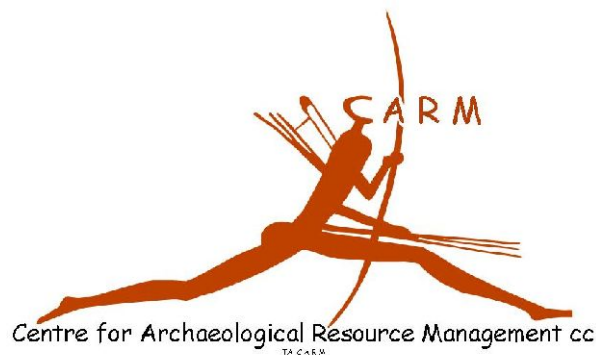


# Archaeological Heritage Survey

## Ruygte Vally; Portion 17 of Farm 205, near Groenvlei, Knysna Municipality, Western Cape Province: Proposed housing development

by

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## **Executive Summary**

*Plantation, thickets and undergrowth in the study area prevent a comprehensive Archaeological Heritage Impact Assessment. Nonetheless, traces of pre-colonial heritage do occur within the Ruygte Valley study area, and the substrate is suitable for the preservation of bone fossils of great antiquity.*

*Given the circumstances, it is recommended that HWC comment favourably on the development proposal from an archaeological point of view, and that the early stages of land clearance on the dune top and on the bottom slopes be monitored by an archaeologist. In the event that heritage is encountered, work will need to cease in the immediate area until the issue can be mitigated appropriately.*

*Elsewhere, in the event that vegetation clearing and earthmoving activities expose archaeological materials, such activities must be halted and Heritage Western Cape notified immediately. If the occurrence concerns human burials older than 60 years, the matter falls under the South African Heritage Resources Agency.*

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# **1. Introduction**

## **1.1 Background**

Alan Dods of Move on Up 136 (Pty) Ltd, proposes to undertake a housing development on Ruygte Vally; Farm 205/17 in the Knysna Municipality near Groenvlei. Consequently, the Mr Dods appointed CARM to undertake a Archaeological Heritage Impact Assessment.

## **1.2. Purpose and Scope of the Study**

The objectives of the Archaeological Heritage Impact Assessment are:

- to assess the study area for evidence of archaeological materials;
- to evaluate the significance of archaeological materials in the study area;
- to assess the significance of the impact of the proposed development on archaeological resources;
- if necessary, to recommend measures in mitigation of the impacts of the proposed development on the archaeological resources and
- to prepare and submit a report to the client that meets standards required by Heritage Western Cape (HWC) in terms of the National Heritage Resources Act , No. 25 of 1999 (NHRA of 1999).

## **1.3 Study Area**

The study area lies above the north-western shores of Groenvlei, close to to the resort town of Sedgefield in the Knysna Municipality of the Western Cape Province (Figure 1). From a geomorphological point of view, the study area lies on the side of a mega-dune and te topography is consequently steep up until the undulating dune ridge. Vegetation in the area is a mix of overgrown plantations (blue gums), free growing exotics such as black wattle and indigenous species, although none of the areas dominated by indigenous species is unaffected by modern day disturbances. The plantations are thickest towards and on the dune ridge and in the south western corner.

Given the due context, the surface sediments in the study areas consist entirely of sands and calcareous pedogenic alterations of these primary aeolian sediments.

A system of dirt trails leads off from the entrance in the south west. A trail steeply ascends the dune up the west side ad then proceeds along the dune ridge until blocked by overgrowth. Subsidence blocks another trail making an eastwards diagonal ascent of the dune.

Development proposals are concentrated in the western quarter of the property and along the dune ridge as well as the gentler approach slopes (refer to Figure 2).

Development of the area would entail vegetation clearance, road making, the provision of bulk services and the construction of houses, with the excavation and earthmoving that such tasks require. The impacts of these activities will be focussed in the footprint areas but will be highly intensive within those limits.

## **1.4 Approach to the Study**

A representative of Move on Up 136 (Pty) Ltd provided maps indicating the location and extent of the study areas. An examination of geo-referenced aerial photography provided the coordinates of boundary as well as development-footprint waypoints, which were then loaded into a Garmin etrex vista handheld GPS. Different parts of the study area were accessed by vehicle and then inspected

on foot by a qualified archaeologist. The hand held GPS provided both navigation to remain within the study area as well as a record, both of observations as well as walk paths.

The archaeologist searched for surface traces of archaeological materials. By necessity, the search was limited to areas where the vegetation permitted access.

Records of the search include an assessment of the viability of the survey with respect to visibility, notes on the materials found and the context, a GPS fix and digital photography (a comprehensive photographic record is available from the author).

Once the fieldworker had located archaeological heritage they made an assessment of each occurrence in terms of both its significance and its scale or extent of importance, and in terms of the impact of the proposed development, both without and with the implementation of mitigation. The archaeologist also bore in mind the restriction of the survey to surface traces and assessed the study area for instances where archaeological heritage could be buried beneath the surface and so require special consideration.

The survey methods employed in this study are standard to archaeology the world over. If conducted diligently and under reasonable conditions for the search, the results will be a comprehensive record of surface traces of archaeological heritage and will provide a means of satisfying the requirements of the NHRA of 1999.

Overall, the search visibility was poor as detailed in the results section.

As far as the writer knows, no previous archaeological work has been undertaken in the immediate vicinity of the affected areas.

## 2. Results

Figure 3 presents the GPS walking trail and the location of observations. Breaks in the trail represent instances where the GPS signal was lost due to obstruction by a person, trees or topography.

Visibility is very restricted along much of the track way running east west along the top of the mega dune. Trees and bushes obstruct medium to long range visibility and a lower level of bushes, grass and branch and twig litter largely preclude a view of the substrate (refer to Figure 4). In places where the trees are absent, indigenous vegetation is waist high and thick (refer to Figure 5).

In the west along that road visibility is a little better, with fewer trees but still a thick undergrowth.

**Waypoint 31:** quartz flake, approx 2 cm long by 1.5 cm wide, quadrilateral shape, found in mole heap just below road (refer to Figure 6). Not diagnostic as to technological sub-stage – could be Middle Stone Age (MSA – the period of history between 300,000 and ca. 30,000 years ago) or Late Stone Age (LSA dating from 30,000 to 350 years ago). Flake is well struck.

**Waypoint 32:** quartz core (that is a a piece of stone from which flakes were struck) found in mole heap in road (refer to Figure 7). Probably LSA in age.

Just west of Waypoint 31 and created by the track is a ca. 1 metre high exposure of calcified sands. No fossil or archaeological materials are evident here but the sediment type is the right one for preservation of bone fossils. Vegetation in vicinity of the calcified and exposure is very thick.

Walked along the western boundary of property. Trees widely spaced, predominantly natural vegetation to waist and shoulder height at most, generally knee height but very thick. Mole heaps and occasional open patches provide access to the substrate. Archaeological visibility mostly poor

but not a complete write-off. Slope moderately steep, not suitable for camping but it becomes much less steep lower down. Vegetation very thick here unfortunately – no prospect of proper survey.

**Waypoint 33:** quartz chunk in mole heap. Clearly a piece derived by intentional human flaking. Beyond that it deserves its anonymity.

Walked to the east of the western boundary – extremely thick vegetation but few trees. No ground exposure and, unsurprisingly, nothing was seen

Walked in the vicinity of the south western corner of study area amongst young blue-gum trees. There was branch and leaf litter with some open patches of ground. Survey prospects poor to moderate but nothing seen.

Walked in area immediately north-west of the entrance across railway line (refer to Figure 3). Open landscape with no trees. natural vegetation underfoot but a thick infestation of kukuyu grass. Some mole heaps. Natural vegetation thickens upslope.

Walked to the north-east of the entrance upslope towards an old road or drainage terrace with a 1.5 m high profile through the surface sands. This provided an opportunity to assess whether or not archaeological materials occur within the sediment body. Nothing was seen.

**Waypoint 37:** 2 to 3 m high exposure through the well calcified aeolian sands of the mega dune ridge – fore set beds prominent (refer to Figure 8). Exposure created by manufacture of the track way leading along the slope of the mega dune. No fossiliferous material seen. Very steep slopes above and below. Impassable without roadway. This locality recorded simply because it is a fine exposure of aeolian structure within the mega-dune.

Drove along the track way that runs parallel to the southern boundary. Thick vegetation, steep slopes and little prospect of systematic survey.

### **3. Assessment of Archaeological Heritage**

Post colonisation activities have vastly complicated the task of locating this material. As a consequence of the plantations, vegetation now is much thicker than in the past and posed substantial impediment to the survey. Overall, the conditions within the study area were not good enough to consider the present study as an authoritative statement on the quality of archaeological heritage present and at risk due to the proposed development.

The study does however, demonstrate unequivocal evidence of heritage within the study area. The two pieces of flaked quartz demonstrate that at some time in the pre-colonial past there was a human presence on the gentler topography of the dune top. This is not unexpected as the locality then would have offered comfortable camping opportunities and a great view. There is also evidence for human activity in the past on the gentler bottom slopes.

Other indicators present draw attention not to certainties but potentials. The presence of calcified sand demonstrates from a geological perspective that conditions conducive to the preservation of bone and shell of antiquity are present.

Three pieces of flaked stone would not warrant further consideration under normal conditions of survey. In such occluded circumstances however, the mere fact of observation points to the presence of other, now well-obscured tools and other traces. Equally, with a substrate conducive to the preservation of bone we cannot discount the possibility of fossiliferous deposits. Any infilling of ancient caverns, burrows and dens within in these sediments will be of potential interest to palaeontologists and / or archaeologists.

In the absence of a ready means of effective survey, it is the potential for and unknown nature of heritage that needs to be managed in the case of the proposed development of Ruygte Valley.

#### 4. Sources of Risk, Impact Identification and Assessment

Development will involve vegetation clearing and earthmoving activities that will have a permanent and negative impact on any archaeological and palaeontological resources intercepted by the machinery as well as people.

In terms of knowledge gleaned from this survey, the mid-slopes of the mega dune are highly unlikely to present any issue with respect to archaeological heritage. There is however a potential issue with respect to palaeontological resources, as indeed there is everywhere within the study area. In terms of probability, the chances of such an occurrence are low, given that they are rare anyhow in the wider southern African landscape. This rarity of course, tends to translate into a high level of significance when fossil deposits are found.

Development activities will potentially place archaeological resources at risk on the dune top and lower slopes.

Table 1 summarizes the potential impacts of the proposed development on archaeological heritage resources without mitigation.

Table 1: Potential Impacts on Archaeological Heritage Resources without Measures of Mitigation (Archaeol = Archaeological; Palaeontol = Palaeontological)

Area	Resource	Significance	Status	Confidence	Intensity	Extent	Duration	Probability
Dune top & lower slopes	Archaeol & palaeontol	Unknown	Negative	High	High	Unknown	Permanent	Definite in case of archaeol; low in case of palaeontol
Mid-slopes	Palaeontol	Unknown	Negative	High	High	Unknown	Permanent	Low

#### 5. Recommended Mitigation Measures

Despite the limitations imposed by the conditions within the study area, this report nonetheless provides a basis for the development process to proceed (assuming that HWC agrees and that legal requirements other than those for heritage are met). Indeed, any further assessment of heritage will need the physical development process to accomplish its goals.

It is recommended that:

- HWC accept this report under the condition that monitoring for heritage resources will take place in the early stages of the physical development, in the event that the project proceeds, and
- that the developer appoint a qualified archaeologist to undertake monitoring of the preparation of the land for development.

The appointed archaeologist should undertake the monitoring study for the dune top and lower slope areas only. Details and requirements should be defined between the HWC, the developer and the contracted archaeologist.

As is the norm for all development projects, the following further undertakings are required:

- In the event that vegetation clearing and earthmoving activities expose archaeological or palaeontological materials, such activities must be halted and HWC notified immediately.
- Unmarked human burials may occur anywhere in the landscape and are often exposed during earthmoving activities. Human remains are protected by law and, if older than 60 years, are dealt with by the State Archaeologist at the South African Heritage Resources Agency (Mrs. Mary Leslie who can be reached at 021 462 4502).

**Figures**

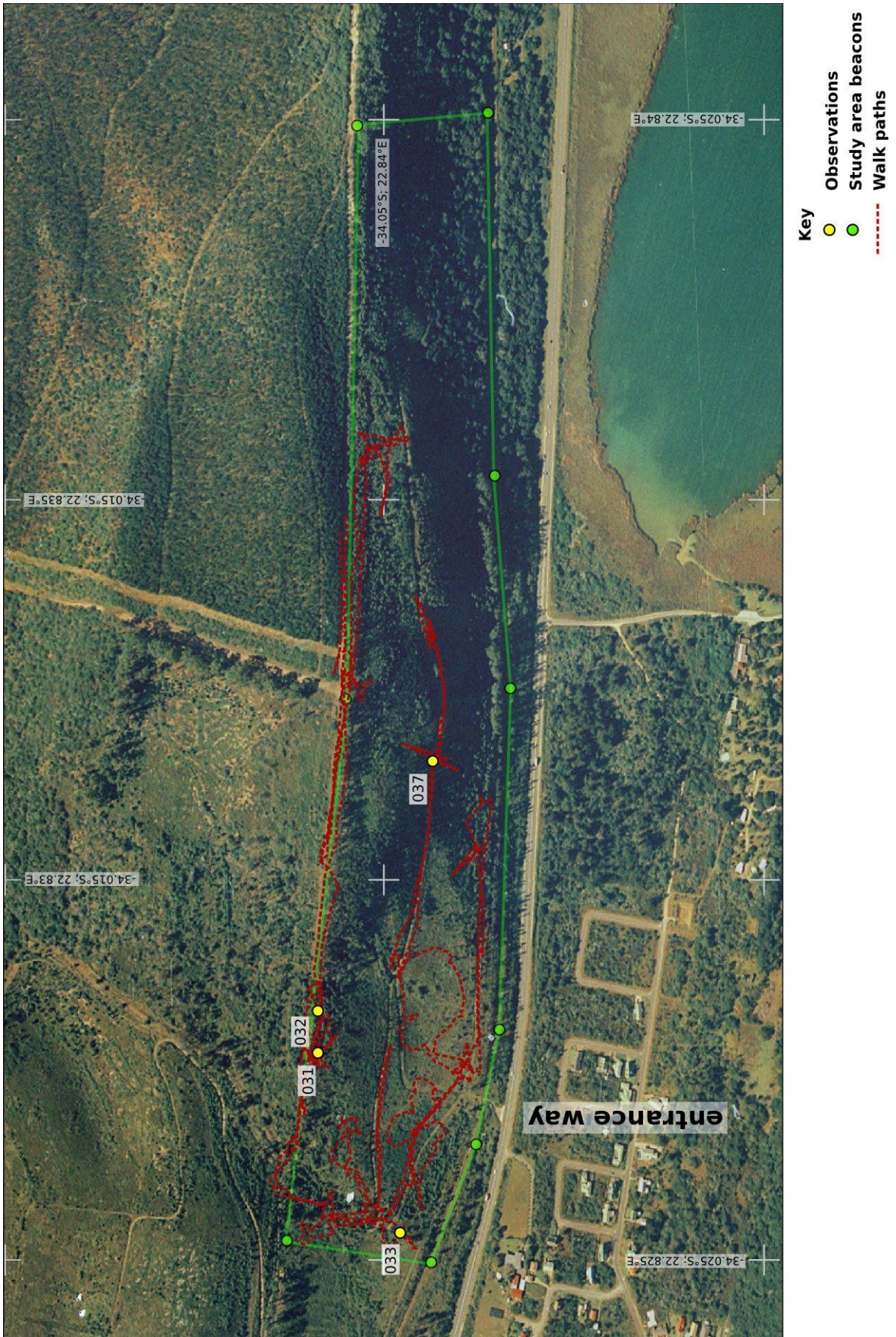


Figure 1: Location of study area with the town of Sedgefield to the west (not-to-scale except of 3422BB 1:50,000 series map - Chief Directorate Surveys and Mapping)



Figure 2: Draft town plan showing restriction of built environment to areas of suitable topography





**Key**  
 ● Observations  
 ● Study area beacons  
 - - - Walk paths

Figure 3: Walkpaths, location of observations and approximately boundary of study area



Figure 4: View to the east from the eastern most search path at the top of the dune



Figure 5: View to east from a clearing 100 m south of Figure 4, showing Groenvlei and dense indigenous vegetation



Figure 6: Quartz flake from Waypoint 31



Figure 7: Quartz core from Waypoint 32



Figure 8: Aeolianite exposure at Waypoint 37