area yielded an Earlier Stone Age scatter, and a few rock art sites are on record for the district (Morris 1988; Rudner and Rudner 1968). These reports show that the De Aar district has a rich archaeological heritage.

METHOD

One ARM staff examined the project area on 13 and 14 March, 2013 in the company of an ecologist (David Hoare) and representatives for Tintswalo (Walter Dhooge) and Seaton Thompson (Brian Gardner). ARM staff surveyed the entire area on foot. Sites were recorded with a hand-held GPS instrument, programmed for WGS 84. The area appears on the 1: 50 000 map sheets 3023DB Brand and 3024CA De Aar (**Figure 1**).

The South African Heritage Resources Agency recognises National and Provincial Monuments for conservation purposes. None of these exist in the immediate project area. For assessments such as this, ARM uses five main criteria to determine site significance: (1) primary versus secondary context; (2) amount of deposit; (3) number and variety of features; (4) uniqueness; and (5), potential to answer present research questions. Sites with no significance do not require further work; low to medium sites may require limited mitigation, while high significance requires extensive mitigation. Outstanding sites, on the other hand,

should not be disturbed at all. Recognizable graves have high social value regardless of their archaeological significance.

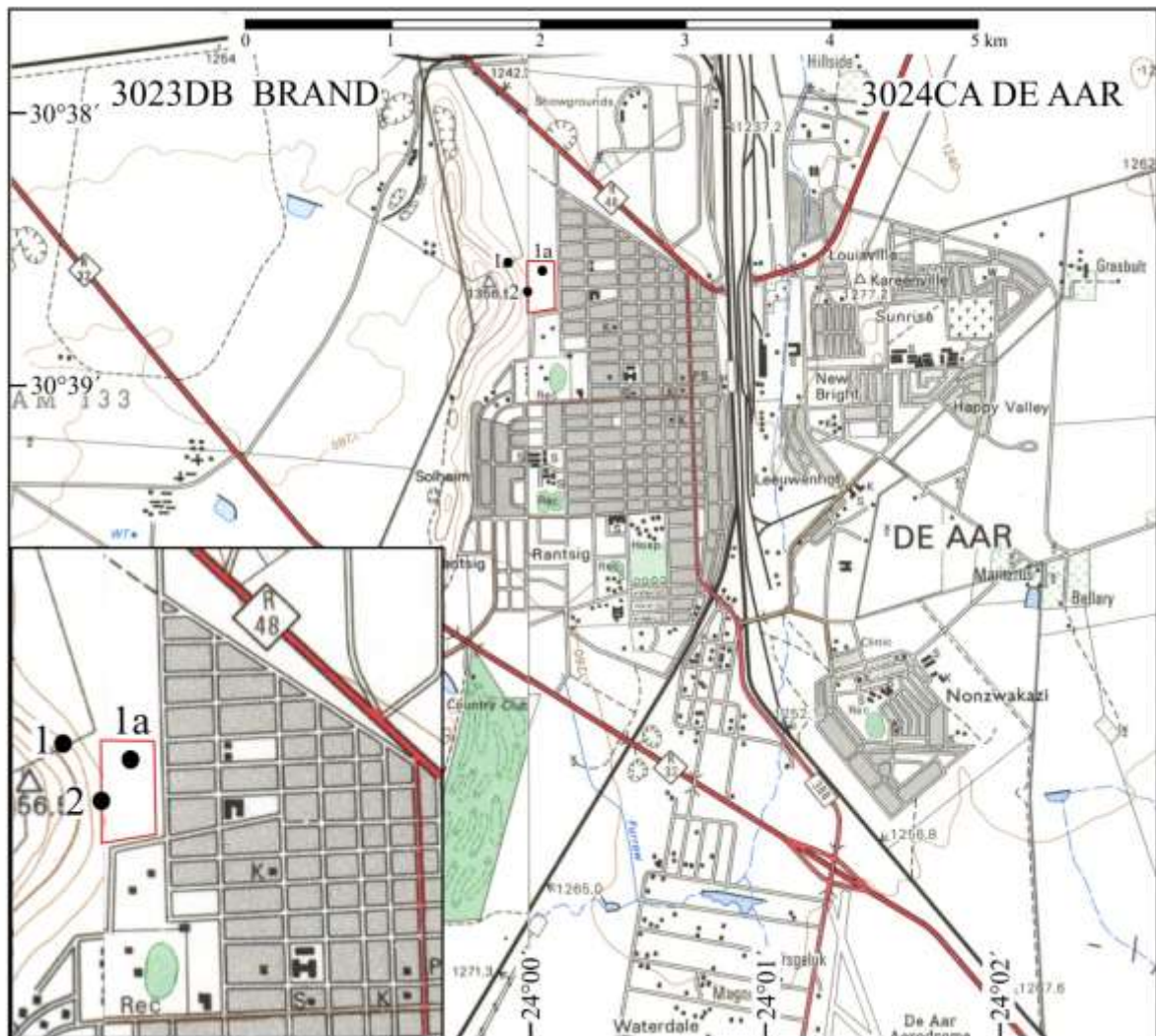


Figure 1. Heritage sites recorded in the project area.

RESULTS

A large dolerite dyke borders the project area on the west side. Most of the plot, however, sits on Beaufort shale that forms a relatively flat landscape.

A few signs of Historic occupation, presumably when De Aar was an active farm, lay on the flats immediately northwest of the designated project area. These include a cluster of small kraals for sheep, and some house walls associated with glass and metal (**Site 1:** 30 38 33.3S

23 59 54.2E). A brick-and-cement water trough, on the other hand, stands inside the project zone (**Site 1a**: 30 38 34.4S 24 00 03E). This trough has *no significance*.

More importantly, a cluster of artefacts marked a Later Stone Age site (**Site 2**: 30 38 39.7S 23 59 59.6E) at the junction of the dyke and flats (**Figure 2**). This cluster (about 30m diameter) includes several formal tools (adzes, end scrapers, end scrapers with adze-like retouch and circular scrapers) as well as trimmed flakes, all made from hornfels (**Figure 3**). Different patinas suggest that this collection contains examples of the Lockshoek industry (or Smithfield A), Interior Wilton and Smithfield B (although pottery was not noted). The site may well then be the result of intermittent occupation over the last 10 000 years. Because of the relatively dense cluster and abundant formal tools, this site has *medium significance*.



Figure 2. Site 2 in foreground. Yellow grass in middle marks junction between the dolerite and shale.



Figure 3. Lockshoek/Smithfield artefacts from **Site 2**. Note black and grey patinas.

Some artefacts have fragments of a red cortex. A similar patina completely covers other rolled artefacts found scattered across the flats (**Figure 3**). In addition to hornfels, a few of these scattered artefacts were made from quartzite; they all appear to date to the Middle Stone Age. This scatter is too diffuse to form a single site, and it is clearly not *in situ*; the scatter has *low significance*.



Figure 3. MSA artefacts from the flats. Note red patina.

To determine appropriate mitigation measures, the Later Stone Age requires further discussion.

DISCUSSION

In broad terms, Lockshoek is one of the terminal Pleistocene/early Holocene non-microlithic industries that belong to the Oakhurst complex (Deacon 1984). There appears to have been a shift at this time from large groups of people hunting large game to smaller groups hunting smaller, less mobile game, as well as an increase in the gathering of wild plants (Mitchell 2002). Locally, Lockshoek belongs to the earliest phase of the Smithfield sequence, and it is the oldest archaeological unit (about 12 000 to 8000 years ago) that can be confidently associated with the San (i.e. Bushmen). The entire Later Stone Age sequence afterwards is commonly credited to ancestral San. In Historic times, De Aar was inside the territory of the famous !Xam Bushmen (Schapera 1930), well known from the Bleek and Lloyd (1911) texts. San in general were nomadic hunter-gatherers who moved between temporary campsites, re-occupying some places from time to time. Later Stone Age sites in this area, in fact, often contain more than one industry (Sampson 1974).

Some archaeologists believe Smithfield B (2000 to 150 years ago) derives from the Interior Wilton (8000 to 2000 years ago) and others believe they represent two different peoples. They are clearly stratified at the Glen Elliott Shelter near Colesberg (Sampson 1967). Whatever the association, considerable information is available about this phase. Sampson's Orange River Scheme survey shows that Smithfield B settlements are typically located within one kilometre of a fountain, but not at the waterpoint itself to avoid disturbing the game (Sampson 1984). Campsites are also located at the base of hills, as **Site 2** is here, in relatively cleared areas between boulders. Although somewhat more recent, this Smithfield B settlement pattern probably also applies to the earlier Wilton and Lockshoek phases. In Historic times, De Aar was well watered (the name means 'the artery'), and a waterpoint was probably close by.

Later Stone Age sites are also usually located in the general vicinity of hornfels quarries, but this does not appear to have been an important determinant because of the abundance of outcrops. Hornfels is created by the intense heat of igneous intrusions on the Beaufort shale,

and are often exposed around the rims of dolerite dykes and sills. Such a quarry probably lies close to the project area.

Historic San social relations with other bands involved the exchange of gifts, such as ostrich egg-shell beads and bone arrow points. This exchange, known as *hxaro*, helped to establish linkages across a wide area that could be activated when resources were scarce. Some archaeologists believe that such an exchange network intensified at the beginning of the Holocene as populations increased and expanded across the previously unoccupied interior. The Later Stone Age site at De Aar could help contribute to research on early San lifeways.

RECOMMENDATIONS

Site 2 provides an opportunity to increase the data base of the Stone Age sequence associated with the San. Developers are not responsible for research, but they are responsible for the recovery of research potential. Phase-2 mitigation is therefore recommended.

This mitigation should include an extensive surface collection and small excavation. Because most of the site will be destroyed, the collection should cover the total site. Different patinas should make it possible to separate the different industries. These measures will make it possible (1) to determine the full range of stone artefacts by industry, (2) to connect the different industries with the occupation levels in neighbouring rock shelters and (3) to recover *hxaro* exchange items, should they be present. It is also important to determine whether the entire sequence predates the introduction of pottery.

An excavation permit from SAHRA will be necessary for this mitigation. Furthermore, the mitigation needs to be completed before development begins.

Finally, it should be noted that graves were not found inside the project area, the development has a relatively small footprint and Europeans have owned the farm since the mid 19th century. A full Heritage Impact assessment is therefore not needed. Once the recommended mitigation has been completed, there are no heritage reasons why the development should not proceed.

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