

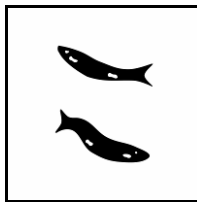
**PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT  
OF THE PROPOSED DRIEFONTEIN RESORT  
(DRIEFONTEIN FARM NO. 127)  
SUTHERLAND  
NORTHERN CAPE PROVINCE**

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## Executive summary

The Agency for Cultural Resource Management was appointed by EnviroAfrica to conduct a Phase 1 Archaeological Impact Assessment for the proposed Driefontein Resort on the Farm Driefontein near Sutherland in the Northern Cape Province.

The proposed project comprises a resort development of approximately 20 units spread across six development nodes, including associated infrastructure such as access roads and some engineering services.

The following findings were made

- Only one Later Stone Age tool was found during the study.
- Historical stone walling and protected stone ruins were documented on the farm, but these occur outside the proposed development footprint.

The archaeological study has identified no significant impacts to pre-colonial archaeological material that will need to be mitigated prior to the proposed development activities.

With respect to stone ruins, structures and features, however, there may be cumulative (long term) or secondary impacts arising out of the proposed development and these will have to be carefully managed to ensure archaeological heritage sites are not damaged or disturbed during the operational phase of the proposed project.

Important vertebrate, plant and trace fossils may also be exposed or uncovered should excavations and construction of access roads penetrate known fossil bearing sediments.

With regard to the proposed Driefontein Resort development near Sutherland in the Northern Cape Province, the following recommendations are made:

- Protected stone ruins in Node 2 must not be damaged, or disturbed, and no stone may be removed for building purposes. It is not recommended that the ruins be demolished or altered. This 'site' could be researched in more detail and possibly be developed as a public interest (heritage) site for visitors to the proposed resort. A Conservation Heritage Management Plan will need to be developed to safeguard the integrity of the site.
- A proposed northern access road to Node 3 is the preferred route. A proposed alternative route from the south is not acceptable as this will impact on extensive historical stone walling.
- A specialist palaeontologist must be appointed by the developer to inspect excavations and road cuttings, for possible vertebrate (bone) fossils during the Construction Phase of the project. Consulting palaeontologist Dr John Almond (021 462 3622) can be contacted in this regard.
- A conservation architect must be consulted to assist in the (proposed) restoration of the stables and cottage/hunting lodge within the Driefontein farm werf.

## Table of Contents

	Page
Executive summary	1
1. INTRODUCTION	3
2. TERMS OF REFERENCE	3
3. THE STUDY SITE	4
4. STUDY APPROACH	6
4.1 Method	6
4.2 Constraints and limitations	7
4.3 Identification of potential risks	7
4.4 Results of the desk top study	7
5. LEGISLATIVE REQUIREMENTS	8
5.1 The National Heritage Resources Act	8
5.2 Archaeology (Section 25 (4))	8
5.3 Burial grounds and graves (Section 35 (3))	8
6. FINDINGS	9
7. IMPACT STATEMENT	14
8. RECOMMENDATIONS	14
9. REFERENCES	15

## **1. INTRODUCTION**

EnviroAfrica on behalf of Merve Trust requested that the Agency for Cultural Resource Management conduct a Phase 1 Archaeological Impact Assessment for the proposed Driefontein Resort (on Driefontein Farm No. 127) near Sutherland in the Northern Cape Province.

The proposed site comprises a resort development of approximately 20 units spread across six development nodes, including associated infrastructure such as access roads and engineering services.

- Node 1: comprises 5 camping sites
- Node 2: comprises 2 units
- Node 3: comprises 5 units
- Node 4: comprises 3 units
- Node 5: comprises 5 units
- Node 6: includes the existing farm werf with cottage/hunting lodge, stables, sheep kraal and worker cottages. It is envisaged that the worker cottages will be upgraded as weekend rental options. The hunting lodge and stables may also be restored.

Recreational activities such as hiking trails, mountain bike trails, horse riding trails and fishing is also planned.

Three of the proposed development Nodes will be reached via existing farm roads, while access to the other three Nodes will require construction of new access roads. Proposed access roads will be 2-track graded roads, not more than 5 m wide.

The proposed units have been carefully sited to minimise any negative visual impacts.

Water will be extracted via existing boreholes and electricity will be generated via solar panels.

The property is currently zoned Agriculture and will be rezoned (Resort Zone III) to accommodate the proposed development activities.

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.

## **2. TERMS OF REFERENCE**

The terms of reference for the archaeological study were to:

- Identify and map pre-colonial archaeological heritage resources within the proposed development nodes;
- Determine the importance of pre-colonial archaeological heritage within the proposed development nodes;

- Determine and assess the potential impacts of the proposed development on pre-colonial archaeological heritage resources, and
- Recommend mitigation measures to minimize impacts associated with the proposed development

### 3. THE STUDY SITE

A locality map is illustrated in Figures 1 and 2.

An aerial photograph of the study site indicating the proposed development Nodes is illustrated in Figure 3.

Driefontein (S 32° 26 36.88 E 20° 27 46.66 on map datum WGS84) is situated about 22 kms west of Sutherland on the Bo-Visriver Road. The farm is currently a working sheep farm, measuring nearly 4450 ha in extent. The original farm house burnt down sometime in the 1960s and was subsequently and inappropriately 'restored' to include flats and storage facilities. It retains no architectural heritage or integrity. Farm worker cottages, a 2-roomed cottage (converted into a hunting lodge) and stables are relatively intact. A bathroom has been inappropriately added to the hunting lodge, while metal windows have replaced the original timber windows. The original (thatch) roof of the stables and hunting lodge has been replaced with corrugated iron. The worker cottages are recent structures, with metal windows and asbestos roofing.

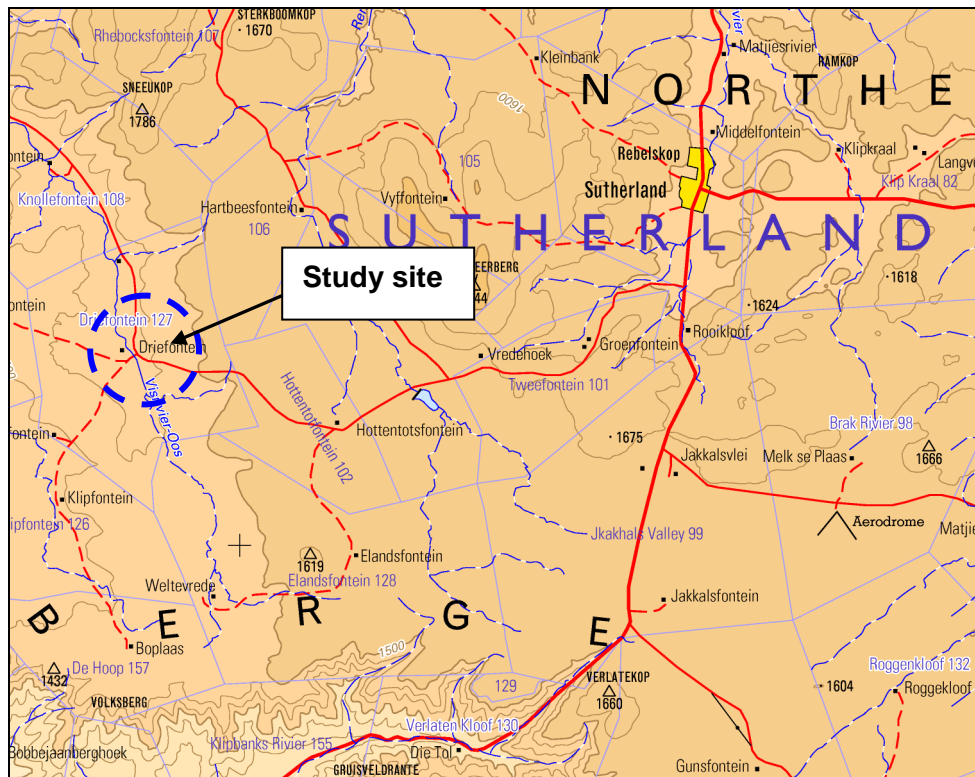


Figure 1. Locality Map

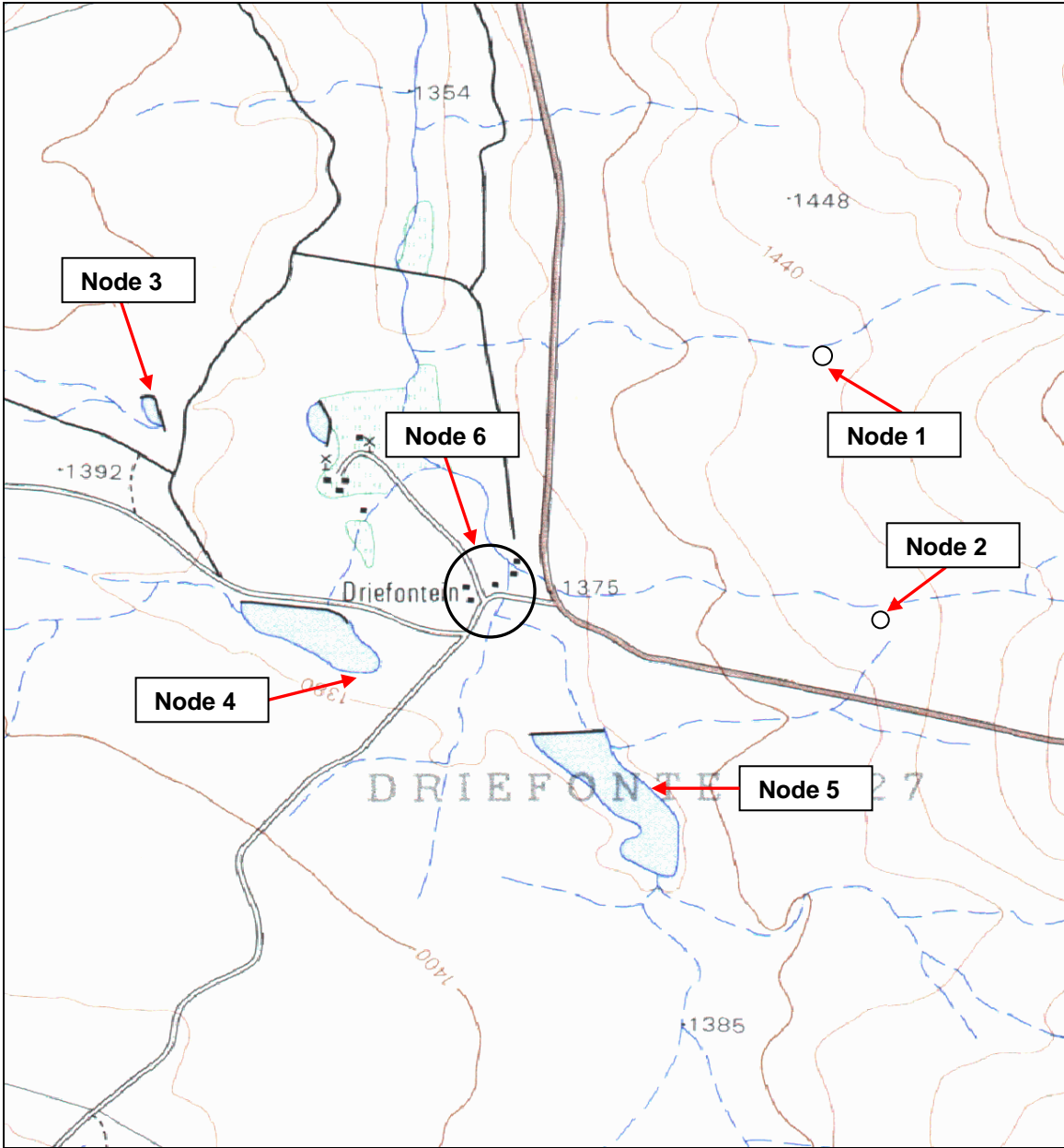
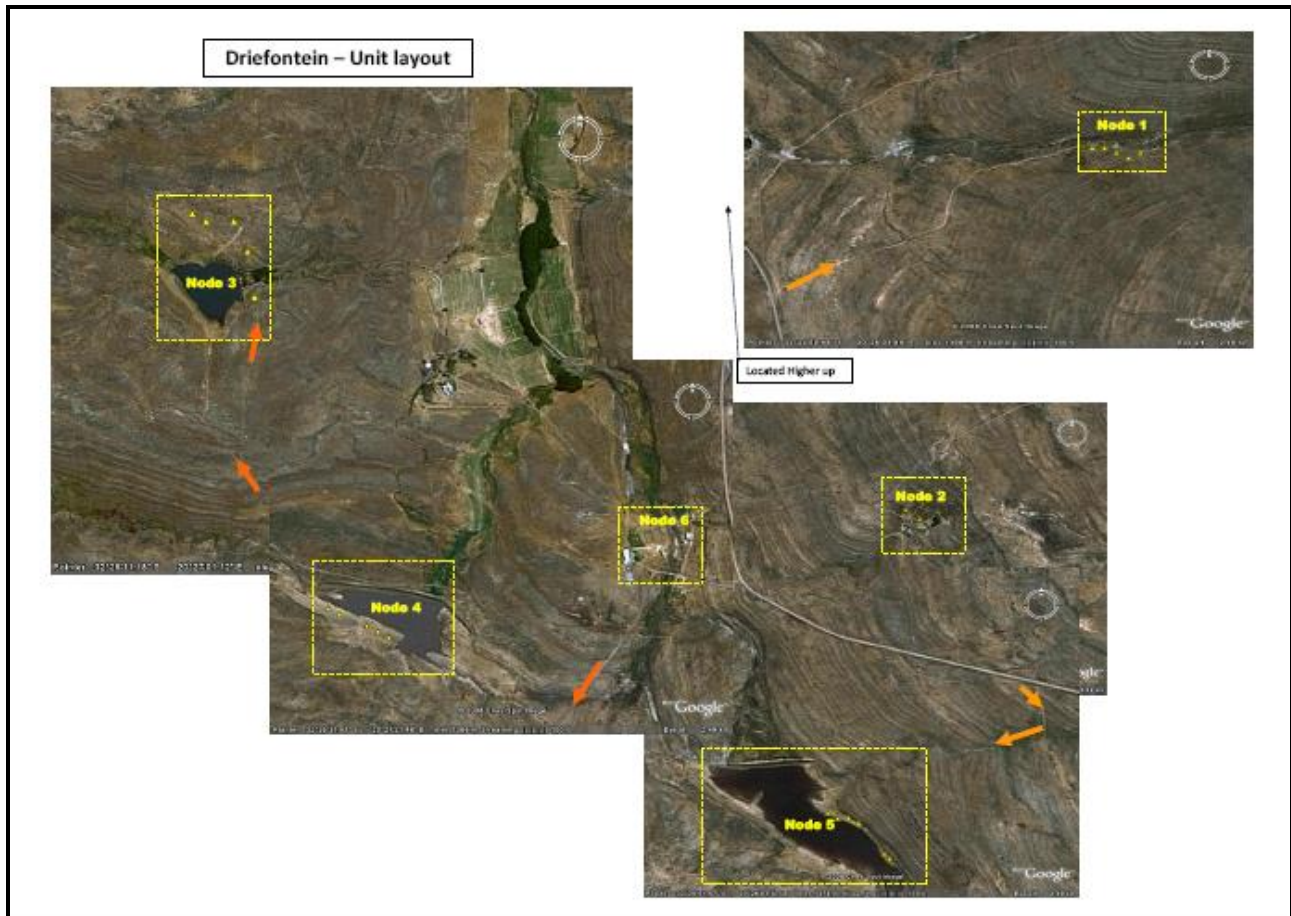


Figure 2. Locality Map (3220 AD Houdenbek)



**Figure 3. Aerial photograph of the site illustrating the proposed development Nodes**

## **4. STUDY APPROACH**

### **4.1 Method**

The approach followed in the archaeological study entailed a ground survey of each of the six proposed development Nodes. Although the actual building footprint for each proposed unit is quite small (measuring about 125m<sup>2</sup>), a much larger (surrounding) area was searched.

In addition, shale ridges, dolerite outcrops and seasonal streams exposing sections of shale bedrock, were also searched (for fossil remains). Ground visibility was good for most of the study.

The site visit and assessment took place on the 2<sup>nd</sup> and 3<sup>rd</sup> March, 2009.

## **4.2 Constraints and limitations**

There were no constraints or limitations associated with the study.

## **4.3 Identification of potential risks**

There are no potential (archaeological) risks associated with the proposed development.

Important vertebrate fossils (bones) and plant and trace fossil occurrences may, however, be exposed during road construction activities and excavations for resort units.

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

### **Archaeology**

The Karoo region is shot through by dolerite dykes where the raw material known as hornfels (or indurated shale) is ubiquitous and an excellent source for making stone tools. Archaeologically, this area of the Roggeveld Karoo is relatively un-explored, however (Hart 2005). What is known is that, despite the Karoo's bleakness and challenging winters, the area had a relatively high carrying capacity and teemed with game long before European colonization. Hunter gatherers (mainly San) successfully occupied the central interior of South Africa during the last 4500 years, subsisting on the large herds of grazing animals that occurred during that time (Sampson et al 1989).

Later Stone Age archaeological sites dating to the late Holocene (within the last 4000 years) are surprisingly common. Although the Karoo is presently more suited to the keeping of small stock such as sheep and goats, research in the Eastern Karoo has revealed that, at about 1200 – 1400 AD, a climatic fluctuation (known as the mini-ice age) may well have caused an increased rainfall in the central Karoo resulting in the area being more suitable for grazing of cattle and occupation by Khoekhoen pastoralist groups (Hart 2005). They left behind an archaeological legacy that consists of stone *kraal* complexes of which several hundred have been recorded in the Zeekoe Valley in the eastern Karoo and the Riet River area in the Northern Cape (Hart 1989).

The indigenous people of Karoo waged a bitter war against colonial expansion as they gradually lost control of their traditional land. With the implementation of the commando system in the late 18<sup>th</sup> and early 19<sup>th</sup> centuries, the Karoo "Bushmen" were eventually destroyed or indentured into farm labour (Hart 1989).

It is worth noting that a dispersed scatter of artefacts consisting of mainly waste material was found during an assessment of the proposed Sutherland Golf Course Estate (Hart 2005), while Hart (2005) also found a dense artifact scatter associated with a shallow rock shelter close to the above same study area indicating that such material may be found in areas that were sheltered from the wind.



## **Palaeontology**

The study area falls within known fossil-bearing deposits, characterised by its own set of fauna. The Beaufort Group (or Karoo Supergroup) - comprising the shales, mudstones and siltstone that make up much of the Karoo geology - contains a vast repository of fossil remains of both plants and early mammal-like reptiles. The area around Beaufort West for example, is considered to be the richest collecting ground for mammal and reptile-like fossils (or Karoo vertebrates) and plants in the world.

Sutherland lies within those parts of the Karoo rich in fossil remains and is thus potentially sensitive. Relatively common plant and trace fossil occurrences which occur fairly widely in the region were identified during a Paleontological Impact Assessment (PIA) of the proposed Sutherland Golf Estate (Almond 2005).

## **5. LEGISLATIVE REQUIREMENTS**

The following section provides a brief overview of the relevant legislation with regard to the archaeology of the subject property.

### **5.1 The National Heritage Resources Act (Act No. 25 of 1999)**

The National Heritage Resources (NHR) Act requires that "...any development or other activity which will change the character of a site exceeding 5 000m<sup>2</sup>, or the rezoning or change of land use of a site exceeding 10 000 m<sup>2</sup>, requires an archaeological impact assessment"

The relevant sections of the Act are briefly outlined below.

### **5.2 Structures (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 South African Heritage Resources Agency (SAHRA), or Heritage Western Cape.

### **5.3 Archaeology (Section 35 (4))**

Section 35 (4) of the NHR stipulates that no person may, without a permit issued by HWC, destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object.

### **5.4 Burial grounds and graves (Section 36 (3))**

Section 36 (3) of the HHR stipulates that no person may, without a permit issued by the South African Heritage Resources Agency (SAHRA), destroy, damage, alter, exhume or 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.

## 6. FINDINGS

### Node 1:

Approximately five camping sites are envisaged in Node 1, which is situated about midway up a fairly steep, narrow kloof, alongside a small stream (Figures 3, 4 & 5). An existing 2-track farm road will be used to access the proposed site. The site, which is heavily overgrazed by sheep, is located about 35 m west of a small stone ruin (Figure 6), most likely a shepherd's hut (or veewagterhuis). Such ruins are quite common in the Karoo landscape and reflect the early Trek Boer movements in the region during the late 18<sup>th</sup> and early 19<sup>th</sup> centuries. (Kaplan 2007, 2006, 2005).

**Finds:** No archaeological remains were documented in Node 1.



Figure 4. Node 1 view facing north

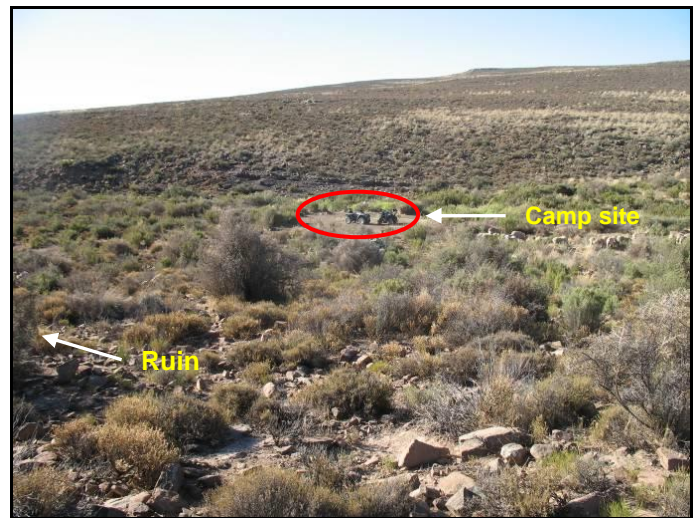


Figure 5. Node 1 view facing west



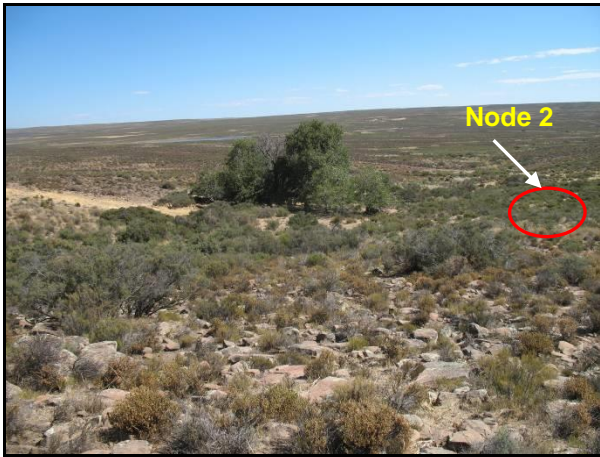
Figure 6. Stone ruin near Node 1

**Node 2:**

Two luxury units are planned for Node 2, which is situated about 30 m to the west of a group of large Wild Pear trees, on a rocky well vegetated slope (Figures 3, 7 & 8). An existing gravel road will be used to access the proposed site. The Pear trees and an open area in front are surrounded by a low, stone wall enclosure. A walled terrace is situated within the enclosure, behind which is located a stone lined well (Figure 9). According to the owner of the property (Mr J. van der Merwe), the ruins are the site of a vegetable garden, which was fed by the stone well. The walled enclosure was built in order to prevent animals from entering the garden and eating the vegetables. The remains of a collapsed, two roomed stone structure occur at the end of a small gravel track about 50 m south west of the stone enclosure (Figure 10). This dwelling was possibly built to house farm workers tending the garden. Several pieces of glass and white porcelain were found lying about. A seasonal stream exposing large sections of shale bedrock occurs about 60 m south east of the group of Wild Pear trees.

The historic vegetable garden and associated ruins will not be directly impacted by the proposed development.

**Finds:** No archaeological remains were documented in Node 2.



**Figure 7. Node 2 view facing south**



**Figure 9. Stone walled terrace**



**Figure 8. Node 2 view facing north**



**Figure 10. Collapsed ruins**

### Node 3:

Approximately five units are envisaged at this site, which is situated on the western side of a small farm dam (Figures 3, 11 and 12). A new road (from the north) will have to be built to access the proposed site. A proposed access road from the south is not suitable as this will impact negatively on an extensive series of stone walling. The receiving environment has been quite heavily grazed, while the surrounding (higher) slopes and shale ridge is vegetated and quite rocky. No dolerite outcrops occur anywhere close to the proposed site. There is very little surface stone on the proposed development site, which is fairly level, but there are areas where some stone (mainly dolerite chunks and nodules) do occur. A seasonal stream that feeds the existing dam, exposing large sections of shale bedrock, occurs about 200 m south of the proposed development footprint.

**Finds:** No archaeological remains were documented in Node 3.

No archaeological remains were documented in the proposed access road (from the north) to the site.



Figure 11. Node 3 view facing north east



Figure 12. Node 3 view facing south east

### Node 4:

Approximately three units are planned for Node 4, which is located on the eastern bank of a moderately large farm dam (Figures 3, 13 & 14). The site is fairly level, and very rocky and covered in bush, low scrub and some grasses. A new road will be built to access the proposed site. The upper slopes of the affected lands are moderately steeper and a low shale ridge is situated further to the east, close to a gravel farm road. Two small outcroppings of dolerite occur outside the proposed development footprint.

**Finds:** An indurated shale end scraper was found on the affected site, but this was located outside the proposed development footprint.

No tools or flakes were found near the dolerite outcrop.

No archaeological remains were documented in the proposed access road.



Figure 13. Node 4 view facing west



Figure 14, Node 4 view facing north west

#### Node 5:

Approximately five units are envisaged for Node 5 which is situated on the northern bank of a large farm dam, about 400 m south of the Bo-Visriver Road, and about 500 m from the entrance to Driefontein Farm (Figures 2 & 15). A new road will have to be built to access the proposed site (Figure 16). The site is covered in low bush and scrub and is very rocky and stony, with some open patches occurring in places. The proposed site is fairly level, but slopes gently toward the farm dam. There are no significant landscape features that occur on the proposed site, but a dolerite ridge about 350 m to the east of the proposed site was inspected for archaeological remains.

**Finds:** No archaeological remains were documented in Node 5.

No tools or flakes were found near the dolerite outcrop.

No archaeological remains were found in the proposed access road.



Figure 15. Node 5 view facing south west

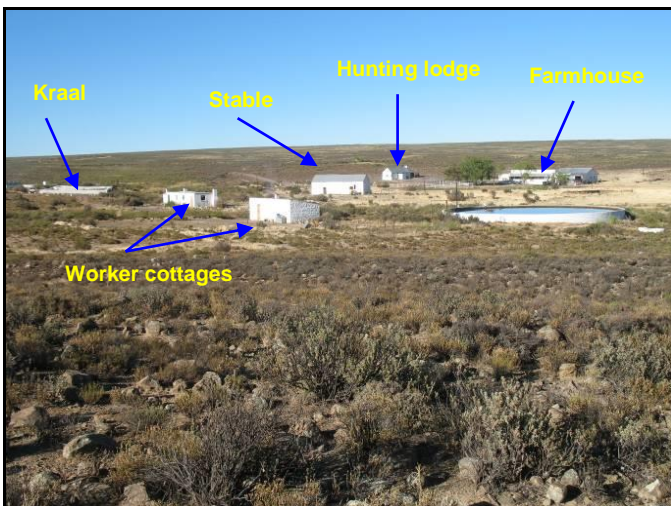


Figure 16. Node 5 view of dam and proposed access road facing south

**Node 6:**

Node 6 comprises the existing Driefontein Farm werf with cottage/hunting lodge, stables, sheep kraal, worker cottages and dam (Figure 17). It is envisaged that the worker cottages will be upgraded as possible weekend rental options. The cottage/hunting lodge and stables may also be restored (and upgraded) to accommodate visitors and their horses. As indicated above (on page 3), the worker cottages are of recent age and are of no historical value, while the hunting lodge retains some integrity even though a bathroom has been inappropriately added at the back and the original windows and roof have been replaced (Figures 18 & 19). The original (thatch) roof of the stable has also been replaced (Figure 20). The original farmhouse burnt down in the 1960s and has been inappropriately 'restored' and converted into flats.

**Finds:** No archaeological remains were documented in Node 6.



**Figure 17. Node 6 farm werf**



**Figure 18. Node 6 Hunting lodge (back). Note bathroom addition**



**Figure 19. Node 6 Hunting Lodge (front)**



**Figure 20. Node 6 Stables**

## **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.

The probability of locating important pre-colonial archaeological heritage remains during implementation of the project is likely to be improbable.

However, with respect to the historical stone ruins and structures (in Node 2), there may be cumulative (or longer term) impacts arising out of the proposed development and these will have to be carefully managed to ensure archaeological heritage sites are not damaged, disturbed or compromised during the operational phase of the proposed project.

Important vertebrate fossils (bones) and plant and trace fossil occurrences may also be exposed or uncovered should excavations penetrate shale deposits or associated fossil bearing sediments.

## **8. RECOMMENDATIONS**

With regard to the proposed Driefontein Resort development near Sutherland in the Northern Cape Province, the following recommendations are made:

- Protected stone walling and ruins in Node 2 must not be damaged, or disturbed, and no stone may be removed for building purposes. It is not recommended that the ruins be demolished or altered. This 'site' could be researched in more detail and possibly be developed as a public interest (heritage) site for visitors to the proposed resort. A Conservation Heritage Management Plan will need to be developed to safeguard the integrity of the site.
- The proposed northern access road to Node 3 is the preferred route. The proposed alternative access road from the south is not acceptable as this will impact on extensive historical stone walling.
- A specialist palaeontologist must be appointed by the developer to inspect excavations and road cuttings, for possible vertebrate (bone) fossil during the Construction Phase of the project. Consulting palaeontologist Dr John Almond (021 462 3622) can be contacted in this regard.
- A conservation architect must be consulted to assist in the (proposed) restoration of the stables and cottage/hunting lodge within the Driefontein farm werf.

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