

Archaeological Impact Assessment

**Proposed residential development, Portion 52 Kraaibosch Farm
195, George, Western Cape Province**

prepared for

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by



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Executive Summary

As requested by Mrs Siân Holder of Cape EAPrac, CHARM conducted an Archaeological Impact Assessment (AIA) for the above-named development on 10 March 2011. In the recent past, the study area was used as a pine plantation, was cleared of black wattle, and structures in the NW corner were demolished. The absence of rooted tree stumps indicates that pine trees were uprooted, which resulted in significant disturbance to sediments and their contents. Other recent human activities include a single vehicle dirt track and a few small-scale trenches. The study area was also used for cattle grazing. Vegetation is dramatically altered and no areas of the property are vegetated exclusively by indigenous species. Sediments consist of sands, humic soil and clay with comminuted quartzitic sandstone occurring in places. No outcrops of hard rock geological sediments were identified.

Although the entire study area is accessible on foot, archaeological visibility is restricted due to dense grass and shrub. Nevertheless, sufficient areas were inspected for the purpose of this assessment.

No historic or prehistoric archaeological resources were identified and therefore, the study area is not archaeologically sensitive. Consequently, there are no objections to the proposed development.

Note that;

- If archaeological materials are exposed during vegetation clearing and/or earth moving activities, then they must be dealt with in accordance with the National Heritage Resources Act (No. 25 of 1999) and at the expense of the developer.*
- In the event of exposing human remains during construction, the matter will fall into the domain of Heritage Western Cape (Ms Belinda Mutti) or the South African Heritage Resources Agency (Ms Mary Leslie or Ms Colette Scheermeyer) and will require a professional archaeologist to undertake mitigation if needed.*

Table of Contents

Content	Page
Executive Summary _____	2
1. Introduction _____	4
1.1. Background _____	4
1.2. Purpose of the Study _____	4
1.3. Study Area _____	5
1.4. Approach to the Study _____	5
2. Results _____	6
3. Sources of Risk, Impact Identification and Assessment _____	6
4. Required Mitigation Measures _____	7
5. References _____	7
Figures and Plates _____	8

1. Introduction

1.1 Background

As required in a RoD issued by Heritage Western Cape (HWC – RoD ID no. 1210, Case ID no.1246) CHARM conducted an Archaeological Impact Assessment (AIA) for the above-named property. The study area – Portion 52 of Kraaibosch Farm 195 - is approximately 13ha in extent and is situated some 4km SE of George CBD in the Western Cape Province (Figures 1 & 2).

The application includes rezoning of the property from Agricultural Zone I to a Sub Divisional Area. The proposed development is for a retirement village and includes the following;

- 177 retirement units,
- administrative offices,
- frail care centre,
- private open space,
- public open space
- roads and
- bulk services

The location and extent of the study area are shown in Figures 1, 2 and 3 and coordinate data for the main boundary points are given in Table 1. Further details can be obtained from Mrs Siân Holder – see contact details on the title page of this report.

Table 1. Coordinate data for main property boundary points (see Figure 3).

Name	Description	Datum: WGS 84	
		Lat/Lon	dec.degrees
A	property boundary point	S33.97423 E22.50116	23 Y0046099 X3760916
B	property boundary point	S33.97275 E22.50385	23 Y0045851 X3760749
C	property boundary point	S33.97295 E22.50428	23 Y0045812 X3760771
D	property boundary point	S33.98063 E22.50359	23 Y0045871 X3761624

1.2. Purpose and Scope of the Study

Objectives of the Archaeological Impact Assessment are:

- To assess the study area for traces of archaeological and tangible heritage related resources;
- To identify options for archaeological mitigation in order to minimize potential negative impacts; and
- To make recommendations for archaeological mitigation where necessary.

Terms of Reference (ToR):

- a) Locate boundaries and extent of the study area.
- b) Conduct a survey of the study area to identify and record archaeological and heritage related resources.
- c) Assess the impact of the proposed development on above-named resources.
- d) Recommend mitigation measures where necessary.
- e) 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
- f) Submit AIA report to HWC

1.3 Study Area

The study area is roughly 4km SE of the CBD of George in the Western Cape Province and is some 13ha in extent (Figures 1, 2 & 3). Coordinate data for the boundary points are given in Table 1 (see alphabetically named markers in Figure 3). The property is on relatively level ground that slopes gently to the west and is on average 200m above mean sea level. Surface sediments consist of humic sands and soil with clay occurring in places. Patches of comminuted quartzitic sandstone were also noted. No rocky outcrops were identified. Vegetation is dramatically altered and no areas of the property are vegetated exclusively by indigenous species. Vegetation is dominated by various grass species and low shrubs. Large numbers of black wattle saplings indicate that the area was recently cleared of the same alien species.

In the recent past, the study area was used as a pine plantation, was cleared of black wattle and structures in the NW corner were demolished. The absence of rooted tree stumps indicates that pine trees or their stumps and roots were unearthed, which resulted in significant disturbance to sediments and their contents. Other recent human activities include a single vehicle dirt track and a few small-scale trenches. The study area was also used for cattle grazing. The bulk of the property is covered with dense ground cover – mostly grass - that renders archaeological visibility very poor. Archaeological inspection was restricted to exposed surfaces and formerly disturbed areas. Given the severe alteration of the natural environment, sufficient areas could be inspected for the purpose of assessment. For examples of the above see Figure 3 and Plates 1 & 2.

The study area was accessed from the east by following the Old Knysna Rd (N9) toward George, by turning right into Saasveld Rd and right again into Glenwood Avenue. The property is situated to the east of Glenwood Avenue where the tarmac ends and gravel begins (see Figures 1 & 2).

1.4 Approach to the Study

Earlier archaeological work conducted in the surrounding environment showed that the area houses an archaeological record dating from the early stages of Stone Age technology to structures and material culture of the historic period (e.g., Nilssen 2009a, b & c, 2010a & b). Archaeology of the Stone Age is represented by;

- Isolated implements and low to medium density stone artefact scatters of Early Stone Age (ESA) origin and these include cores, hammer stones, hand axes, cleavers, chopper tools and flakes. Quartzite is the raw material for the bulk of these artefacts and materials are located in open air contexts.
- The Middle Stone Age (MSA) is represented by open air occurrences of isolated artefacts and low to medium stone artefact scatters. A coastal cave on the adjacent Portion 54 of the Farm Hooge Kraal 238 contains remnant deposits of MSA origin that likely date to around 160 000 years ago (Marean *et al* 2004 & 2007 and Nilssen 2009b). The remnant deposits include cemented sediment, stone artefacts, marine shell and bone. At Pinnacle Point, Mossel Bay, caves like these yielded valuable information for furthering research into ancient climates and environments (Bar-Matthews *et al* in press). While artefacts in quartz are found, the dominant raw material is quartzite. MSA artefacts in open contexts are restricted to stone and include a variety of single and multi platform cores, hammer stones, grind stones, blades, a variety of retouched pieces, convergent flakes, points, possible scrapers and adzes, flakes and chunks.
- Compared with that of the ESA, material culture of Later Stone Age (LSA) origin is relatively rare in this area and occurs as isolated stone artefacts and

low to medium stone artefact scatters. All identified occurrences are in the open. In general, the stone tool kit of the LSA is more varied, technology is more refined and artefacts are commonly smaller than those of the MSA assemblages. Although artefacts in quartzite are found, the preferred raw material is “milky” and clear quartz. Stone artefacts include a variety of single and multi platform cores as well as bipolar and bladelet cores, hammer stones, grind stones, anvils, blades, bladelets, a variety of retouched pieces, scrapers, adzes, flakes, chunks and chips.

Mrs Siân Holder provided background information, a locality map and coordinate data for the affected property. Mrs Holder also obtained permission to access the property and the study was conducted independently. The entire study area is accessible on foot and adequate information was obtained for archaeological assessment.

Survey tracks were fixed with a hand held Garmin Camo GPS to record the search area (Figure 3, gpx tracking file submitted to HWC and is available from author). Observations and photo localities were also fixed by GPS (Figure 3, Plates 1 and 2 and Table 2). Digital audio notes and a high quality, comprehensive digital photographic record were also made (full data set available from author). Localities of photographs are established by matching the numbers on photographs with those of waypoints in Figure 3 and coordinate data are given in Table 2. Directions of views are indicated with compass bearing names like E is east; WSW is west south west, and so on. Bearing names on panoramic views are approximate and indicate the bearing at the position of the label on the photograph.

2. Results

On 10 March 2011, in 2 hours of survey, a distance of 6km was walked, covering an area of about 5ha, of which an average of between 5 and 10% provided good archaeological visibility (Plates 1 & 2). The vast bulk of the study area comprises disturbed sediments (see section 1.3 above). No historic or prehistoric archaeological resources were identified.

Table 2. Descriptive and coordinate data for photo localities (img = photo number and snd = audio file number).

Name	Description	Datum: WGS 84		Datum: WGS 84		Elevation masl
		Lat/Lon	dec.degrees	Grid: SA National		
1	img2431-4 snd2434 S-W	S33.97282	E22.50382	23 Y0045855	X3760757	219 m
2	img2435-40 snd2440 E-W	S33.97370	E22.50230	23 Y0045994	X3760856	216 m
3	img2441-4 snd2444 E-S	S33.97428	E22.50120	23 Y0046096	X3760920	212 m
4	img2445-6 snd2446 E&W	S33.97371	E22.50294	23 Y0045935	X3760856	213 m
5	img2447-8 snd2448	S33.97442	E22.50235	23 Y0045990	X3760936	210 m
6	img2449-51 snd2451 E-S	S33.97479	E22.50155	23 Y0046063	X3760977	210 m
7	img2452-7 snd2457 N-S	S33.97575	E22.50174	23 Y0046045	X3761083	206 m
8	img2458-61 snd2461	S33.97686	E22.50214	23 Y0046008	X3761206	200 m
9	img2462-8 snd2468 N-S	S33.97967	E22.50316	23 Y0045911	X3761518	194 m
10	img2469 snd2469	S33.98046	E22.50350	23 Y0045880	X3761606	190 m
11	img2470-5 snd2475 S-N	S33.97716	E22.50365	23 Y0045868	X3761239	210 m

3. Sources of Risk, Impact Identification and Assessment

Earth moving activities associated with the proposed development will have large scale impact on surface and sub-surface sediments. Nevertheless, and given the significant alteration of the natural environment, sufficient areas could be inspected for the purpose of assessment. No historic or prehistoric archaeological resources were identified and therefore, the study area is not considered to be archaeologically sensitive. As a result, from an archaeological perspective, there are no objections to the proposed activity.

4. Required Mitigation Measures

- If archaeological materials are exposed during vegetation clearing and/or earth moving activities, then they must be dealt with in accordance with the National Heritage Resources Act (No. 25 of 1999) and at the expense of the developer.
- In the event of exposing human remains during construction, the matter will fall into the domain of Heritage Western Cape (Ms Belinda Mutti) or the South African Heritage Resources Agency (Ms Mary Leslie or Ms Colette Scheermeyer) and will require a professional archaeologist to undertake mitigation if needed.

5. References

Nilssen, P.J. 2009a. Archaeological Monitoring: Le Grand Golf Estate on Portion 76, 77 and 78 of the Farm Craige Burn 202, Pacaltsdorp, George, Western Province (in prep)

Nilssen, P.J. 2009b. Archaeological Heritage Impact Assessment: Remainder Portion 54 of the Farm Hooge Kraal 238, Magisterial District George, Western Cape Province: proposed development of a small, "Eco Friendly" and environmentally sustainable Health Spa. Prepared for Ms Karen Waterson of Lekala Eco Tourism Management (Pty) Ltd

Nilssen, P.J. 2009c. Heritage Impact Assessment focused on Cultural Landscapes: Remainder Portion 54 of the Farm Hooge Kraal 238, Magisterial District George, Western Cape Province: proposed development of a small, "Eco Friendly" and environmentally sustainable Health Spa. Prepared for Ms Karen Waterson of Lekala Eco Tourism Management (Pty) Ltd

Nilssen, P.J. 2010a. Archaeological Impact Assessment: Proposed Extension of Rand Street across Erven 464 & 325, Pacaltsdorp, George, Eden, Western Province, prepared for George Municipality C/o Aurecon South Africa (Pty) Ltd

Nilssen, P.J. 2010b. Archaeological Impact Assessment with comment on Palaeontology by Dr John Almond. Proposed Enlargement and Remedial Work on Platrug Dam, Portion 40 of Farm 208, George, Eden, Western Province. Prepared for Ms Cathy Avierinos, HillLand Associates Environmental Management Consultants

Figures and Plates (on following pages)

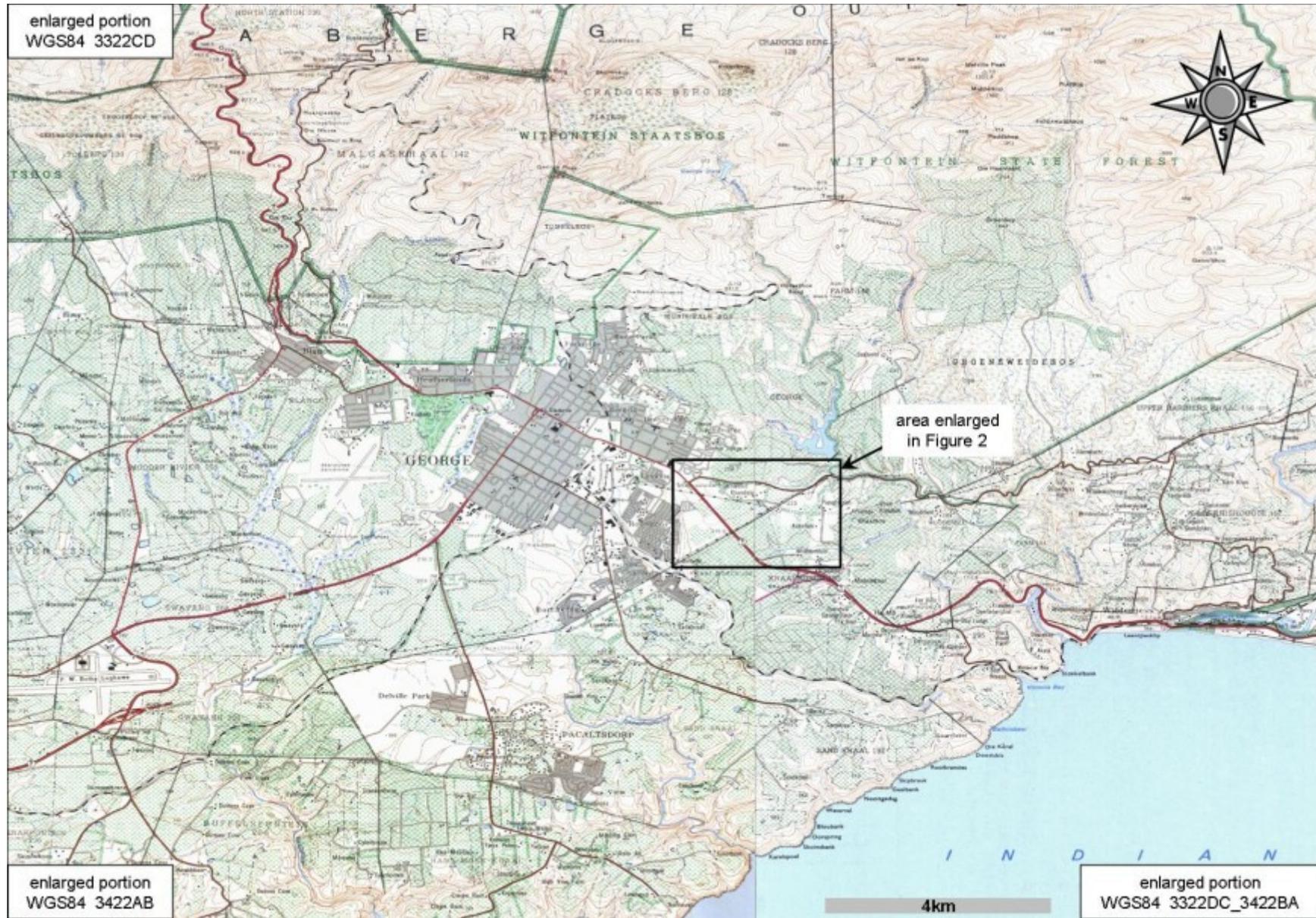


Figure 1. Location of study area south east of George, Western Province. Map courtesy of Chief Directorate Surveys and Mapping (CDSM).



Figure 2. Enlarged area as indicated in Figure 1 showing property boundary in red.



Figure 3. Enlarged area as indicated in Figure 2 showing property boundary (red), features, survey tracks (white) and photo localities in blue (see Tables 1 & 2).



Plate 1. Examples of the environment – topography, vegetation cover and disturbances.



Plate 2. Examples of the environment – topography, vegetation cover and disturbances.