

## APPENDIX 3

# ARCHAEOLOGICAL SPECIALIST STUDY OF THE PROPOSED HOUSING DEVELOPMENT ON ERF 1283, VELDDRIF, WESTERN CAPE

(In terms of Section 38(8) of the NHRA of 1999)

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## EXECUTIVE SUMMARY

ACO Associates were appointed by SRK Consulting (South Africa) (Pty) Ltd to undertake a Heritage Impact Assessment consisting of an archaeological study for the proposed construction of housing on Erf 1283, Noordhoek suburb in Velddrif, Western Cape. The project includes the construction of approximately 1000 residential units, community facilities, internal roads and service supply infrastructure on 69 ha of land.

A Notice of Intent to Develop was submitted to Heritage Western Cape (HWC). They have issued the following Response dated 5 February 2014 (Case Number: 140117T801E): "Since there is reason to believe that heritage resources will be impacted upon, HWC requires an HIA consisting of an archaeological study and palaeontological desktop study with an integrated set of recommendations" (Appendix 1). The desktop palaeontological study is attached to this report (Appendix 2).

This is the Archaeological specialist study and is attached as Appendix 3.

Albatros Road, which runs along the eastern extent of the existing residential suburb of Noordhoek, is separated from the vacant land which will be developed, by a Vibracrete fence. Limitations on the day of fieldwork (6 March 2014) by Drs Webley and Malan, included thick fog at the start of the survey as well as concerns regarding safety especially along the northern section of the property which adjoins an informal settlement.

Notwithstanding the above, ACO is confident that these assumptions and limitations do not compromise the overall findings of this report.

### Archaeological Indicators:

- The literature survey of the available published and unpublished literature for the study area shows that some archaeological sites (stone tools scatters and/or shell middens) have been reported from the Velddrif fossil shell bar which is situated some 650 m to the west of the study area. This particular feature appears to have been a focus for pre-colonial settlement; and
- The survey of the study area failed to identify any archaeological material, whether stone tools or shell scatters.

### Archaeological Mitigation Measures:

While it is improbable that any archaeological remains will be uncovered after the study area has been cleared of vegetation;

- It is possible that below ground archaeological material (such as stone artefacts and/or shell midden material) may be found during large scale excavations for services; and
- It is also possible that pre-colonial graves and/or human remains may be uncovered below the ground surface.

### Conclusions

For this reason it is recommended that the Environmental Control Officer (ECO) should be alerted to the possibility of archaeological remains. He should immediately contact HWC if any archaeology, including human remains, is uncovered.

While there is a graveyard some 450 m to the south-east of the proposed development, it is not threatened by the development.

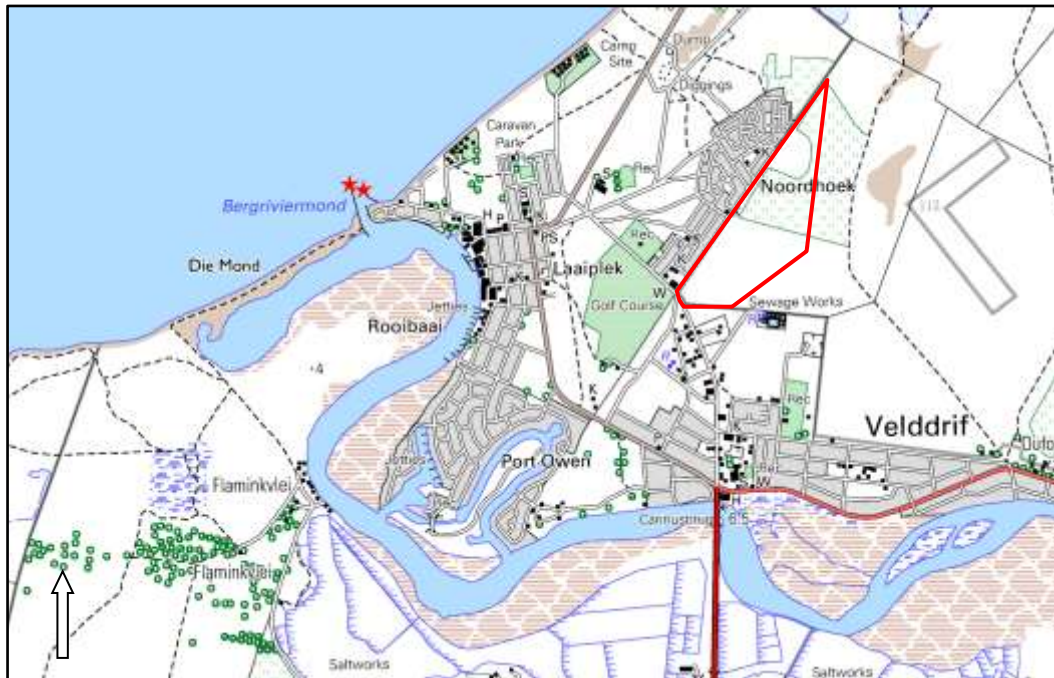
From an archaeological perspective it is recommended that the development be approved.

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## 1. INTRODUCTION

ACO Associates were appointed by SRK Consulting (South Africa) (Pty) Ltd to undertake a specialist archaeological study for the proposed construction of housing on Erf 1283, Noordhoek suburb in Velddrif, Western Cape. The project includes the construction of approximately 1000 residential units, community facilities, internal roads and service supply infrastructure.



**Figure 1:** The 1:50 000 map of 3318 CA&CC Velddrif (Directorate of Surveys & Mapping).

## 2. THE PROPOSAL

The provision of affordable housing at the suburb of Noordhoek in the town of Velddrif forms part of the Bergriver Local Municipality's Human Settlement Plan.

A Basic Assessment (BA) process was recently completed and Environmental Authorisation was granted by the Department of Environmental Affairs and Development Planning for the provision of 107 erven on a 1.5 ha portion of Erf 1283. This development has been designed in such a way that the larger portion can be integrated with its layout. The overall site will be developed in phases. The development of 107 erven is the first phase of development and thereafter subsequent phases of 200 erven in each phase will be developed as required.

The Bergriver Municipality proposes to develop a 69 ha portion of Erf 1283 that could accommodate over 1000 households. The proposed development is located within close proximity to the business centre of Velddrif and is adjacent to the existing Noordhoek residential suburb. The development will be integrated with the existing urban structure of the Noordhoek suburb and will link with the existing main road (Albatros Road) and to the southwest of the Noordhoek suburb (Figure 2).

Erf 1283 will be subdivided and the portion that will be developed will be rezoned from Agriculture 1 to Subdivisional Area. The disturbed footprint will be approximately 69 ha. The proposed development will include residential units with a minimum size of 40 m<sup>2</sup> and on-site parking. The development will also make provision for a neighbourhood centre, primary school, businesses, community facilities and open space. A portion of the development area will also accommodate GAP housing.

New internal roads and service infrastructure will be required. A new water reservoir and WWTW will be required for the future development (excluding the 107 units in Phase 1). This bulk infrastructure is expected to be operational by the time the next phase of 200 houses is ready.

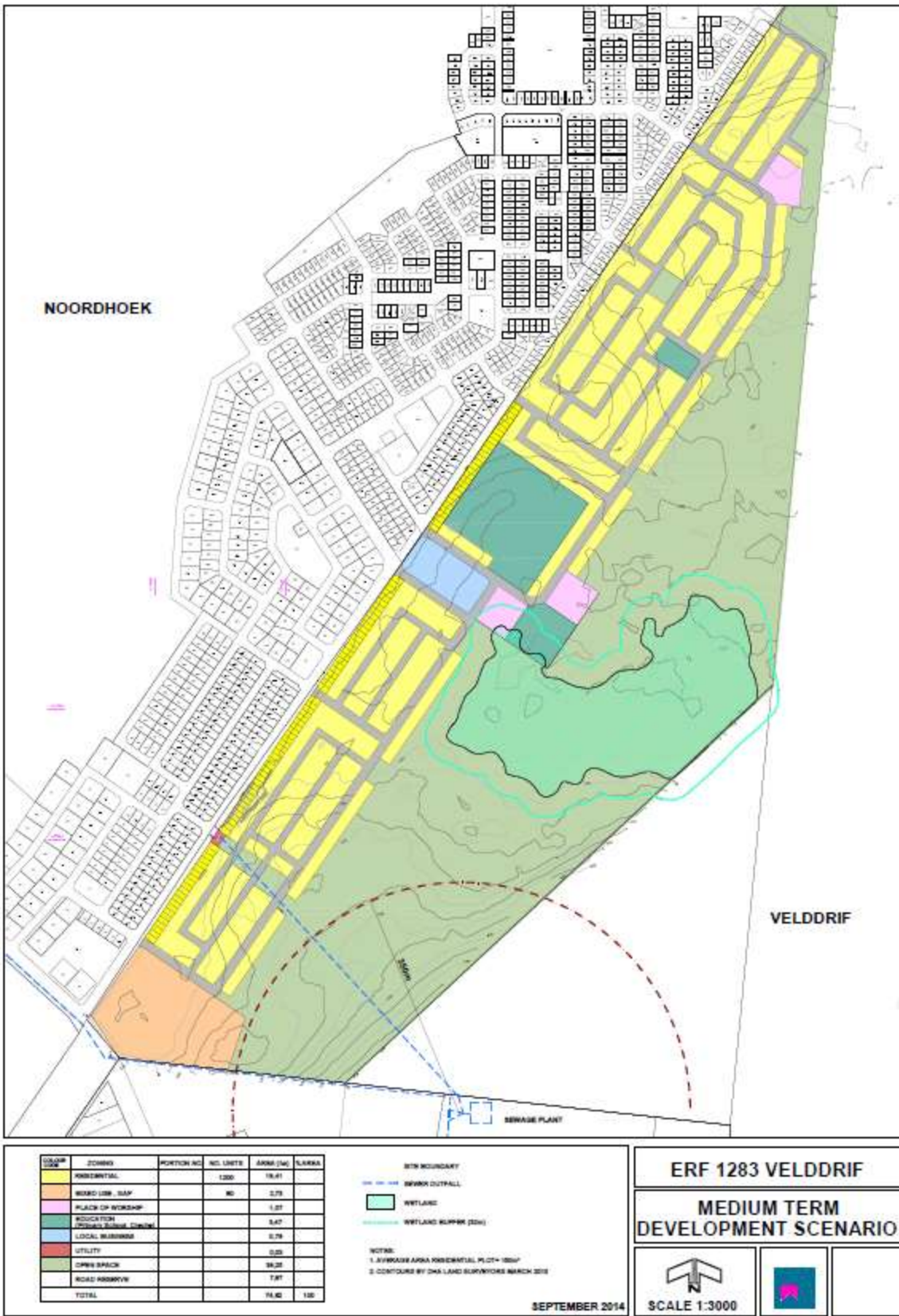


Figure 2: The location of the study area and plan of the proposed development (map supplied by client).

### 3. HERITAGE LEGISLATION

The National Heritage Resources Act (NHRA) No. 25 of 1999 protects a variety of heritage resources including palaeontological, prehistoric and historical material (including ruins) more than 100 years old (section 35), human remains older than 60 years and located outside of a formal cemetery administered by a local authority (section 36) and non-ruined structures older than 60 years (section 34). Landscapes with cultural significance are also protected under the definition of the National Estate (section 3 (3.2d)). Section 38 (2a) states that if there is reason to believe that heritage resources will be affected then an impact assessment report must be submitted. This report fulfils that requirement.

A Notice of Intent to Develop (NID) was sent to Heritage Western Cape (HWC) and they have indicated in their Interim Comment dated 5 February 2014 (Case Number: 140117T801E): "Since there is reason to believe that heritage resources will be impacted upon, HWC requires an HIA consisting of an archaeological study and palaeontological desktop study with an integrated set of recommendations". The desktop palaeontological study is attached to this report as Appendix 2.

### 4. TERMS OF REFERENCE

With respect to the Heritage Assessment the following terms of reference were required:

- Provide a description of the baseline environmental in terms of heritage and archaeology, based on a desktop review of existing information;
- Undertake a fieldtrip to investigate the site (Erf 1283)
- Record all Heritage Sites and features photographically and provide GPS coordinates for all features of interest;
- Identify and map sensitive areas at Erf 1283 as early on in the project as possible;
- Identify, describe and assess the impacts of the proposed development on the Heritage resources in the area, including Stone Age and historical archaeology, the built environment, the cultural landscape and graves and burials;
- Summarise, categorise and rank all identified impacts on heritage resources in appropriate Impact Assessment tables, to be incorporated in the overall EIA. Present the assessment of impacts associated with various alternatives in separate tables where applicable;
- Recommend practicable management measures to mitigate and/or optimise impacts;
- Compile a monitoring plan to monitor impacts, if required;
- Assist the EIA team in responding to any comments received from stakeholders as they relate to heritage impacts;
- Prepare an Integrated Heritage Impact Assessment Report inclusive an Archaeological Impact Assessment and a desktop Palaeontological Impact Assessment;
- Ensure that the report meets the requirements of HWC; and
- Advise on and provide technical input required for the submission of applications to HWC in terms of the National Heritage Resources Act 25 of 1999.

### 5. METHOD

#### 5.1 Literature Survey

A survey of available literature was carried out to assess the general heritage context of the area. A background search of other Cultural Resource Management (CRM) projects in the area was made via the South African Heritage Resources Information Systems (SAHRIS) database. A summary is presented in the background section of the report.

#### 5.2 Field Survey

The polygon of the proposed development was provided to ACO Associates. The site was visited by Dr Lita Webley and Dr Antonia Malan on 6 March 2014. Our tracks were recorded by means of



Garmin GPS devices and are displayed in Figure 4. Digital photographs were taken of the landscape and these were supplemented with street views from Google Earth.

### 5.3 Limitations

On the morning of the field survey on 6 March, the project area was covered in thick mist making visibility and photography difficult. The mist lifted later in the morning after most of the survey had been completed.

The presence of an informal housing development to the north of the existing housing development means that many individuals criss-cross the vacant land on a number of small footpaths. Issues of safety during fieldwork determined the extent of the foot survey. However, it is unlikely that this limitation will have any impact on the results of the survey.

## 6. DESCRIPTION OF AFFECTED ENVIRONMENT

The study area is covered with grass and low bush. Ground visibility is fair. Dune mole rats are active with much of the sandy surface deposits highly disturbed and riddled with burrows. The area bordering the prefabricated fence of Noordhoek is polluted with litter.

There are many footpaths across the property and the vacant land is used for a variety of social activities. There are small hearths and old clothing clustered around bushes, suggesting that individuals or groups may spend time out in the veld.



**Plate 1:** View of the vegetation and the high density of dune mole rate activity looking in a westerly direction. The thick mist impeded general visibility and photographs at the start of the survey.



**Plate 2:** There is a slightly elevated area along the southern section of the property which was covered in more dense waist-high vegetation. View in a south-westerly direction.



**Plate 3:** View of the Vibracrete fence toward the north of the existing suburb of Noordhoek showing rubble which has been dumped on the property.





**Plate 4:** View from a gap in the Vibracrete fence in an easterly direction across the property (Google Earth Street View). At the time of the survey, the view was covered by dense mist.

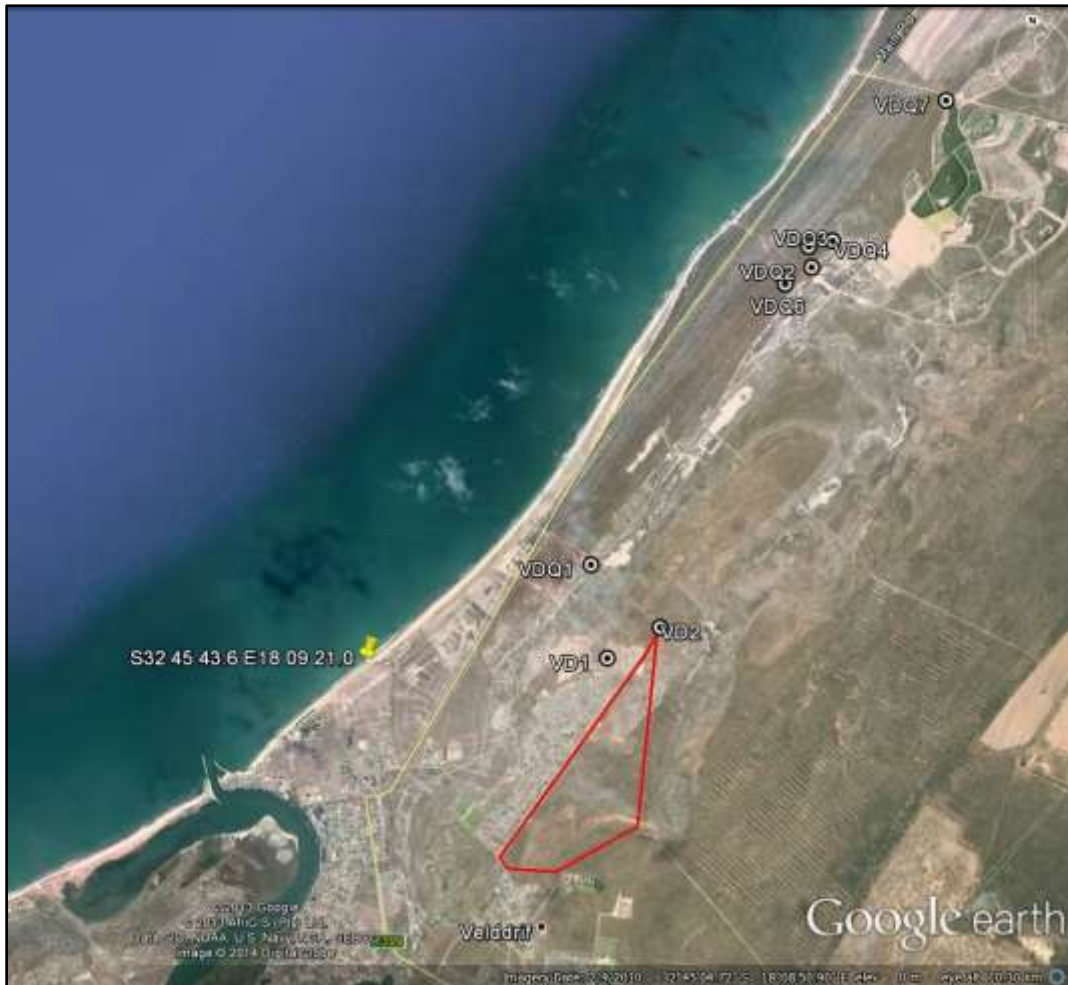
## 6.1 Archaeological Background

A few previous studies have been carried out in the Velddrif-Laaipek area (Ellis 2005; Hart & Halkett 1992; Hart & Miller 1994; Hart & Halkett 1995; Hart & Halkett 2002; Kaplan 2008).

The section of the coastline extending from the mouth of the Berg River in a north-easterly direction towards Dwarskersbos has a complex geological history (Figure 3). It is the result of a combination of Pleistocene fluctuations in sea levels interacting with the mouth of the Berg River. This has resulted in a deposition of a succession of sand and shell bars, the most significant of which is the Velddrif fossil shell bar which extends from just north-east of Laaipek to Dwarskersbos some 10 km up the coast. As there are only one or two surviving examples of this type on the West Coast, the shell bar is considered an important heritage resource. Further discussion regarding this heritage resource falls within the ambit of the palaeontological specialist report and will be discussed in greater detail in Appendix 2. It is mentioned here because of discussions below.

A number of fish traps (visvywers) are located along the south-west section of the coastline around Swartpunt and were recorded and studied by Hart & Halkett (1992).

In 1994, Hart and Miller assessed the significance of the Velddrif fossil shell bar with respect to proposed mining operations. They observed that the shell bar (although of palaeontological interest) appeared to be a significant focus on the landscape which seems to have attracted prehistoric people in the past.



**Figure 3:** Location of archaeological sites on adjoining properties discussed in the text.

At least seven prehistoric shell middens were located on top of the bar (VDQ1-VDQ7). These are indicated on Figure 3. Some of them had already been disturbed by previous mining and agricultural activities. None of the sites contained any ceramic material suggesting that the bar was perhaps the focus of hunter-gatherer activity during the mid-Holocene (between 4000 to 2000 years ago). This period of occupation may have been associated with raised sea levels and a more rocky coastal topography. At least some of the sites were considered to be of high significance and further mitigation, in the form of excavations, was recommended if the development took place.

A survey of the proposed Velddrif Waste Disposal site in 1995, revealed no archaeological material in that locality but recommended mitigation of the potential damage to the shell bar be negotiated with Iziko Museum as per the finding of the 1994 study (Hart & Miller).

In his survey of Erven 478 and 231 Laaiplek, Kaplan (2008) did not identify any archaeological sites.

The Archaeology Contracts Office (2002) conducted a survey of Erf 471 immediately to the north and west of the proposed development at Noordhoek. They located three archaeological sites (Figure 3). They were all positioned on top of a yellow sand bar and included (a) a large, low-density scatter of quartz artefacts which may be of Middle Stone Age origins (VD1); (b) a small Later Stone Age shell midden (VD2) and (c) a small Later Stone Age scatter similar to the previous site (VD3). The latter two LSA sites were badly disturbed by both dune mole activity and mole rats and accorded a low significance status. None of the sites were considered worthy of further mitigation work. Only two of the three sites are shown (VD1 and VD2) on Figure 3, the geographic co-ordinates for VD3 are too inaccurate for use.

## 6.2 Colonial period history

The important fishing and trading village of Laaipek at the mouth of the Berg River (Figure 1) has been briefly discussed in Ellis (2005). The mouth of the river was used as a harbour by free burghers who were settled in the area by the VOC during the 18<sup>th</sup> century. In time the VOC encouraged the free burghers to become farmers by giving out grazing licences and then loan farm (1714). The fishing communities who developed at the Berg River mouth provided fish for a growing agricultural economy in the Sandveld. The first “fishing house” at Laaipek dates back to 1819 and Laaipek became a thriving fishing community. By the end of the 19<sup>th</sup> century the Stephan Brothers had established a monopoly. But the arrival of the railways resulted in a decline in the fortunes of Laaipek which only improved after World War 2 with the establishment of the first fish factory. There are no structures on the property and no evidence that Erf 1283 (which was subdivided from the farm Velddrif 110 in 2006) has any historic significance (L.G. 8690/2006).

## 7. FINDINGS

No pre-colonial archaeological stone tool scatters or archaeological shell middens were identified during the survey.



**Figure 4:** The walk path (in blue) and the outline of the proposed development in red. The orange circle indicates the location of a cemetery.

There are also no buildings or structures on the property and no evidence of historical archaeological remains pointing to earlier historical settlement.

There is a current graveyard located some 450 m to the south-east of the proposed development (Figure 5). It will not be impacted.





**Figure 5:** The graveyard about 400m to the south-east of the proposed development.

## 8. ASSESSMENT OF IMPACTS

The construction of residential development will require that all vegetation is cleared from the property and that the ground surface is levelled prior to construction. A degree of below ground excavation will be necessary to provide the necessary infrastructure such as sewage and foundations for buildings.

The impact to archaeology is likely to be low without mitigation and very low with mitigation and the confidence, with which this is expressed, is high.

**Table 1:** Significance of the potential loss of archaeological heritage

	Extent	Intensity	Duration	Consequence	Probability	Significance	Status	Confidence
Without Mitigation	Local 1	Low 1	3 Irreversible	Low 5	Possible	Low	Negative	High
Essential Mitigation Measures:								
<ul style="list-style-type: none"> <li>If any pre-colonial archaeological material (including stone tool scatters or shell accumulations) or historical archaeological material are uncovered during earth-moving operations, then work should stop in that area and the Environmental Control Officer (ECO) should contact HWC (Tel: 021 483 9598);</li> <li>If any graves or human remains are uncovered during construction, then work should stop in that area and the ECO should contact HWC (Tel: 021 483 9598)</li> </ul>								
Best Practice Mitigation Measures:								
<ul style="list-style-type: none"> <li>Archaeological remains are best left <i>in situ</i>, and conserved for the future. If this is not possible then mitigation in the form of excavation with a permit will be required.</li> </ul>								
With mitigation	Low 1	Local 1	3	Low 5	Improbable	Very Low	Negative	High

## 9. CONCLUSIONS AND RECOMMENDATIONS

The literature survey of the available published and unpublished literature for the study area suggests that some archaeological sites (stone tools scatters and/or shell middens) have been reported from the Velddrif fossil shell bar which is situated some 650 m to the west of the study area. This particular feature appears to have been a focus for pre-colonial settlement.

The survey of the study area failed to identify any archaeological material, whether stone tools or shell scatters.

While it is improbable that any archaeological remains will be uncovered after the study area has been cleared of vegetation, it is possible that below ground archaeological material (such as stone artefacts and/or shell midden material) may be found during large scale excavations for services. It is also possible that pre-colonial graves and/or human remains may be uncovered below the ground surface.

For this reason it is recommended that the ECO should be alerted to the possibility of archaeological remains. He should immediately contact HWC if any archaeological resources are uncovered.

There is a graveyard some 450 m to the south-east of the proposed development. The cemetery is not threatened by the development.

It is recommended that the development can proceed.

## **10. REFERENCES**

- Ellis, R. 2005. Heritage Impact Assessment: Phase 2 Sections 36 & 38(1) & (8):NHRA. Erven 231 and RE 478 Laaiplek, Bergivier Municipality.
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