

# ARCHAEOLOGICAL IMPACT ASSESSMENT OF A PROPOSED DAM AND ASSOCIATED INFRASTRUCTURE, ON PORTION 2 OF FARM 489, GROENVLEI, CITRUSDAL

**Magisterial district: Clanwilliam**

Assessment conducted in terms of  
Section 38 (8) of the National Heritage Resources Act (Act 25 of 1999)  
as part of an EIA

Prepared for  
**Holland and Associates**

on behalf of  
**Mouton Citrus (Pty) Ltd**

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Fieldwork and report by

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## **EXECUTIVE SUMMARY**

The Archaeology Contracts Office was requested by Holland and Associates on behalf of Mouton Citrus (Pty) Ltd, to conduct an assessment of a proposed farm dam on Portion 2 of the farm Groenvlei 489, south of the town of Citrusdal in the Clanwilliam Magisterial District. Pipeline routes will cross other portions of land but these are minor interventions. The pipelines will in addition to Portion 2 of Groenvlei 489 also cross the Remainders of Farms 489 and 488.

No heritage remains were observed during the field survey and no impact is therefore likely to result from the proposed activities.

It is recommended that, subject to the approval of Heritage Western Cape, the proposed development be allowed to continue with no further heritage work being required. The following should be noted:

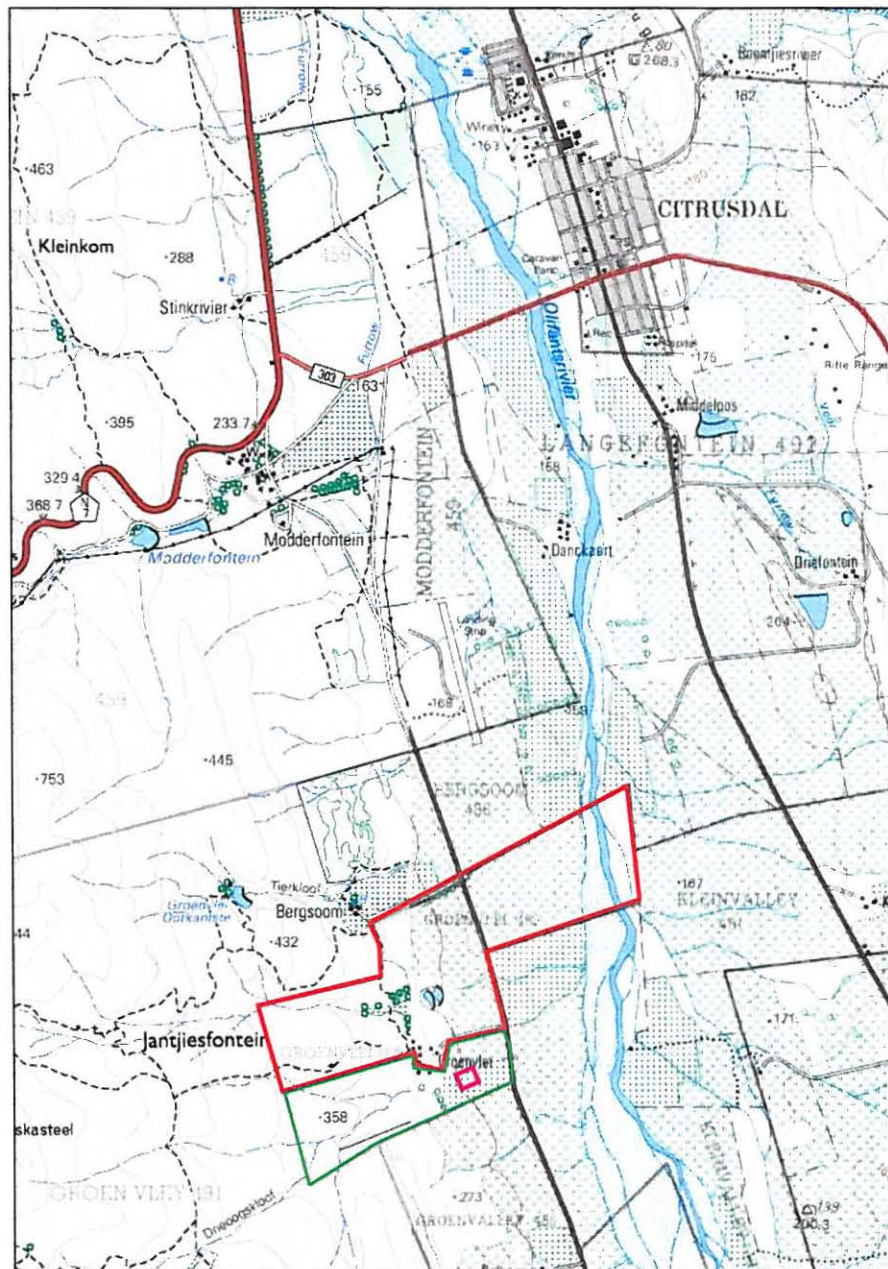
- Some of the proposed activities will be on sandy soil of moderate depth and as such the possibility exists that unmarked human burials could be encountered during excavation work. Construction crew needs to be aware of the possibility and must know what to do if a burial is encountered. The bones should not be moved as this would further disturb the context of the burial. The find should be reported to Heritage Western Cape (021-483 9685) or the South African Heritage Resources Agency (021-4624502) and an archaeologist should be contracted to remove the remains.

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# 1. INTRODUCTION

The Archaeology Contracts Office was requested by Holland and Associates to conduct an assessment of a proposed dam and associated infrastructure such as a spillway and pipeline routes on the farm Groenvlei 489 to the south of the town of Citrusdal in the Clanwilliam Magisterial District (Figure 1). The dam and spillway will be located on Portion 2 of the farm Groenvlei 489 while pipeline routes (to be buried) will in addition also cross the Reminders of Farms 489 and 488. The earth dam will collect water from a stream which runs across the property and pipelines will enable pumping between this dam and an existing off-channel dam elsewhere on the farm, providing irrigation water for existing orchards. The site of another dam on Groenvlei was previously examined by this office (Halkett 2004).



**Figure 1:** Map showing the location of the farm Groenvlei 489 (Ptn 2 - green polygon, Rem of 489 - red polygon). Approximate position of the proposed dam shown by purple rectangle. (Composite map from 3218DB Eendekuil and 3219CA Citrusdal. Mapping information supplied by - Chief Directorate: Surveys and Mapping. Website: w3sli.wcape.gov.za)

## 2. 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 (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(2)(d)).

Since the project is subject to an Environmental Impact Assessment, Section 38(8) of the NHRA applies and Heritage Western Cape (HWC) is required to comment on the proposed project in order to facilitate final decision making by the Department of Environmental Affairs and Development Planning (DEA&DP).

## 3. DESCRIPTION OF THE AFFECTED ENVIRONMENT

The receiving environment is of an agricultural nature, with the dam site lying on previously cultivated land. No rocky outcrops are implicated in the development and the soils are generally sandy consisting of decomposed sandstone. A portion of the site has been used in the past for a smaller earth dam. The proposed new dam is shown in detail in Figure 2 while the positions of the dam and all associated infrastructure and irrigation areas is shown in Figure 3. The accompanying photographs give some indication of the prevailing landscape at the dam site. The pipelines all lie alongside existing farm roads.

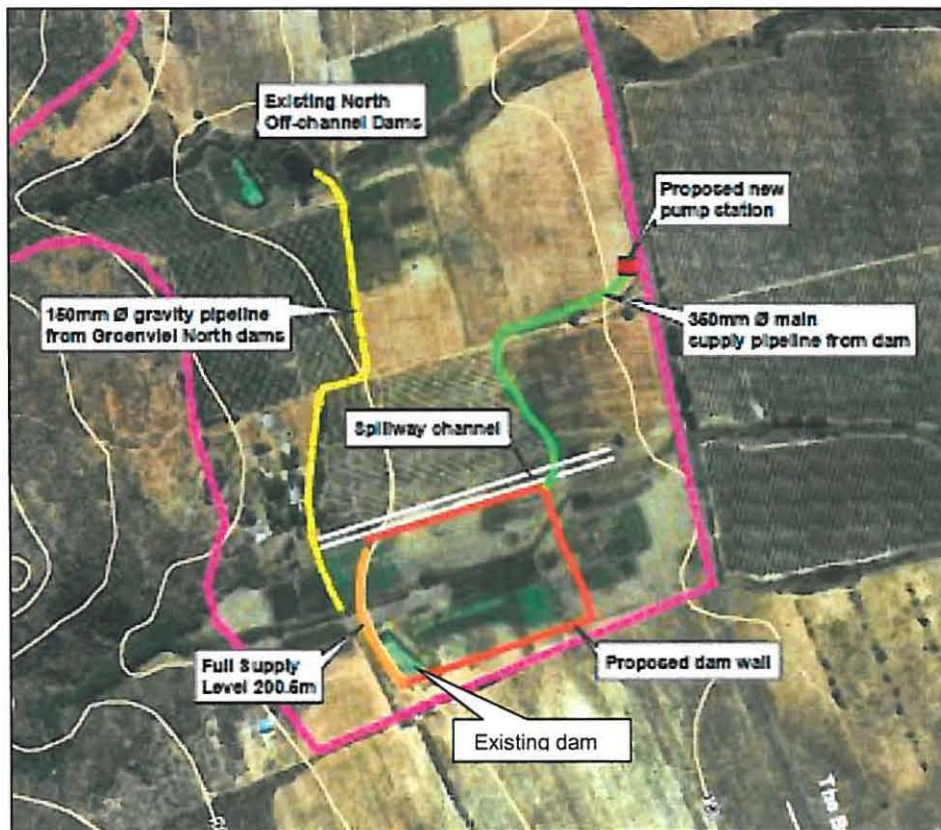
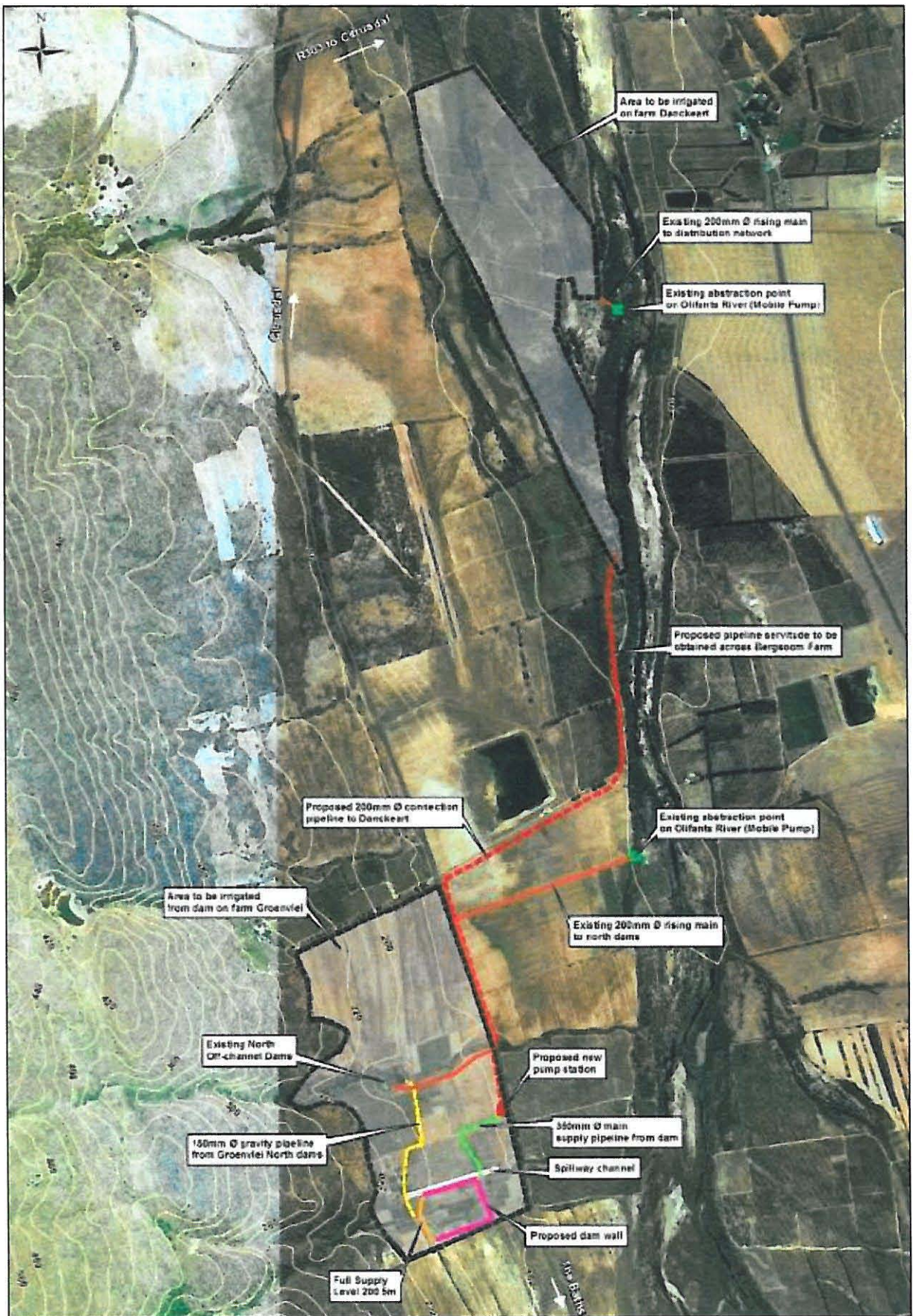


Figure 2: Detail of the proposed dam site and associated infrastructure (drawing supplied by Ninham Shand)



**Figure 3:** Dam and associated infrastructure(drawing supplied by Ninham Shand)



**Figure 4:** Panorama of the proposed dam site (approx wall position marked in yellow)



**Figure 5:** Panorama looking to the north-east with the existing dam visible in the foreground



**Figure 6:** The spillway will run along road at left. The pines mark the approximate middle of the dam



**Figure 7:** The full supply level will be at the 200m contour, marked more or less by the track visible at center



**Figure 8:** The nearest rocky outcrops are some distance from the full supply level of the dam, marked more or less by the track in the foreground

## 4. HERITAGE CONTEXT

The Olifants River Valley is known for the numerous archaeological and historical sites that are to be found there. Some of the oldest artefactual material dating to the Early Stone Age (ESA) could be as old as 500 000 years. This material is often found in river valleys particularly where the ferruginous sub surface layers are exposed by human activity or erosion. Numerous hand axes have been found on the east bank of the Olifants River at the site of the Tienrivieren Dam (Halkett 2004) which is to the south of Groenvlei and at the site



of the Bleskop Dam to the north of Citrusdal (Halkett 2006). These occurrences are relatively common.

Sites dating to the Late Stone Age (LSA) are also relatively abundant. These are much more recent dating for the most part to the last four thousand years or so. They will often be found close to water sources and may be out in the open, although by far the most common are to be found in caves and rockshelters. Rock paintings will often be found in association with the artefactual material. The Cederberg mountains contain many thousands of rock painting sites many of which have still to be discovered and described. Many rock art sites are known at the southern end of the Olifants River valley and a number have been described in the course of preparing heritage impact assessments for example (Koorlandskloof (Halkett 1996), Farm 567/1 (Halkett 1996), Olifants/Doorn Basin Study (Halkett et al 1997), Citrusdal Hot Spring (Halkett 2002)). Many sites were recorded around Citrusdal by the Spatial Archaeology Research Unit at UCT.

## **5. METHODS**

The dam site and pipeline routes were inspected by an archaeologist via a combination of walking and driving on the 19<sup>th</sup> November 2008. The location of the features on the ground were determined from a map supplied by Ninham Shand, the information digitized and loaded onto a GPS for use in the field.

### **1.1 Limitations**

Areas of the surface at the dam site were obscured by thick grassy vegetation and visibility was extremely poor. I was able to examine the bed of an existing dam however and the edges of a stream that bisects the site. Despite the overall lack of surface visibility, observations in the vicinity suggest that this limitation has not affected the overall conclusions of the survey.

## **6. FINDINGS**

### **1.2 Archaeology**

No archaeological sites were located at the proposed dam site, or in proximity to the pipeline route. The dam is not situated on or close to any rocky outcrops and so no rock paintings will be affected. We believe there is only a very low possibility that pre-colonial burials will be encountered during construction or trenching activities. It is entirely possible that ESA implements will be exposed during construction of the dam. We believe that the significance of those implements is generally low due to the fact that they are often in secondary context and not associated with any organic remains.

### **1.3 Cultural landscape**

Although not strictly in the ambit of archaeology, some comment is offered here of the cultural landscape and visual impact.

The cultural landscape is essentially agricultural, with a complex of relatively modern farm buildings to the north west of the dam. Although quite large, it is not believed that the essential character of the site will be altered.

## **1.4 Visual impacts**

Some moderate visual impacts will be associated with this project but are moderated by the fact that the dam is low down (below 200 m contour), and is constructed with earth which will lead to it blending into the surroundings. Part of a line of pines (old windbreak) adjacent to the stream will be lost during the course of construction. The dam is to a large degree in keeping with the traditional land use of the area. Pipelines will be buried and any visual impact related to those would be restricted to the construction phase.

## **7. CONCLUSIONS**

The construction of the proposed pipeline routes and dam will have no tangible impact on heritage. It must be noted that unmarked prehistoric burials can be present almost anywhere where there are sandy soils and there is always a possibility that unmarked burials could be encountered during the trenching or construction.

## **8. RECOMMENDATIONS**

It is recommended that, subject to the approval of Heritage Western Cape, the proposed project be allowed to continue with no further heritage work being required. The following should be noted:

- There is always the chance in sandy substrates that burials could be present, either associated with archaeological sites or elsewhere. It is important that workers on the site are aware of this possibility and that work must be stopped at the site of a burial immediately upon discovery. The bones should not be moved as this would further disturb the context of the burial. The find should be reported to Heritage Western Cape (021 483 9685) or the South African Heritage Resources Agency (021 462 4502) and an archaeologist should be contracted to remove the remains.

## **9. REFERENCES**

Halkett, D. and Hart, T. 1996. Phase one archaeological investigation of Farm 490, Koornlandskloof, Citrusdal. Prepared for Kingston Management (Pty) Ltd. Archaeology Contracts Office, UCT.

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