

**HERITAGE IMPACT ASSESSMENT
PROPOSED CONSTRUCTION OF THE ZAND
RIVIER DAM AND PIPELINE AND CLEARING OF
LAND FOR AGRICULTURE
ROBERTSON**

(PORTION 78 PTN OF PTN 11 OF THE FARM ZAND RIVIER 106)

Assessment conducted under Section 38 (3) of the National Heritage
Resource Act (No. 25 of 1999)

Prepared for:

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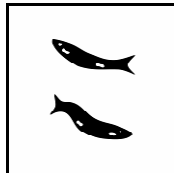
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Executive summary

Pieter Badenhorst Professional Services requested that the Agency for Cultural Resource Management conduct a Heritage Impact Assessment (HIA) for the proposed construction of a small farm dam and pipeline, and the clearing of agricultural land for development, on Portion 78 (Ptn of Ptn 11) of the Farm Zand Rivier No. 106 in Robertson in the Western Cape.

The HIA forms part of the Basic Assessment process that is being conducted by Pieter Badenhorst Professional Services.

Zand Rivier is a 383 ha farm situated alongside R60 (Robertson-Worcester) about 3 kms west of Robertson on the lower slopes of the Langeberg Mountains. Initially, about 50 ha of natural vegetation had been identified for clearing, but as a result of the specialist botanical assessment, all these areas have now been excluded from the development proposal. Instead, previously worked, old agricultural land, including a large Blue Gum plantation, has been set aside for the production of export fruit. Thus, apart from a small dam (less than 2.0 ha in extent), no natural vegetation will be cleared from the property. The proposed 2 km long pipeline will be laid alongside an existing gravel farm road. Most of the pipeline will be buried underground.

The affected landholdings are already zoned for Agriculture, but have not been utilised for agriculture for many years. The previous owner of the farm used the land for planting Lucerne (for grazing), cattle, almond trees, vineyards and thoroughbred horses. Historically, the land was used for marginal wheat. It is mostly these old agricultural lands that will be utilized for the new development.

A Notification of Intent to Develop (NID) was completed by ACRM and submitted to Heritage Western Cape (HWC) for comment. In a letter dated 25 April, 2012 (Case No. 120416JL04), HWC requested that a HIA, consisting of an archaeological, study must be done.

A one day field study was undertaken by J Kaplan in April in which, the following observations were made:

Three Middle Stone Age flakes and two Early Stone Age implements were located during the study. The very small numbers mean that the archaeological remains are rated as having low (Grade 3C) significance.

It is clear that the proposed development will not have an impact on the archaeological heritage.

The following recommendations are made:

1. No further archaeological mitigation is required.
2. If any unmarked human remains are uncovered or exposed during earthworks, these must immediately be reported to the archaeologist (J Kaplan 082 321 0172), or Heritage Western Cape (J. Lavin 021 483 9543).

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1. INTRODUCTION

Pieter Badenhorst Professional Services on behalf of the Stenslunde Family Trust requested that the Agency for Cultural Resource Management conduct a Heritage Impact Assessment (HIA) for the proposed construction of a small farm dam and pipeline, and the clearing of agricultural land for development on Portion 78 (Ptn of Ptn 11) of the Farm Zand Rivier No. 106 in Robertson in the Western Cape (Figure 1).

The HIA forms part of the Basic Assessment process that is being conducted by Pieter Badenhorst Professional Services

Zand Rivier is a 383 ha farm situated alongside R60 (Robertson-Worcester) about 3 kms west of Robertson on the lower slopes of the Langeberg Mountains. Initially, about 50 ha of natural vegetation had been identified for clearing, but as a result of the specialist botanical assessment (McDonald 2012), all these areas have now been excluded from the development proposal. Instead, only previously worked, old agricultural land, including a large Blue Gum plantation, has been set aside for the production of export fruit. Thus, apart from a small dam (less than 2.0 ha in extent), no natural vegetation will be cleared from the property. The proposed 2 km long pipeline will be laid alongside an existing gravel farm road. Most of the pipeline will be buried underground.

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2. HERITAGE LEGISLATION

The National Heritage Resources Act (Act No. 25 of 1999) makes provision for a compulsory Heritage Impact Assessment (HIA) when an area exceeding 5000 m² is being developed. This is to determine if the area contains heritage sites and to take the necessary steps to ensure that they are not damaged or destroyed during development

Section 38 (1) (a) of the Act specifically indicates that any person constructing a powerline, pipeline or road, or similar linear development or barrier exceeding 300m in length is required to notify the responsible heritage resources authority, who will in turn advise whether an impact assessment report is needed before development can take place

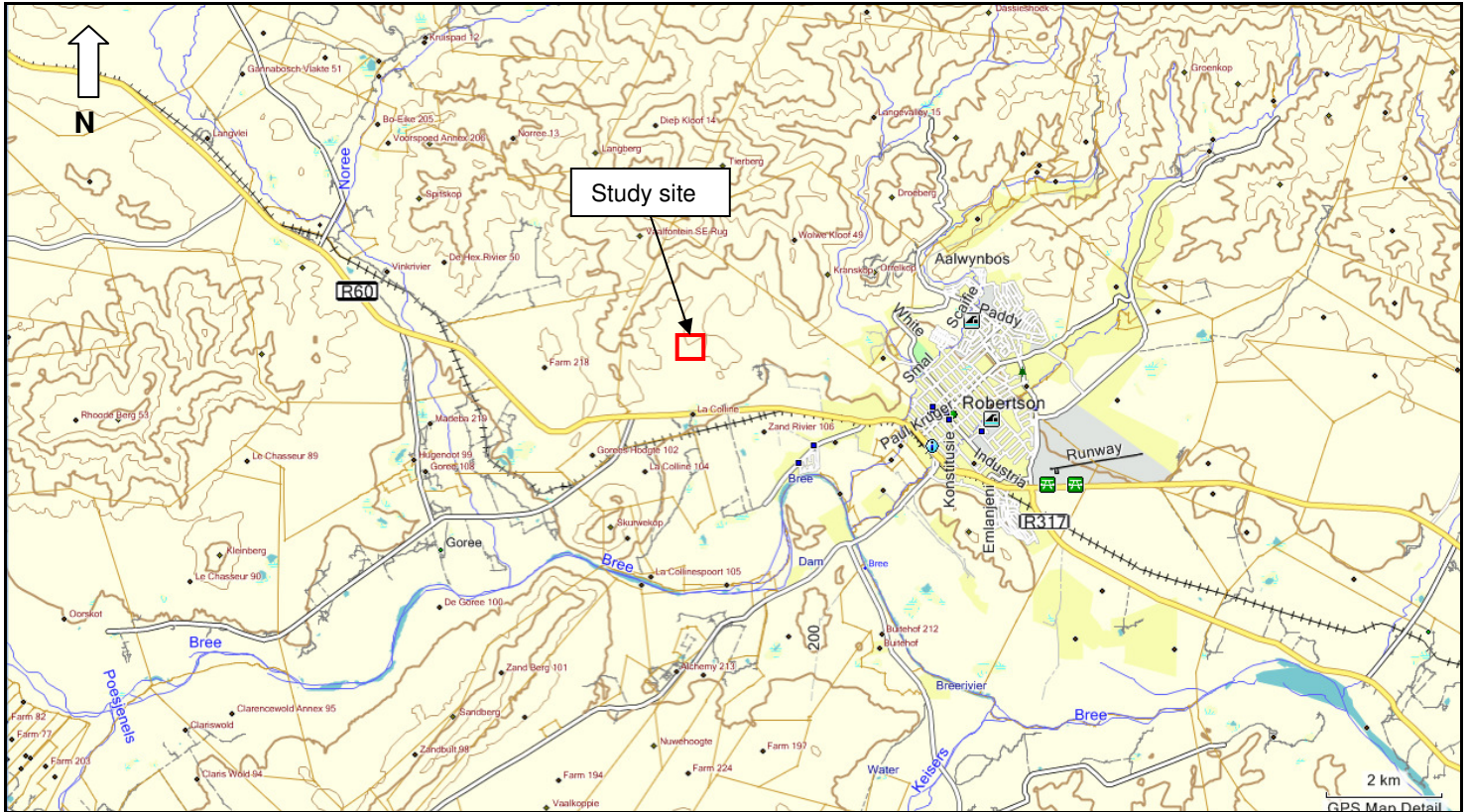


Figure 1. Locality Map

3. TERMS OF REFERENCE

The terms of reference for the archaeological study were:

- To determine whether there are likely to be any important archaeological sites or remains that might be impacted by the proposed development;
- To identify and map archaeological sites/remains that might be impacted by the proposed development;
- To assess the sensitivity and conservation significance of archaeological sites/remains on the proposed site and in the proposed pipeline route;
- To assess the status and significance of any impacts resulting from the proposed development, and
- To identify measures to protect any valuable archaeological sites/remains that may exist within the proposed footprint area.

4. DESCRIPTION OF THE RECEIVING ENVIRONMENT

Zand River is situated about three kms west of Robertson (Figures 2 & 3). The R60 (Robertson-Worcester) runs alongside portion of the farm, but the affected land holdings are situated on lower slopes of the Langeberg Mountain.

For ease of reference the affected landholding have been divided into five portions

Portion A is located on old agricultural lands. The site slopes quite steeply and is mostly covered in a mix of weeds and pioneer vegetation. Some natural vegetation occurs on the steeper higher slopes. The soils are quite shaley. The slopes are heavily sheet washed in places and there are lines of deep erosion gullies cutting through the site in the west. There is an old shooting range below a wooded kloof on one of the land parcels in the north east (Figures 4-7). There is no other infrastructure on the site.

Portion B: The large, mature blue gum plantation is located alongside Portion A (Figures 8 & 9).

Portion C: Portion C comprises old agricultural lands, which are covered in thick pioneer veld on the upper slopes. There is hardly any surface stone on the proposed site. There is a modern farm labourer's cottage situated on the boundary of the property (Figures 10-12). A large pile of felled and burnt Blue Gum trees have been dumped on the site.

Portion D: Portion D comprises old agricultural lands. The sandy soils have been ripped and the upper slopes have also been contoured, and are covered in pioneer vegetation and weeds. There is hardly any surface stone in the surrounding fields (Figures 13-15). There is no infrastructure on the site.

Portion E: Portion E comprises old agricultural lands (onion and Lucerne) which have recently been ploughed and sown (Figure 16). The soils are loose and sandy.

The proposed dam and pipeline will be located in a heavily wooded kloof alongside Portion C (Figures 17 & 18). A dam wall about 120 m long will be built across a small stream and the gravel farm road. There are no kopjes or overhangs that will be impacted by inundation.

The proposed 2 km long pipeline will be laid alongside the gravel farm road and is designed to service Portions A, and B (refer to Figures 18 & 19).

Surrounding land use is extensive vineyard and fruit production, especially alongside the R60 (Figure 20), and Wilderness Area.

Heritage Impact Assessment proposed agricultural development on Zand Rivier Farm No. 106 near Robertson

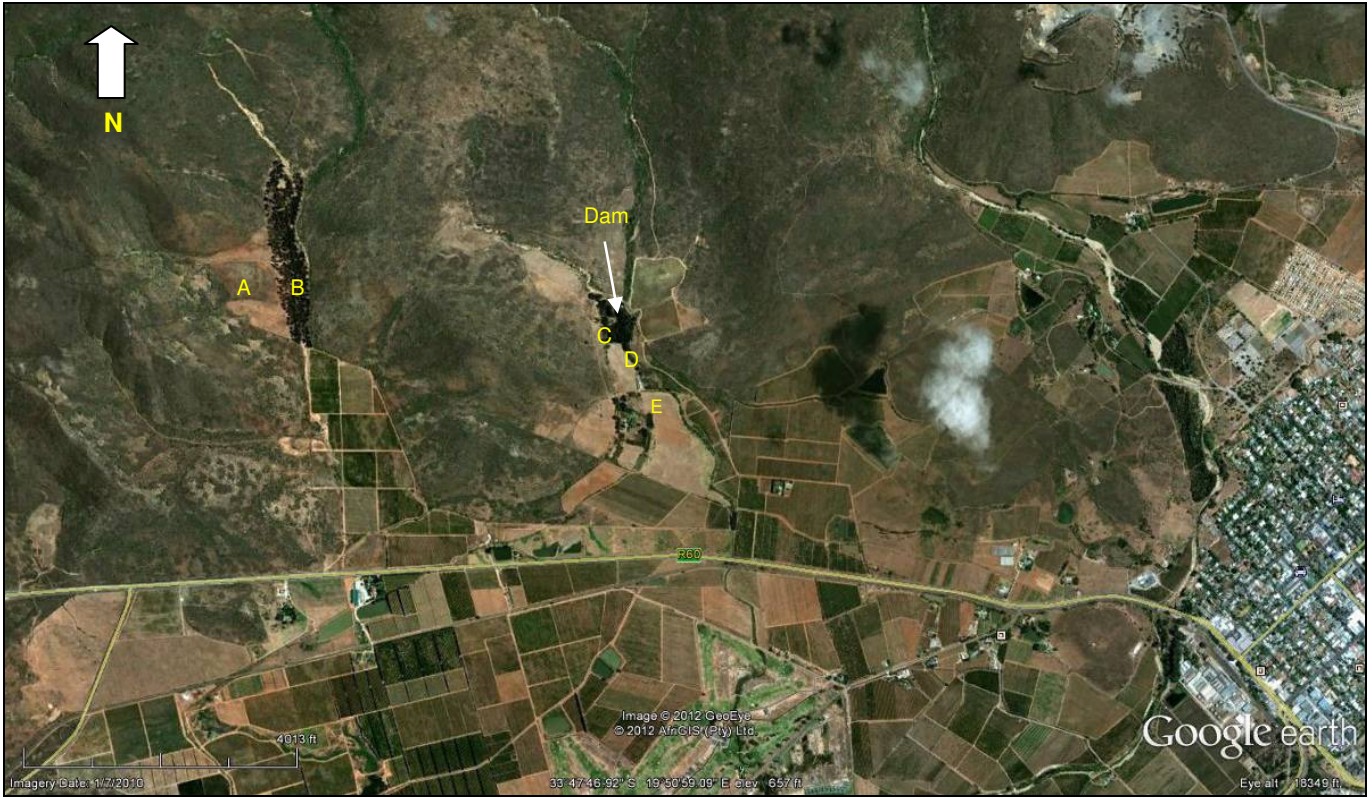


Figure 2. Aerial photograph of the study site – local context

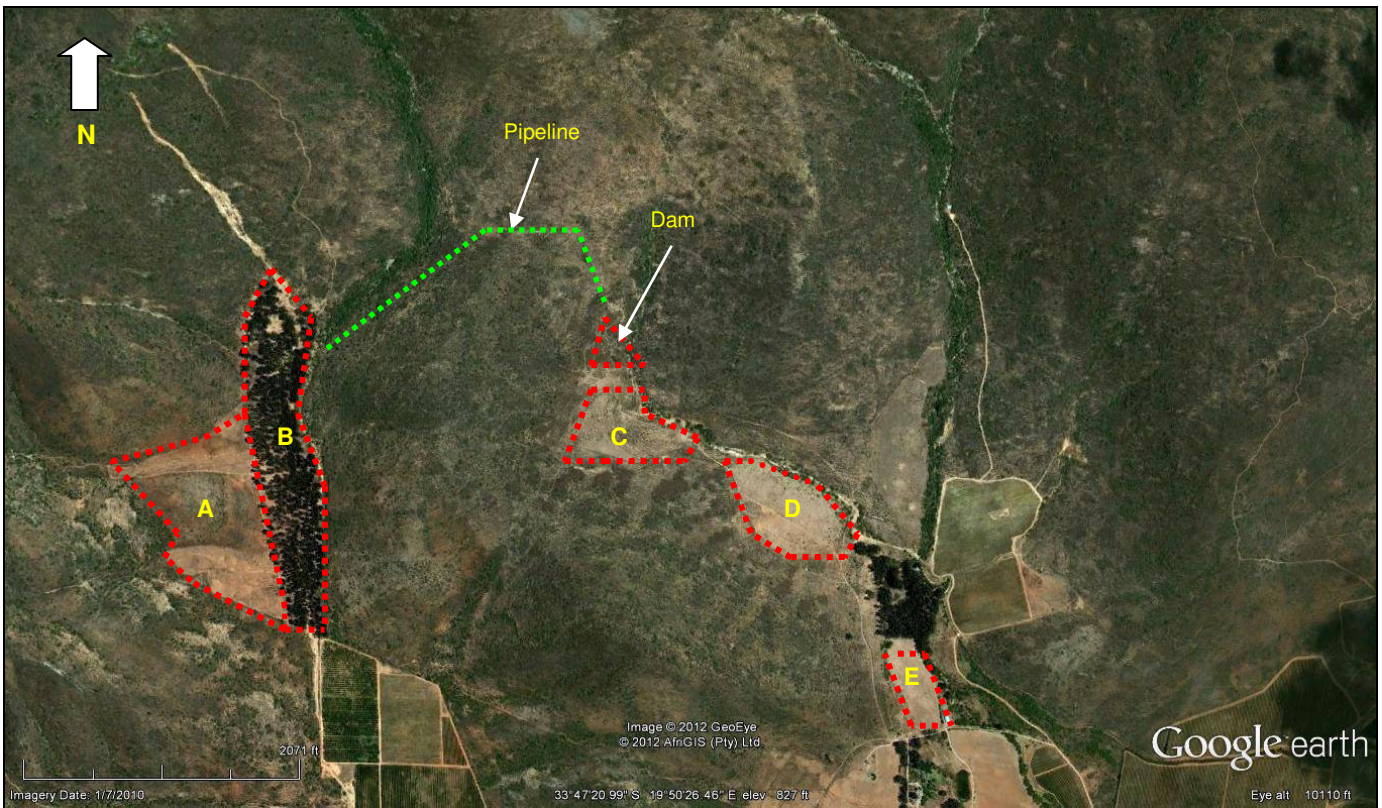


Figure 3. Close up aerial photograph of the study site indicating the approximate footprint areas for Portions A-E, including the proposed dam and pipeline

Heritage Impact Assessment proposed agricultural development on Zand Rivier Farm No. 106 near Robertson



Figure 4. Portion A view facing south. Note the Blue gums (Portion B)



Figure 5. Portion A view facing south west. Note the Blue gums (Portion B)



Figure 6. Portion A view facing south

Heritage Impact Assessment proposed agricultural development on Zand Rivier Farm No. 106 near Robertson



Figure 7. Portion A view facing north. Arrow indicates the shooting range



Figure 8. Portion B with Portion A in the foreground. View facing south west



Figure 9. Portion B view facing north west

Heritage Impact Assessment proposed agricultural development on Zand Rivier Farm No. 106 near Robertson

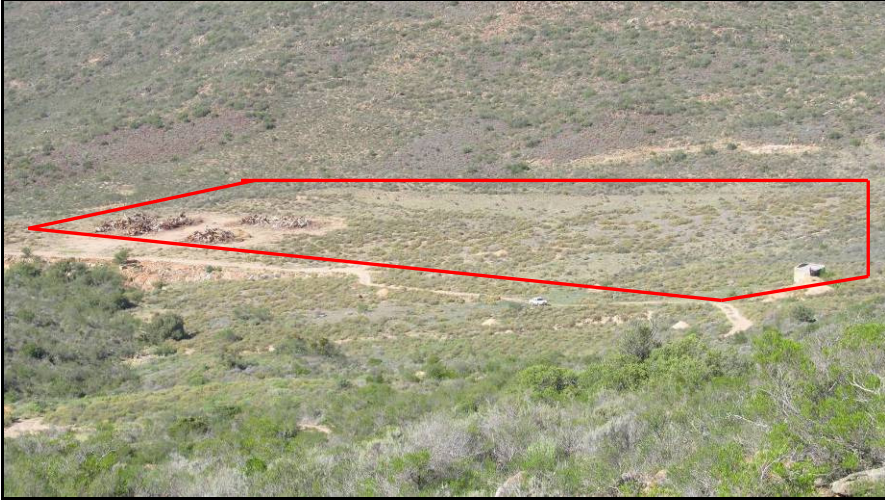


Figure 10. Portion C view facing south west



Figure 11. Portion C view facing south



Figure 12. Portion C view facing south

Heritage Impact Assessment proposed agricultural development on Zand Rivier Farm No. 106 near Robertson



Figure 13. Portion D view facing south west



Figure 14. Portion D view facing south



Figure 15. Portion D. View facing south

Heritage Impact Assessment proposed agricultural development on Zand Rivier Farm No. 106 near Robertson



Figure 16. Portion E view facing south west



Figure 17. Proposed dam site in the foreground view facing south west. Portion C is located in the background.



Figure 18. Proposed dam site view facing north east. The proposed pipeline will follow the alignment of the gravel road in the background



Figure 19. Proposed pipeline route in gravel road to Portions A & B



Figure 20. The remainder of the farm is intensively cultivated. View south toward Robertson

5. STUDY APPROACH

5.1 Method

The approach followed in the archaeological study entailed a controlled foot survey of Portions A-E. A track path of the survey was created (refer to Figure 22). The proposed dam site was not assessed. Archaeological occurrences were plotted *in situ*, using a hand held GPS device, set on the map datum wgs 84. The field study took place on the 19th April, 2011. A desk top study was also done.

5.2 Constraints and limitations

The slopes of the proposed dam site are quite steep and the kloof heavily vegetated, resulting in very poor archaeological visibility. Access was also severely constrained. However, there are a number of deep pits that have been excavated on the proposed

dam site, and these were inspected for archaeological remains. For the remainder of the study, over Portions A-E, archaeological visibility was good.

5.3 Identification of potential risks

There are no archaeological risks associated with the proposed development.

5.4 Results of the desk top study

Early Stone Age tools (ESA) were first recorded during a study for the proposed Silverstrand Golf Course and residential development on the banks of the Breede River near Robertson (Kaplan 2003). ESA and Middle Stone Age (MSA) tools were later documented inside the urban edge of the town (Kaplan 2006, 2007). Large numbers of MSA tools, and a few ESA implements including bifaces were recorded on the farm Klipbos a few kilometres south of the town (Kaplan 2011a). In De Goree about 5 kms north of Robertson, MSA tools have also been found, including ESA bifaces (Kaplan 2010). Relatively large numbers of MSA tools have been documented west of Robertson, on the road to McGregor (Kaplan 2011b). On the R60 between Worcester and Robertson, large numbers of MSA lithics have recently been encountered during an AIA for a large agricultural development alongside the Vinkrivier on the Farm Middelburg (Kaplan 2012a in prep.). A pattern is emerging of MSA sites/remains dominating the landscape in this part of the Western Cape.

6. RESULTS OF THE SURVEY

A possible MSA broken flake/chunk (388) was found in Portion A.

Two MSA flakes (389 & 390) were found in Portion D (Figure 21).

One ESA tractor damaged chunk (391) and one ESA flaked chunk (392) were found in Portion E.

No archaeological remains were found among the spoil dumps alongside the deep test pits in the proposed dam site.

The very small numbers in which the tools were found means that the Zand Rivier archaeological remains have

been rated as having low (Grade 3C) significance.



Figure 21. MSA tools. Scale is in cm

<u>Site</u>	<u>Lat/Long</u>
388	S33 47.381 E19 49.745
389	S33 47.492 E19 50.565
390	S33 47.491 E19 50.573
391	S33 47.735 E19 50.791
392	S33 47.721 E19 50.765

7. IMPACT STATEMENT

It is clear that the proposed development on Zand Rivier 106/78 (Ptn of Ptn 11) will not have an impact on the archaeological heritage.

The affected lands (Portion A-D and the proposed dam site) do not constitute a sensitive archaeological landscape.

8. CONCLUSION

The specialist study has identified no impacts to the archaeological heritage that will need to be mitigated prior to proposed development activities.

9. RECOMMENDATIONS

With regard to the proposed construction of the Zand Rivier dam and pipeline, and the clearing and preparation of agricultural for development, the following recommendations are made:

1. No archaeological mitigation is required.
2. If any unmarked human remains are uncovered or exposed during earthworks, these must immediately be reported to the archaeologist (J Kaplan 082 321 0172), or Heritage Western Cape (J. Lavin 021 483 9543)

10. REFERENCES

Kaplan, J. 2012a in prep. Heritage Impact Assessment proposed cultivation of virgin soil and construction of a dam on Portion 9 of the Farm Middelburg (Vinkrivier) No. 10, with a water pump scheme from the Breede River. Report prepared for Boland Enviro. ACRM

Kaplan, J. 2011a. Heritage Impact Assessment proposed development of agricultural lands on Portion 16 of Farm 112 (Klipbos), Robertson. Report prepared for Boland Enviro. ACRM Cape Town

Kaplan, J. 2011b. Archaeological Impact Assessment proposed development of agricultural land and construction of an off-channel storage dam on Portion 18 of the Farm Uitnoord 129 Robertson. Report prepared for EnviroAfrica. ACRM Cape Town

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Kaplan, J. 2010b. Archaeological Impact Assessment proposed development of agricultural land on Portion 3 and Portion 80 of Farm 125 Wolvendrift, Robertson. Report prepared for Envirodinamik. ACRM Cape Town

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McDonald, D. J. 2012. Botanical Assessment for the proposed new dam and agricultural lands at Zand Rivier Farm, Robertson. Report prepared for Pieter Badenhorst Professional Services. Berg Wind Botanical Surveys and Tours. Cape Town.

Appendix I



Figure 22. Zand Rivier archaeological study. Track paths and archaeological waypoints

