

**APPENDIX G (ii):**

**ARCHAEOLOGICAL IMPACT ASSESSMENT**

**ARCHAEOLOGICAL IMPACT ASSESSMENT  
PROPOSED CONSTRUCTION OF THE  
KOEKEDOUW DAM PIPELINE  
ERF 1001  
CERES**

Prepared for

**ENVIROAFRICA**

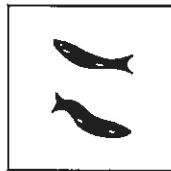
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## EXECUTIVE SUMMARY

EnviroAfrica requested that the Agency for Cultural Resource Management conduct an Archaeological Impact Assessment for the proposed construction of a new 900 mm water pipeline from the Koekedouw Dam in Ceres in the Western Cape. The length of the pipeline is about 560 m long. The existing pipeline is old and a new, larger, water supply pipeline is required in order to meet growing domestic, agricultural and industrial demand.

Three alternatives (A1, A2 and A3) have been assessed.

- Alternative A1: is located alongside the existing tarred, service road and is the preferred alternative.
- Alternative A2: is located alongside the existing pipeline.
- Alternative A3: is located between Alternatives A1 and A2.

The archaeological study entailed an assessment of Alternative A1 and A3 only, as Alternative A2 has been screened out.

The following findings were made:

**Alternative A1:** No archaeological remains were located during the study.

**Alternative A2:** No archaeological remains were located during the study.

The archaeological assessment has identified no impacts to archaeological material that will need to be mitigated prior to proposed construction activities.

The proposed water supply pipeline, including associated infrastructure is suitable for development and neither route is more preferred than the other is.

The project should be allowed to proceed as planned.

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## 1. INTRODUCTION

EnviroAfrica on behalf of the Ceres Koekedouw Management Committee requested that the Agency for Cultural Resource Management conduct an Archaeological Impact Assessment for the proposed construction of a new, 900 mm water pipeline from the existing Koekedouw Dam, near Ceres in the Western Cape.

The New Koekedouw-Ceres Dam was constructed in 1997 to augment the water supply to the Ceres area. The existing pipeline is old and a new, larger, water supply pipeline is required in order to meet the regions growing domestic, agricultural and industrial demand.

The length of the proposed pipeline is about 560 m.

Three alternatives (A1, A2 and A3) have been proposed. These include:

- Alternative A1: located alongside the existing tarred service road and is the preferred alternative.
- Alternative A2: is located alongside the existing pipeline.
- Alternative A3: is located between Alternatives A1 and A2

The archaeological assessment entailed a survey of Alternative A1 and A2, only, as Alternative A2 has been screened out.

The extent of the proposed development (a linear development exceeding more than 300 m in length) 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 sites and remains that may be negatively 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 determine whether there are likely to be any archaeological sites of significance within the proposed and proposed alternative pipeline routes (i.e. A1 and A3);
- to identify and map any sites of archaeological significance within the proposed and proposed alternative pipeline routes;
- to assess the sensitivity and conservation significance of archaeological sites within the proposed and proposed alternative pipeline routes;
- 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 and proposed alternative pipeline routes

### 3. THE STUDY SITE

The Koekedouw-Ceres Dam is situated about 2 kms south west of Ceres (Figure 1).

An aerial photograph of the study area and the proposed layout is illustrated in Figures 2 and 3.

Alternative A1 (the preferred route) is situated alongside the tarred service road and comprises mostly fill and disturbed lands.

Alternative A2 follows the alignment of the existing pipeline which is situated on very steep, west facing slopes. It has been deemed to expensive to build a new pipeline along this route and Alternative A2 has subsequently been screened out.

Alternative A3 is situated between the Koekedouw River and the tar road (Figures 4-15).

The surrounding land-use is Nature Conservation (Ceres Nature Reserve).

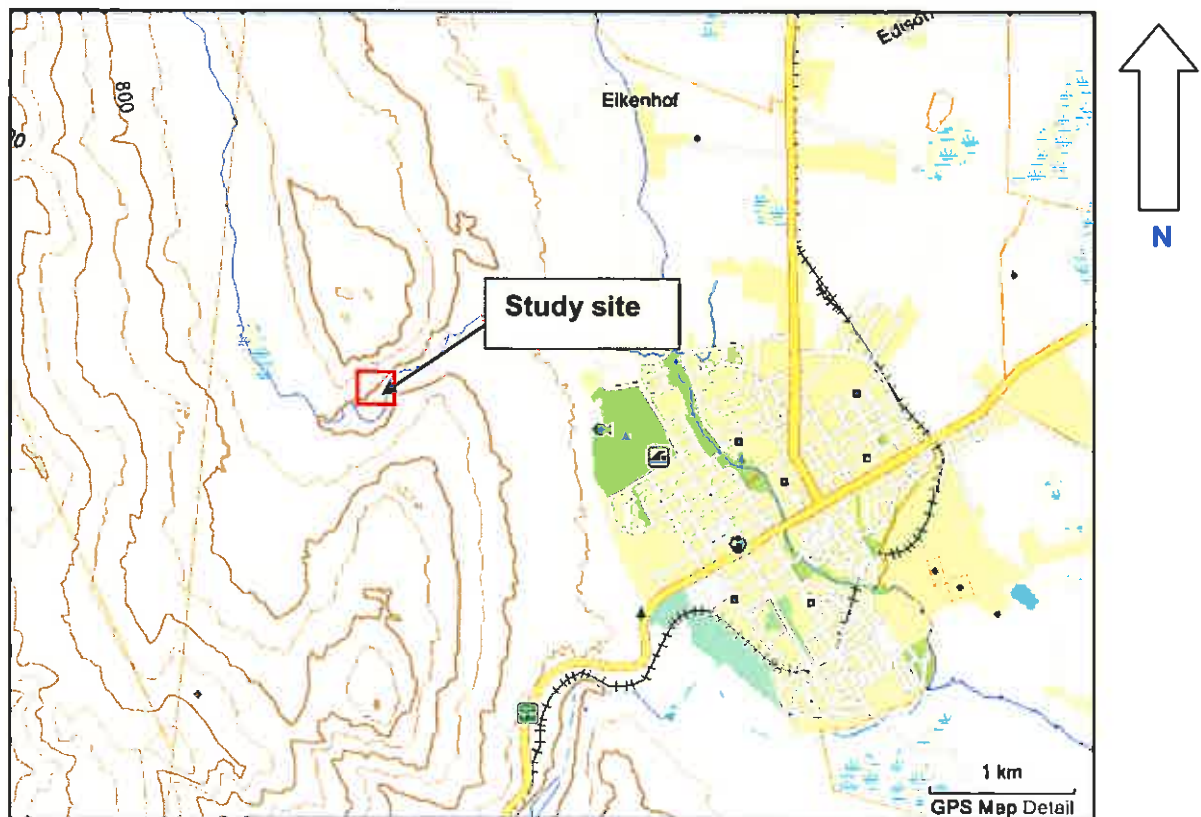
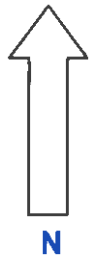


Figure 1. Locality Map



**Figure 2. Study site**



**Figure 3. Proposed layout**





**Figure 4. View of the study site from the dam**



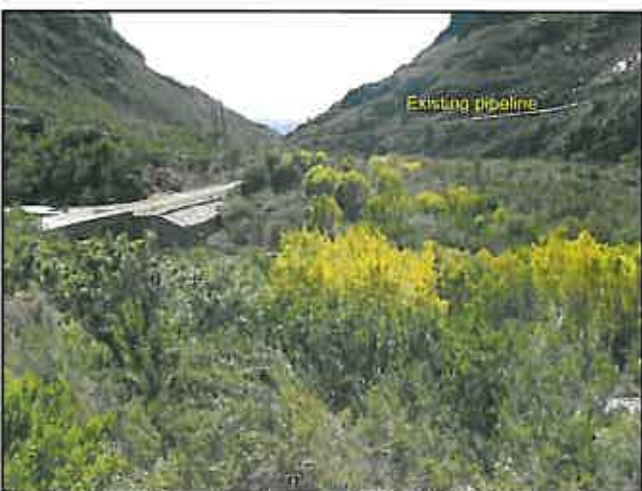
**Figure 7. Alternative A1 and A3 facing south**



**Figure 5. View of the study site facing north**



**Figure 8. Alternative A3 facing north**



**Figure 6. Alternative A1 and A3 facing north**



**Figure 9. Alternative A3 facing north**





**Figure 10. Alternative A1 facing north**



**Figure 13. Alternative A1 facing north**



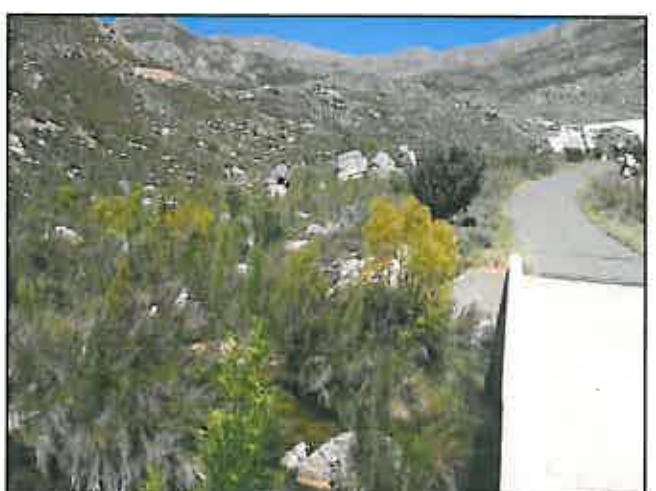
**Figure 11. Alternative A3 facing north**



**Figure 14. Alternative A1 and A3 facing south**



**Figure 12. Alternative A1 and A3 facing north**



**Figure 15. Alternative A1 and A3 facing south**

## **4. STUDY APPROACH**

### **4.1 Method**

The approach followed in the archaeological study entailed a detailed foot survey of Alternative A1 and Alternative A3.

There are several large sandstone outcrops in Alternative A3 and these were searched for rock art sites (Refer to Figure 9).

A GPS track path of the archaeological survey was created, but was inadvertently deleted.

The site visit took place on the 9<sup>th</sup> October, 2009.

### **4.2 Constraints and limitations**

There were no constraints associated with the study. Although much of Alternative A3 is covered in natural veld, it was still possible to search most of the route.

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

Based on the results of the study, there are archaeological risks associated with the proposed project.

### **4.4. Result of the desk top study**

An archaeological study of the proposed construction of the New Koekoedouw-Ceres Dam documented a few Early Stone Age (ESA) artefacts downstream from the dam wall (Kaplan 1996). The river course was also searched during the study, but no rock art sites were found at the time. ESA tools have been found near the Ceres Golf Course and within the urban edge of the town (Kaplan 2007). The Ceres Museum has a small collection of Stone Age material on display, some of which was collected from the surrounding area (Bertdene Laubscher Ceres Museum pers. comm.).

Bushman rock paintings are well known in the Koue Bokkeveld of the Ceres region, particularly those depicting colonial imagery (Yates et al 1993). Several rock painting sites are known to occur in the broken mountains and rocky boulder strewn slopes overlooking Ceres. One such site, in the adjacent Ceres Nature Reserve overlooking the Ceres Caravan Park, is badly vandalised, despite repeated attempts to clean up the graffiti. Painted sites (of human figures and serpents) with Later Stone Age artefacts and pottery were documented in the same hills during a study on behalf of Eskom (Kaplan 2005). Several other painted sites are known to occur near the top of Michell's Pass (Bertdene Laubscher pers. comm. & personal observation).

## **5. RESULTS OF THE SURVEY**

### **5.1 Alternative A1**

No archaeological remains were located during the study.

### **5.2 Alternative A3**

No archaeological remains were located during the study. No rock paintings were found among the sandstone boulders (refer to Figure 9).

## **6. IMPACT STATEMENT**

The impact of the proposed project on archaeological heritage remains is likely to be **low**.

The probability of locating significant archaeological remains during implementation of the project is likely to be improbable.

## **7. CONCLUSION**

The Archaeological Impact Assessment of the proposed construction of a new water pipeline (and associated infrastructure) from the existing Koekedouw Dam, has identified no significant impacts to archaeological material that will need to be mitigated prior to proposed development activities.

The proposed pipeline is suitable for development and neither route is more preferred than the other is.

The project should be allowed to proceed as planned.

## **8. REFERENCES**

Kaplan, J. 2007. Proposed Ceres Golf Estate, Hotel and Housing Development, Ceres. Report prepared for Ninham Shand. Agency for Cultural Resource Management.

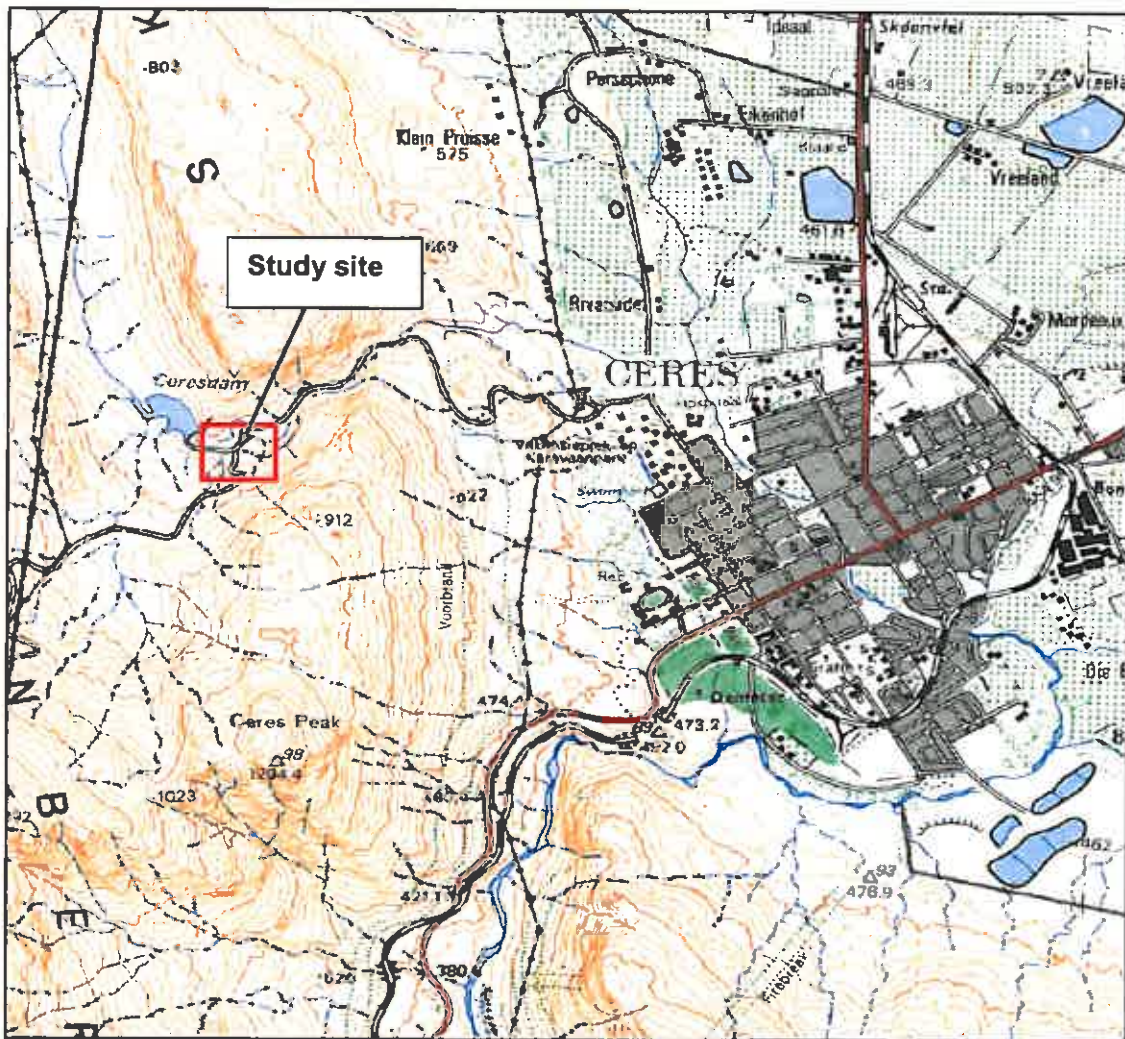
Kaplan, J. 2005. Phase 1 Archaeological Impact Assessment proposed Romansrivier-Ceres 66 Kv powerline refurbishment. Report prepared for Eskom. Agency for Cultural Resource Management.

Kaplan, J. 1995. Archaeological study new Koekoedouw Dam, Ceres. Report prepared for Steffen Robertson and Kirsten. Agency for Cultural Resource Management

Yates, R., Manhire, A. & Parkington, J. 1993. Colonial era paintings in the rock art of the south-western Cape: some preliminary observations. South African Archaeological Society Goodwin Series 7:59-70.



# Appendix



1:50 000 locality map (3319AD Ceres)