

Case No. 15012612GT0224E

HERITAGE IMPACT ASSESSMENT

PROPOSED DEVELOPMENT OF NEW FIELDS ON PORTION 41 OF FARM 338 KLOPPERBOSCH, WORCESTER, WESTERN CAPE

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

Prepared for:

BOLAND ENVIRO

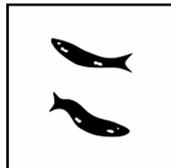
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Executive summary

ACRM was appointed by Boland Enviro to conduct a Heritage Impact Assessment (HIA) for the proposed development of a piece of agricultural land on Portion 41 of Farm 338 Klopperbosch in the Nuy Valley, near Worcester (Breede Valley Municipality) in the Western Cape.

The HIA (a specialist archaeological study) forms part of the Basic Assessment Process that is being undertaken by Boland Enviro. The HIA was requested by Heritage Western Cape (HWC).

The footprint area for the proposed development is about 20 ha in extent and the subject property is already zoned Agriculture I. Initially, three blocks of land were identified for development, but now only a single portion of land has been set aside, while the other two portions have been screened out.

The applicant (Mr Johannes Rabie) intends clearing and preparing the land for the production of citrus and stone fruit.

The proposed development site is located about 15 kms south of Worcester on the R60 to Robertson. Access to the site is via the Nuy Valley Road turnoff. The undeveloped site is located in a relatively flat, open valley, approximately 3 kms east of the Nonna River and about 1.3kms west of the Nuy River. The site slopes from north to south and is covered in thick natural vegetation (Renosterveld Karoo & succulent ground cover) on a gravel and shale substrate. New gravel roads have been graded on the farm, alongside a number of deep soil test pits. A school and gravel sports field also occurs on the property, while an old airplane runway cuts through the middle of the site. Archaeological visibility is quite low due to the dense vegetation cover. No significant landscape features occur on the proposed development site.

A field assessment of the proposed site was undertaken by ACRM on the 1st April 2015, in which the following observations were made:

- 15 stone implements assigned to the Middle Stone Age (MSA) were recorded during the baseline study. The tools, all in locally available quartzite, comprise flakes/broken flakes, broken cores and chunks. No formal tools were found.
- A small hammerstone and three quartzite flakes were located outside the boundary of the proposed development site.

Significance of the archaeological remains

The very small numbers, isolated and disturbed context in which they were found, means that the archaeological remains encountered during the study have been graded as having low (Grade 3 C) significance.

Conclusion

The HIA has shown that the proposed clearing and development of agricultural land on Farm 338/41 Klopperbosch will not impact on any important archaeological heritage. No

evidence of any factory or workshop site, or the result of any human settlement was identified. The tools recorded (flakes, chunks & cores) most likely represent discarded flakes or flake debris. Indications are that, in terms of archaeological heritage, the receiving environment is not a sensitive or threatened landscape.

The impact significance of the proposed development on archaeological resources is assessed as LOW and therefore, there are no objections to the authorization of the proposed development.

Recommendations

1. No further archaeological mitigation is required.
2. In the unlikely event of any unmarked human remains being uncovered during bulk earthworks, these must immediately be reported to the archaeologist (J Kaplan 082 321 0172), or Heritage Western Cape (Guy Thomas 021 483 96 85).

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1. INTRODUCTION

ACRM was appointed by Boland Enviro to conduct a Heritage Impact Assessment (HIA) for the proposed development of a piece of agricultural land on Portion 41 of Farm 338 Klopperbosch in the Nuy Valley, near Worcester (Breede Valley Municipality) in the Western Cape (Figures 1 & 2).

The HIA was requested by Heritage Western Cape (HWC Case No. 15012612GT0224E).

The footprint area for the proposed development is about 20 ha in extent and the subject property is already zoned Agriculture I. Initially, three blocks of land were identified for agricultural development, but now only a single portion of land has been identified, while the other two portions have since been screened out.

The applicant (Mr Johannes Rabie) intends clearing and preparing the land for the production of citrus and stone fruit.

The HIA (a specialist archaeological study) forms part of the Basic Assessment Process that is being undertaken by Boland Enviro.

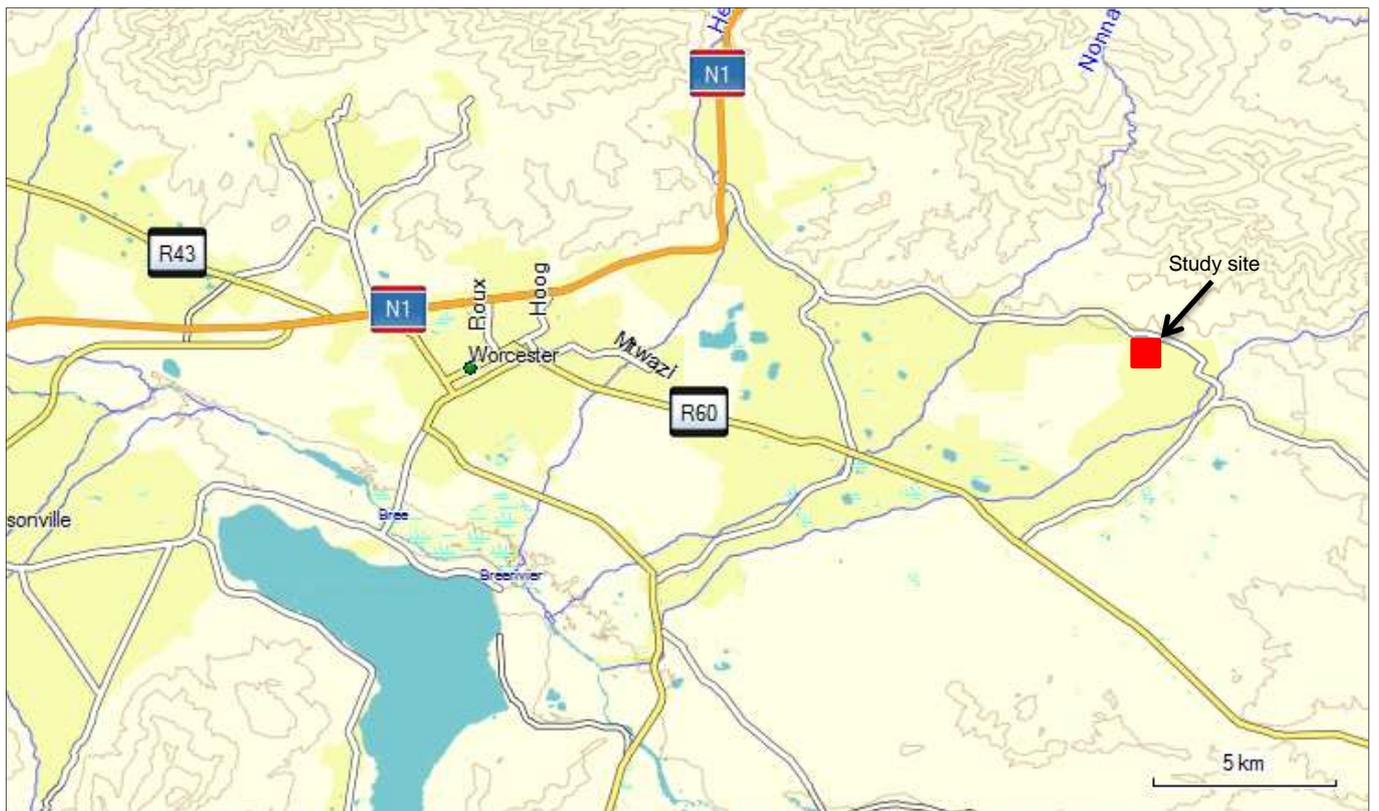


Figure 1. Map indicating the location of the proposed development site in relation to Worcester. Arrow indicates the study site.

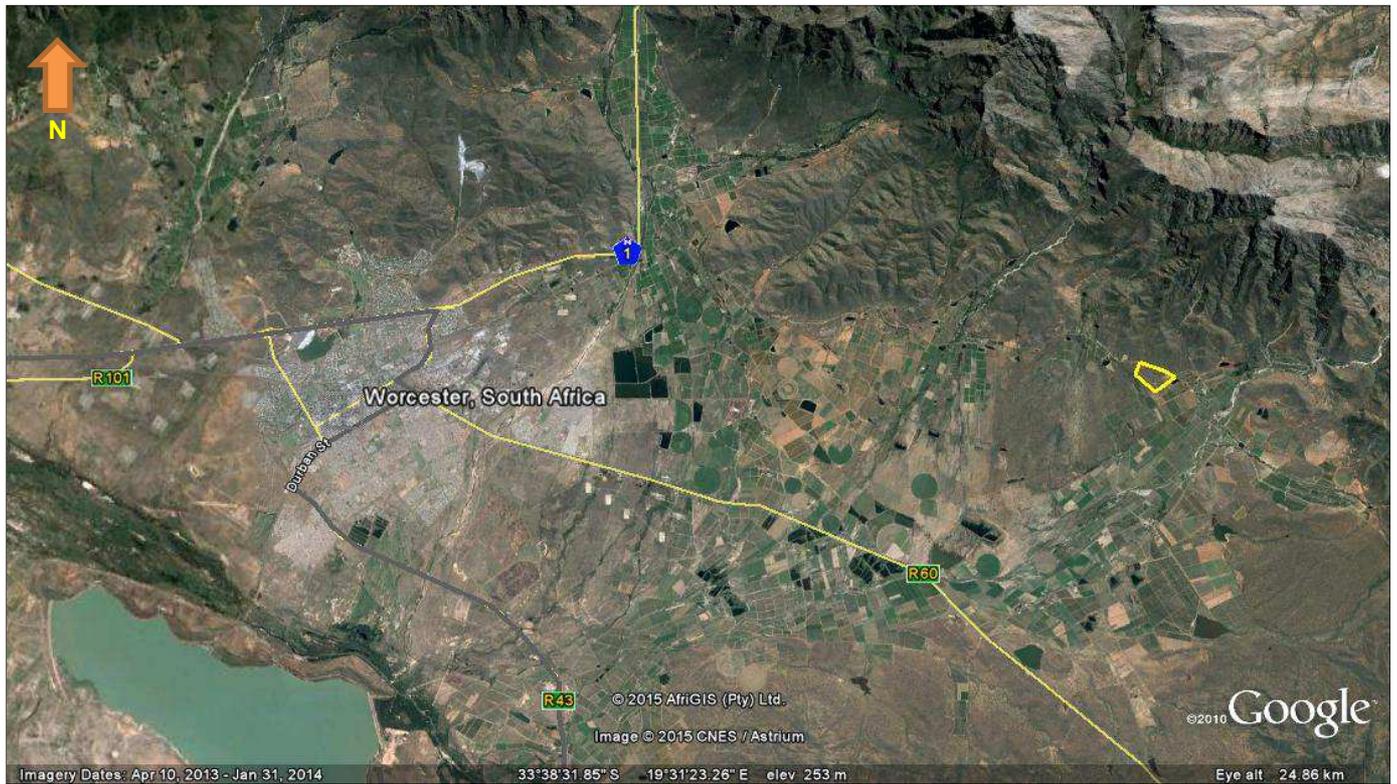


Figure 2. Google aerial map indicating the proposed development site (outlined in yellow).

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.

The NHRA provides protection for the following categories of heritage resources:

- Landscapes, cultural or natural (Section 3 (3))
- Buildings or structures older than 60 years (Section 34);
- Archaeological sites, palaeontological material and meteorites (Section 35);
- Burial grounds and graves (Section 36);
- Public monuments and memorials (Section 37);
- Living heritage (defined in the Act as including cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems and the holistic approach to nature, society and social relationships) (Section 2 (d) (xxi)).

3. DESCRIPTION OF THE RECEIVING ENVIRONMENT

The proposed development site is located on the Farm Klopperbosch, about 15 kms south of Worcester on the R60 to Robertson (Figure 3). Access to the site is via the Nuy Valley Road. The undeveloped site is located in a relatively flat, open valley, approximately 3 kms east of the Nonna River and about 1.3kms west of the Nuy River. The site slopes from north to south and is covered in thick natural vegetation (Renosterveld Karoo & succulent ground cover) on a gravel and shale substrate. New gravel roads (not visible on Google Earth) have been graded alongside a number of deep soil test pits of shale derived clay. A school and gravel sports ground/play area occur in the south eastern corner of the property, while an airplane runway cuts through the middle of the site. An old concrete hanger/shed is also visible alongside the runway. The school and playground will be excluded from the development. The remains of a dam occur alongside the school, while a small stream/drainage line is also evident. Patches of gravel diggings occur over the site. Some dumping also occurs in the north east. Additional infrastructure includes a Telkom, servitude along the eastern boundary of the property, farm fencing, a windmill and a small concrete channel that feeds into a dam behind the school. There are no significant landscape features occurring on the affected site. Overall, the proposed development site is fairly degraded (Figures 3-8).

Surrounding land use and infrastructure is predominantly agriculture-related and includes vineyards and orchards, farm dams, farm workers housing, and farm homesteads on neighboring properties.



Figure 3. The proposed development site (outlined in yellow).



Figure 4. View of the proposed development site facing south



Figure 5. View of the proposed development site facing south west



Figure 6. View of the proposed development site facing south



Figure 7. View of the proposed development site facing south



Figure 8. View of the site facing south east. The school is located in the background of the plate

4. STUDY APPROACH

4.1 Method

The overall purpose of the study is to assess the sensitivity of archaeological resources in the affected area, and to determine potential impacts on such resources.

The significance of archaeological resources was assessed in terms of their content and context. Attributes considered in determining significance include artefact and/or ecofact types, rarity of finds, exceptional items, organic preservation, potential for future research, density of finds and the context in which archaeological traces occur.

The position of identified archaeological occurrences, were fixed by a hand held GPS unit set on the map datum WGS 84.

A track path of the survey was also captured (Figure 9).

The survey of the proposed development site was undertaken by J. Kaplan of ACRM on 01 April, 2015.

A desk top study was also done, which included searching the SAHRIS data base.

4.2 Constraints and limitations

Most of the site is covered in thick natural vegetation, resulting in low archaeological visibility. However, the archaeologist was able to cover a large portion of the site on foot.

4.3 Identification of potential risks

The results of the study indicate that there are no archaeological risks associated with the proposed development.

4.4 Archaeology of the study area

More than 20 archaeological studies have been undertaken by ACRM in the Worcester region, which includes the small towns and farms surrounding Rawsonville, Goudini and Slanghoek (Kaplan 2013, 2012a, b, 2011, 2010a, b, c, d, 2009, 2008a, b, 2006a, b, c, 2005, 2004, 2003, 2002, 2001; Orton 2008). The majority of the archaeological remains encountered during these studies include stone implements such as handaxes, angular flakes and large cores assigned to the Early Stone Age (ESA), mostly recovered from transformed landscapes such as vineyards, grazing lands, wheat fields, river gravels, cuttings, hill slopes, borrow pits and quarries.

Extensive scatters of Middle Stone Age (MSA) tools have also been recorded in the Breede River Valley, and appear to dominate landscapes where little disturbance or development has taken place (Kaplan 2012a, b, 2011).

Later Stone Age (LSA) sites are less visible in the area, but some evidence for this late expression of the Stone Age as been found near Worcester, Goudini and Rawsonville (Kaplan 2012a, 2011, 2010b, 2006d, e). An *in-situ* scatter of microlithic LSA implements that included cores, hammerstones, anvils, flakes and a pecked metal disc were recorded on a farm south west of the R60 (Kaplan 2012a), while indigenous clay pottery found alongside the R60 (Kaplan 2011) possibly confirms the presence of Hassequa Khoekhoe Herders who were known to have seasonally occupied the Worcester area during the late 17th Century (Martin 2006). A possible Khoekhoen herder campsite was also recorded alongside the Modderrivier during a study for a proposed wind energy farm about 3kms south of the Kwaggaskloof Dam (Kaplan 2010d).

Bushmen rock paintings have also been recorded in the Breede River Valley, at Goudini (Kaplan 2003), Quaggaskloof (Yates 2004) and in the Slanghoek Valley (personnel observation).

5. RESULTS OF THE ARCHAEOLOGICAL STUDY

Fifteen stone implements, assigned to the MSA, were recorded during the baseline study (refer to Figure 9 & Table 1).

Most of the finds comprise flakes and/or broken flakes, chunks, a retouched and utilized blade (Site 261), and a broken/worked out silcrete core (Site 248). A cobble hammerstone and three flakes (Site 258) were also found outside the boundary of the application area (Figures 10-13). No formal tools such as points, adzes or scrapers were

found. All of the tools are in locally available quartzite and were found on a substrate of eroded and washed gravels (refer to Figure 13).

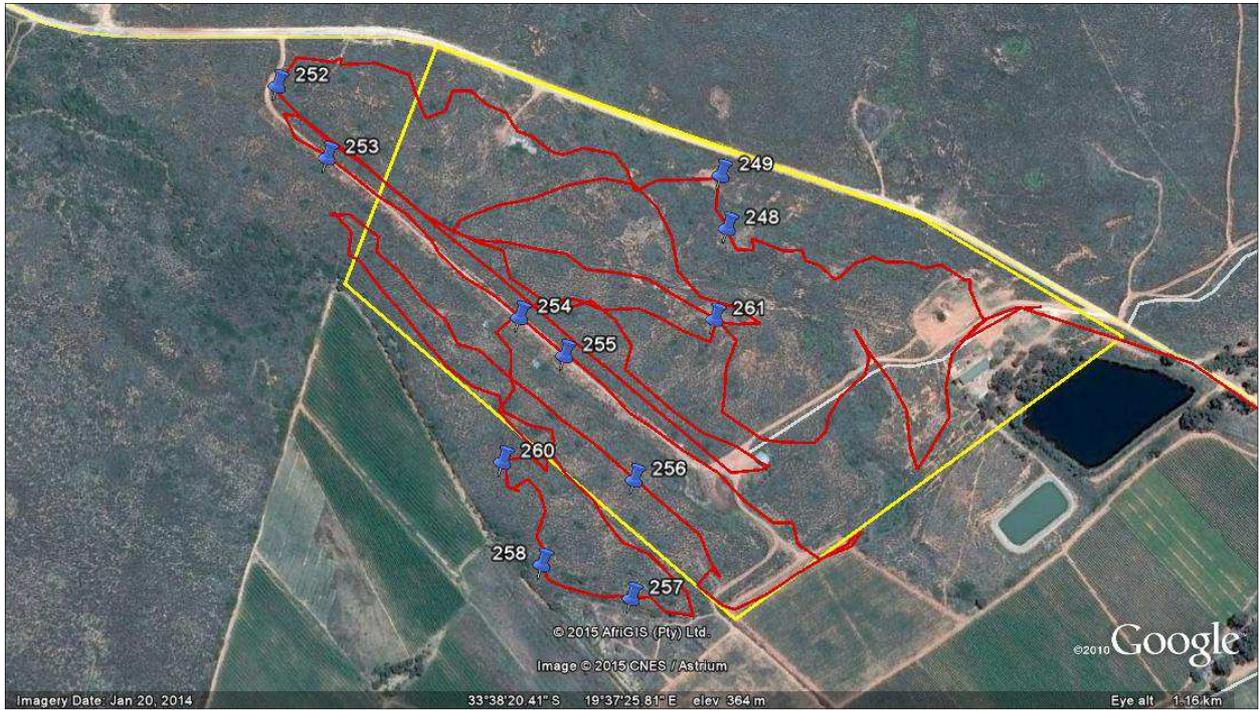


Figure 9. Google aerial photograph of the study site (outlined in yellow) including track paths (in red) and waypoint of archaeological finds

Site	Name of farm	Lat/long	Description	Grading	Suggested mitigation
	Farm 338/41 Klopperbosch				
248		S33 38.266 E19 37.496	Broken silcrete core embedded in gravel road	3C	None required
249		S33 38.235 E19 37.492	X 2 quartzite MSA flake & a chunk on scraped patch in Telkom servitude	3C	None required
252		S33 38.183 E19 37.186	MSA partially retouched quartzite flake in gravel road	3C	None required
253		S33 38.225 E19 37.221	Large chunk/broken flake	3C	None required
254		S33 38.317 E19 37.353	Broken quartzite chunk/flake embedded in gravel road	3C	None required
255		S33 38.339 E19 37.384	Quartzite chunk	3C	None required
256		S33 38.411 E19 37.432	Quartzite partially retouched/utilized flake	3C	None required
257		S33 38.480 E19 37.430	Snapped quartzite flake	3C	None required
258		S33 38.460 E19 37.369	Small hammerstone and two quartzite flakes, one MSA	3C	None required
260		S33 38.401 E19 37.342	Quartzite MSA flake	3C	None required
261		S33 38.318 E19 37.488	MSA quartzite utilized &/or partially retouched blade	3C	None required

Table 1. Spreadsheet of waypoints and description of archaeological finds



Figure 10. Collection of stone tools recorded during the study. Scale is in cm



Figure 11. Collection of tools recorded during the study. Scale is in cm



Figure 12. Site 258. Small hammerstone and 3 quartzite flakes



Figure 13. Context in which the tools were found (Site 249)

5.1 Grading of archaeological resources

The very small numbers, isolated and mostly disturbed context in which they were found, means that the archaeological remains encountered during the study have been graded as having low (Grade 3 C) significance.

6. GRAVES

No visible graves or typical surface grave markers were found in the proposed footprint area.

7. IMPACT STATEMENT

The results of the study indicate that the proposed development of new citrus and stone fruit orchards, on Farm 338/41, near Worcester, will not have an impact of great significance on the archaeological heritage.

8. CONCLUSION

The HIA has shown that the proposed clearing and development of agricultural land on Farm 338/41 Klopperbosch will not impact on any important or significant archaeological heritage.

No evidence of any factory or workshop site, or the result of any human settlement was identified. No organic remains such as bone, pottery, or ostrich eggshell were found. The tools recorded (flakes, chunks & cores) most likely represent discarded flakes or flake debris on eroded and washed surfaces.

Indications are that, in terms of archaeological heritage, the receiving environment is not a sensitive or threatened landscape.

The impact significance of the proposed development on archaeological resources is assessed as LOW and therefore, there are no objections to the authorization of the proposed development.

9. RECOMMENDATIONS

With regard to the proposed clearing, preparation and development of agricultural lands on Portion 41 of Farm 338, Klopperbosch near Worcester the following recommendations are made.

1. No further archaeological mitigation is required.
2. In the unlikely event of any unmarked human remains being uncovered during earthworks, these must immediately be reported to the archaeologist (Jonathan Kaplan 082 321 0172), or Heritage Western Cape (Mr Guy Thomas 021 683 9543).

10. REFERENCES

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