

# **ARCHAEOLOGICAL IMPACT ASSESSMENT DE ZALZE WINELANDS GOLF ESTATE SOUTHERN EXTENSION**

**Erf 4 De Zalze and Portion 10 of Farm 502  
Stellenbosch**

Prepared for

## **DJ ENVIRONMENTAL CONSULTANTS**

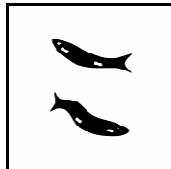
Att: Mr Quinton Terhoven  
Postnet Suite 66  
Private Bag X15  
Somerset West  
7130

Email: [quinton@djec.co.za](mailto:quinton@djec.co.za)

On behalf of:

**Spier Properties (Pty) Ltd**

By



Jonathan Kaplan  
Agency for Cultural Resource Management  
P.O. Box 159  
Riebeeck West  
7306  
Ph/Fax: 022 461 2755  
Cellular: 082 321 0172  
E-mail: [acrm@wcaccess.co.za](mailto:acrm@wcaccess.co.za)

**AUGUST  
2009**

## **EXECUTIVE SUMMARY**

DJ Environmental Consultants requested that the Agency for Cultural Resource Management conduct an Archaeological Impact Assessment for the proposed De Zalze Winelands and Golf Estate Southern Extension, in Stellenbosch, in the Western Cape. The proposed development serves as an extension to the existing De Zalze Winelands Golf Estate.

The project comprises a mixed-use development consisting of 185 residential units, recreational facilities and a private nature reserve (or conservation area).

The proposed development site is located alongside the western boundary of the Stellenbosch airfield and west of the R44 that runs between Stellenbosch and Somerset West.

The two properties on which the development is to be undertaken collectively cover about 380 ha, of which less than 50 ha will be developed. The majority of the development will be situated on Portion 10 of Farm No 502, while a development portion of about 6 ha is to be situated on the existing De Zalze Winelands Golf Estate.

The relevant properties are currently zoned Agriculture I and will need to be rezoned to provide for the proposed activities.

Most of the original natural vegetation on Farm 502/10 has been destroyed by agriculture and has been replaced by a dense cover of Slangbos, Kweek grass and other pioneer species. The north eastern portion of the farm has been transformed as a result of previous mining and quarrying (for kaolin), creating a system of artificial, seasonal and permanent wetlands.

Erf 4 De Zalze comprises mostly disturbed lands, some orchards and vineyards. A portion of the floodplain of the Blouklip River will also be modified in order to make way for the extension of an existing dam on the De Zalze Golf Estate.

The aim of the study is to locate and map archaeological heritage sites and remains that may be impacted by the planning, construction and implementation of the proposed project, to assess the significance of the potential impacts and to propose measures to mitigate against the impacts.

A Heritage Impact Assessment of the proposed project will be undertaken by Vidamemoria Heritage Consultants. The AIA forms part of the HIA.

### **The following findings were made:**

More than 130 Early Stone Age (ESA) and Middle Stone Age (MSA) tools were documented during the study. All the remains have been point plotted and mapped with a hand held Garmin Oregon 300 GPS unit, and photographed in-situ. More than 90% of the tools comprise unmodified flakes, chunks, flaked cobbles and cores. Ten handaxes and two cleavers were also found. Most of the tools are on river-rolled quartzite cobbles, while some of the MSA tools are in more coarse-grained quartzite stone. The majority of tools is spread very thinly and very unevenly over the surrounding landscape and occurs

in a highly disturbed and transformed context (gravel roads, vineyards, fruit orchards and old agricultural lands).

A small concentration (or cluster) of tools were, however, found lying on the exposed, quarried and excavated surfaces in the highly disturbed north eastern portion of the proposed development site (i.e. Farm 502). These tools occur about 2-3 m below the surface (top soil) of the property on colluvian gravels and it is very likely that more remains may be exposed during the construction phase of the proposed project, in the digging of foundations, earth moving activities and the laying of services.

The following recommendations are therefore made:

- Archaeological monitoring must take place during the construction phase of the proposed project. Sub-surface sites could be uncovered during earthmoving and concentrations of Early Stone Age and Middle Stone Age artefacts may be buried in the colluvium below the top soil.
- Should any human remains be disturbed, exposed or uncovered during excavations and earthworks for the proposed project, these should immediately be reported to the South African Heritage Resources Agency (Mrs Mary Leslie 021 462 4502), or Heritage Western Cape (Mr Nic Wiltshire 021 483 9692). Burial remains should not be disturbed or removed until inspected by the archaeologist.

## **Table of Contents**

	<b><u>Page</u></b>
Executive summary	1
1. INTRODUCTION	4
Background and brief	4
2. TERMS OF REFERENCE	4
3. THE STUDY SITE	5
4. STUDY APPROACH	9
Method of survey	9
Constraints and limitations	9
Identification of potential risks	9
Results of the desk-top study	10
5. FINDINGS	10
5.1 New Southern Access Road	12
6. IMPACT STATEMENT	13
7. DISCUSSION	13
8. RECOMMENDATIONS	13
9. REFERENCES	14

## **1. INTRODUCTION**

### **1.1 Background and brief**

DJ Environmental Consultants on behalf of Spier Properties (Pty) Ltd requested that the Agency for Cultural Resource Management conduct an Archaeological Impact Assessment (AIA) for the proposed De Zalze Winelands and Golf Estate Southern Extension, in Stellenbosch, in the Western Cape. The proposed development serves as an extension to the existing De Zalze Winelands Golf Estate.

The proposed development of Erf 4 De Zalze (5.83 ha) and Portion 10 of Farm 502 (43.98 ha) envisages a mixed-use development consisting of 185 residential units, recreational facilities and a private nature reserve (or conservation area). The two properties on which the development is to be undertaken collectively cover about 380 ha, of which less than 50 ha will be developed.

The relevant properties are currently zoned Agriculture I and will need to be rezoned to provide for the proposed activities.

The extent of the proposed development falls within the requirements for an archaeological impact assessment as required by Section 38 of the South African Heritage Resources Act (No. 25 of 1999).

The aim of the study is to locate and map archaeological heritage sites and remains that may be impacted by the planning, construction and implementation of the proposed project, to assess the significance of the potential impacts and to propose measures to mitigate against the impacts.

A Heritage Impact Assessment (HIA) of the proposed project will be undertaken by Ms Quahnita Samie of Vidamemoria Heritage Consultants. The AIA forms part of the HIA.

## **2. TERMS OF REFERENCE**

The terms of reference for the archaeological study were:

- to determine whether there are likely to be any archaeological sites of significance within the proposed development site;
- to identify and map any sites of archaeological significance within the proposed development site;
- to assess the sensitivity and conservation significance of archaeological sites within the proposed development site;
- to assess the status and significance of any impacts resulting from the proposed development, and
- to identify mitigatory measures to protect and maintain any valuable archaeological sites that may exist within the proposed development site.

### 3. THE STUDY SITE

The subject property (S 33° 58' 44.63" E 18° 48' 55.88" on map datum wgs 84) is located alongside the western boundary of the Stellenbosch airfield and west of the R44 that runs between Stellenbosch and Somerset West (Figure 1).

An aerial photograph of the study site is illustrated in Figure 2

A proposed site development plan is illustrated in Figure 3.

Most of the original, natural vegetation on Portion 10 of Farm 502 has been destroyed by agriculture and replaced by an extremely dense cover of Slangbos, Kweek and other pioneer species (Figures 4-16). There is some woody alien vegetation (Pine and Port Jackson), but these are thinly dispersed over the property. Significantly (for the archaeological heritage), much of the north eastern portion of the property has been subjected to quarrying activities (mining for kaolin), creating a system of artificial, seasonal and permanent wetlands and exposed hard surfaces of colluvian gravels (and some Koffieklip) below the topsoil. Some large-scale diggings have also taken place alongside the north western boundary of the farm, where it appears that a small (informal) brick making industry may have operated (Figure 16).

The ± 6 ha development portion of Erf 4 De Zalze comprises disturbed lands alongside the southern boundary of Farm 502, fruit orchards and vineyards. A portion of the floodplain of the Blouklip River will also be flooded to extend the existing dam on the De Zalze Golf Estate (Figures 17-21).

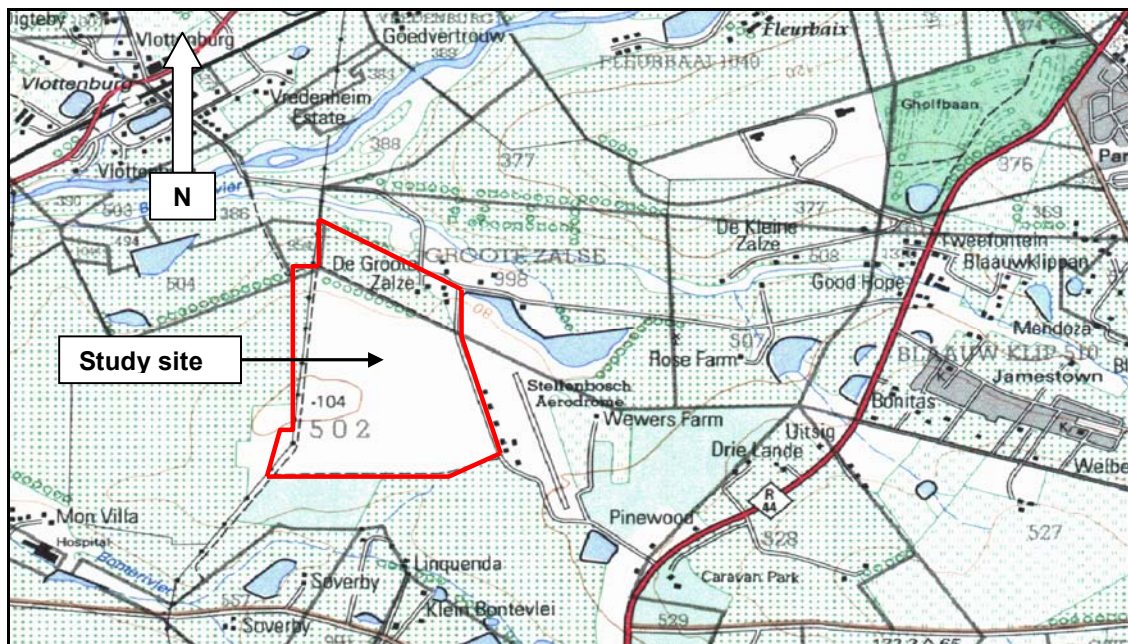


Figure 1. Locality Map (3318 DD Stellenbosch)





Figure 2. Aerial photograph of the study site



Figure 3. Proposed (preferred) development plan

## **4. APPROACH TO THE STUDY**

### **4.1 Method of survey**

The approach followed in the archaeological study entailed a foot survey of the proposed development site only, including the proposed southern access road. A number of test pits have been excavated over the western portion of the property (Farm 502) and these were also inspected for archaeological remains.

With regard to Erf 4 De Zalze, all the gravel farm roads between and alongside the fruit orchards and vineyards, were searched for archaeological remains. The cultivated vineyards and orchards were not searched as it was assumed that any artefacts found in the gravel farm roads would be fair reflection of the artefacts that might occur over the remainder of the property. Erf 4 is a highly modified environment. The affected portion of the floodplain of the Blouklip River is covered in thick Kikuyu grasses and is also waterlogged in places (refer to Figure 19).

More than 50 digital photographs of the proposed development site have been taken, that clearly illustrate the nature of the receiving environment. These have also been saved to CD and included with a digital copy of this report.

A GPS track path of the archaeological study was created. This track path has also been saved to CD and submitted with the digital copy of the report.

All archaeological finds were plotted (and photographed) in situ, using a Garmin Oregon 300 GPS unit, set on map datum wgs 84<sup>1</sup>. A spreadsheet of the waypoints and a description of the provenance of each of the artefacts are also included with the CD.

The site visit and assessment took place on the 30<sup>th</sup> July, and 01<sup>st</sup> August, 2009.

A desk-top study was also undertaken.

### **4.2 Constraints and limitations**

As indicated, most of the original natural vegetation on Portion 10 of Farm 502 has been destroyed by agriculture and has been replaced by a dense cover of Slangbos, Kikuyu Kweek and other pioneer species and grasses, resulting in very low archaeological visibility (refer to Figures 4-15). Although much of the eastern portion of the property is also covered in thick bush and dense ground cover, the quarried areas are exposed and archaeological visibility is good. The waterlogged nature of this area restricted access, however.

### **4.3 Identification of potential risks**

Depending on the depth of excavations and removal of top soil from the site, bulk earthworks, excavations and the laying of services will likely expose Early Stone Age and Middle Stone Age tools during the construction phase of the proposed project.

---

<sup>1</sup> The GPS walk path and spreadsheet tabling all the GPS co-ordinates have been saved to CD and submitted separately with this report



#### **4.4 Results of the desk-top study**

Early Stone Age (ESA) tools were first discovered at Bosman's Crossing at the foot of the Papagaaiberg near the Eerste River in Stellenbosch (Peringuey 1902, 1911; Seddon 1966). The artefacts are associated with the younger gravels of the course alluvial fan on which much of Stellenbosch is situated, and are dated to the earlier part of the Middle Pleistocene between 700 000 and 300 000 years ago (Deacon and Goosen 1997). Among these ESA tools was an artefact type of great antiquity recognized as an early handaxe. For many years after this, the ESA of South Africa was referred to as the 'Stellenbosch Culture' until the term was re-defined in the 1960s (Goodwin & Van Riet Lowe 1929).

Today the ESA is divided into the 'Oldowan' period, which is up to 1.7 million years old. This industry is associated with the oldest and most simple human-made artefacts. This was followed by the 'Acheulean' Tradition, a more developed stone artefact industry, characterised by the presence of specific types of stone tools such as handaxes, choppers and cleavers.

Acheulean sites have been recorded throughout South Africa and are especially associated with pans, river terraces, streams, and certain types of rock outcrops. Acheulean tools are also commonly found on mountain slopes, and in degraded areas such as slope washes, cuttings, excavations, and in vineyards and ploughed fields. These ancient tools are widespread in South Africa.

Acheulean sites and artefacts have been documented in the surrounding area, on the farms Spier, Meerust, Lynedoch, Hartlands, Vlottenberg and De Wijnlanden which are all situated a few kilometres to the west of the study area, (Kaplan 2002 and personnel observation), while Acheulean tools have also been found on several farms to the east of the R310, at Croyden (Kaplan 2005, 2004) and Faure (Kaplan 2006).

In the context of this study, it must be noted that Acheulean artefacts including handaxes, cleavers, cores, and flakes were documented (in a disturbed context) in agricultural fields and vineyards during an investigation of the De Zalze Golf and Agricultural Estate, while a rich Acheulean site occurs on the Farm Blaauklippen (Deacon and Goosen 1997).

#### **5. FINDINGS**

Given the constraints and limitations associated with the study, as well as the disturbed nature of the receiving environment, a relatively large sample ( $n = 133$ ) of Early Stone Age and Middle Stone Age (MSA) tools were documented over the two properties.

In Portion 10 of Farm 502, more than 25 tools were found on the exposed, colluvian gravels of the old diggings in the highly disturbed north eastern portion of the property, and about 2-3 m below the top soil. The tools have clearly been exposed as a result of past quarrying and excavations (for kaolin) in this portion of the property. The tools occur as a thin concentration or cluster over the exposed hardened surfaces overlooking the wetlands (Figures 20 & 21). These exposed areas are also (currently) quite waterlogged and wet and make up a large part of the artificial, seasonal wetlands in the area. It is important to note that no development will take place in this wetland area, which has

been rated as having high botanical importance, with several endangered and near threatened Red Data Book plants being found (Helme 2009). The wetland also supports water birds and some terrestrial fauna. Wetlands are considered to be ecologically important.

Most of the tools in this area of the site comprise unmodified flakes, flaked cobbles, large and small cores and chunks, while two incomplete handaxes, two complete bifacial handaxes and one cleaver were also documented (Figures 22 & 23). The MSA tools comprise mostly smaller, flatter flakes and blades, and several smaller round, prepared (and) flattened cores.

The remainder of tools ( $n = \pm 20$ ) on Farm 502 was found scattered very widely and unevenly over the proposed development site. These included mostly flakes, chunks and cores, while one large (crude) handaxe (DZ 47) was found in the north western portion of the study site. Several tools were found in the gravel farm road on the western boundary of Farm 502, while nine ESA flakes and cores and one MSA flake were found in/near an erosion gulley near the Eskom substation in the far south western portion. One large ESA flake and one chunk were also found among a pile of rock near the diggings in the north western boundary of the property. One ESA chunk was also found on a spoil dump alongside a test pit. No other tools were found associated with the test pits. All the ESA tools are made on rounded river quartzite cobbles, while some of the MSA tools are made on a more coarse-grained quartzite stone.



**Figure 20. Wetland site facing north east**



**Figure 22. Handaxe (DZ 17). Scale is in cm**



**Figure 21. Wetland site facing north**



**Figure 23. Cleaver (DZ 31). Scale is in cm**



66 ESA and MSA artefacts were documented on Erf 4 of the Farm De Zalze. Of these tools, which mostly comprise large and smaller flakes, chunks, large cores and smaller rounded/prepared cores and flaked cobbles, five handaxes and one cleaver was also documented (Figures 24-27). One handaxe measured more than 25 cm from tip to base, while another measured more than 23 cm long.



Figure 24. Handaxe (DZ 71). Scale is in cm

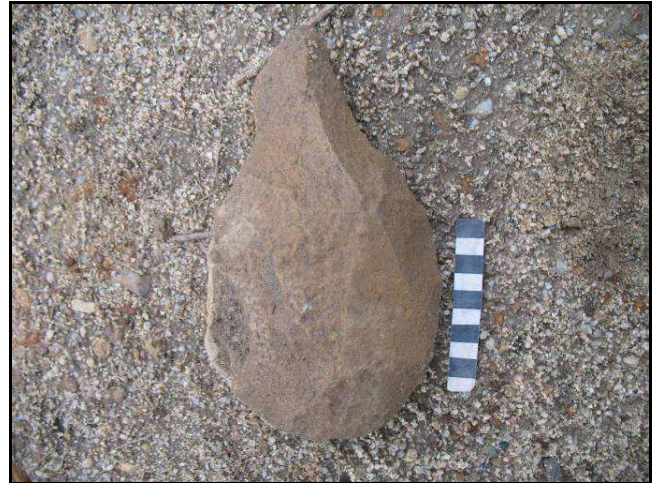


Figure 26. Handaxe (DZ 95). Scale is in cm



Figure 25. Handaxe (DZ 82). Scale is in cm



Figure 27. Cleaver & core (DZ 89). Scale is in cm

## **5.1 New Southern Access Road**

One ESA chunk (DZ 9) one MSA flake (DZ 10) and one ESA flake (DZ 11) were documented in the proposed new southern access road.

## **6. DISCUSSION**

The majority of tools documented during the study comprise unmodified flakes, chunks, flaked cobbles and cores. Only a few formal tools were found. These included 10 handaxes, of which 4 are incomplete and one large crude example. Two cleavers were also found.

A small, but thin concentration of tools was documented on exposed colluvian gravels about 2-3 m below the surface (top soil) in the highly disturbed north eastern portion of the property, on Farm 502/10. These remains probably occur in a relatively undisturbed context, although some movement of material must have occurred during quarrying activities. No development will take place in the wetlands areas, however.

## **7. IMPACT STATEMENT**

The Phase 1 Archaeological Impact Assessment has identified no significant impacts to pre-colonial archaeological material that will need to be mitigated prior to the proposed development activities. All of the tools documented during the study have already been mapped with GPS waypoints and photographed in-situ.

It is, however, very likely that more remains or concentrations of tools may be exposed during the construction phase of the proposed project, in the digging of foundations, earth moving activities and the laying of services.

It is unlikely, but unmarked human burials may also be uncovered or exposed during earthmoving operations.

## **8. RECOMMENDATIONS**

- Archaeological monitoring must take place during the construction phase of the proposed project. Sub-surface sites could be uncovered during earthmoving and concentrations of Early Stone Age and Middle Stone Age artefacts may be buried in the colluvian below the top soil.
- Should any human remains be disturbed, exposed or uncovered during excavations and earthworks for the proposed project, these should immediately be reported to the South African Heritage Resources Agency (Mrs Mary Leslie 021 462 4502), or Heritage Western Cape (Mr Nic Wiltshire 021 483 9692). Burial remains should not be disturbed or removed until inspected by the archaeologist.

## 9. REFERENCES

Deacon, H.J. and Goosen, R.J. 1997. Phase 1 Archaeological investigation De Zalze Golf and Agricultural Estate. Report prepared for De Zalze Development (Pty) Ltd. Department of Archaeology, University of Stellenbosch.

Goodwin, A.J.H. & Van Riet Lowe, C. 1929. The Stone Age Cultures of South Africa. Annals of the South African Museum. 27.

Helme, N. 1990. Botanical scoping and impact assessment of the proposed De Zalze Winelands and Golf Estate Southern Extension, Stellenbosch. Report prepared for DJ Environmental Consultants. Nick Helme Botanical Surveys.

Kaplan, J. 2006. Archaeological heritage assessment pre-feasibility study Faure Farms Faure (Helderberg). Report prepared for Chand Environmental Consultants. Agency for Cultural Resource Management.

Kaplan, J. 2005. Archaeological report Croyden Olive Estate. Report prepared for Ecosense Consulting Environmentalists and Ecologists. Agency for Cultural Resource Management.

Kaplan, J. 2004. Archaeological scoping for the proposed Croyden Vineyard Estate Farm 654 Croyden. Report prepared for Ecosense Consulting Environmentalists and Ecologists. Agency for Cultural Resource Management.

Kaplan, J. 2002. Phase 1 Archaeological Impact Assessment proposed development De Wijnlanden Residential Estate. Report prepared for Greenfield Consultants. Agency for Cultural Resource Management.

Péringuey, L. 1902. Stone Implements from Paarl and Stellenbosch. Transactions of the South African Philosophical Society 11 (4).

Péringuey, L. 1911. The Stone Ages of South Africa as represented in the collection of the South African Museum. Annals of the South African Museum 8:180-201

Seddon, D. 1966. Some Early Stone Age surface sites around Stellenbosch, S.W. Cape. South African Archaeological Bulletin 22:57-59.