

Case No. 15012613GT0224E

HERITAGE IMPACT ASSESSMENT

PROPOSED CLEARING OF AGRICULTURAL LAND ON PORTION 5 OF FARM 342 (DE NONNA) WORCESTER, WESTERN CAPE

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

Prepared for:

BOLAND ENVIRO

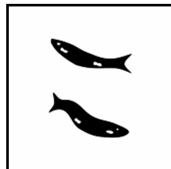
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Executive summary

ACRM was appointed to conduct a Heritage Impact Assessment (HIA) for the proposed development of a 30 ha portion of agricultural land on Portion 5 of Farm 342 (De Nonna), near Worcester in the Western Cape.

The HIA forms part of the Basic Assessment Process that is being done by Boland Enviro.

The HIA (a specialist archaeological study) was requested by Heritage Western Cape, following submission of a Notification of Intent to Develop.

The applicant (Mr Poen Jordaan) intends clearing and preparing the affected land for the production of vineyards.

The subject property is located about 12 kms east of Worcester in the Nuy Valley. The property lies about 1 km east of the Nonna River and 4.5 km west of the Nuy River.

Farm 342/5 comprises a combination of degraded agricultural land (\pm 10 ha) in the northern portion, and a larger wedge (\pm 20 ha) of intact natural vegetation across the southern portion.

Archaeological visibility on the site is low due to dense vegetation cover.

A field assessment of the site was undertaken by ACRM on the 29 May 2015, in which the following observations were made:

- Between 80 and 100 stone tools were encountered during the study, of which more than 99.9% are assigned to the Middle Stone Age. The majority of the tools comprise unmodified flakes and chunks, while a few retouched/utilized tools were also counted. Only two cores were found. No formal tools such as points or scrapers were encountered during the study. All the tools are made in locally available quartzite. A single Later Stone Age indurated shale flake was found. No Early Stone Age tools were found.

Grading of the archaeological remains

The proposed development will cause the permanent loss of archaeological heritage, but overall, the relatively small numbers, disturbed and isolated context in which they were found, means that the remains have been graded as having low (Grade 3 C) significance.

Conclusion

The HIA has captured a good record of the archaeological resources on the proposed site. The study has shown that the clearing of vegetation and preparation of agricultural land will not impact on important or significant archaeological heritage. The density of archaeological remains is very low. The number of cores (n = 2) suggest low incidence of flaking activity. The majority of the tools recorded, most likely represent discarded flakes or flake debris.

Heritage Impact Assessment development of agricultural land on Farm 342/5, near Worcester

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. Should 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 ± 30 ha piece of agricultural land on Portion 5 of Farm 342 De Nonna, near Worcester (Breede Valley Municipality) in the Western Cape (Figures 1 & 2).

The HIA forms part of a Basic Assessment process. The HIA (a specialist archaeological study) was requested by Heritage Western Cape (HWC Case No 15012613GT0224E), following the submission of a Notification of Intent to Develop.

The applicant (Mr Poen Jordaan) intends clearing and preparing the affected land for the production of vineyards.

The subject property is located about 12 kms east of Worcester in the Nuy Valley. The property lies about 1 km east of the Nonna River and 4.5 km west of the Nuy River.

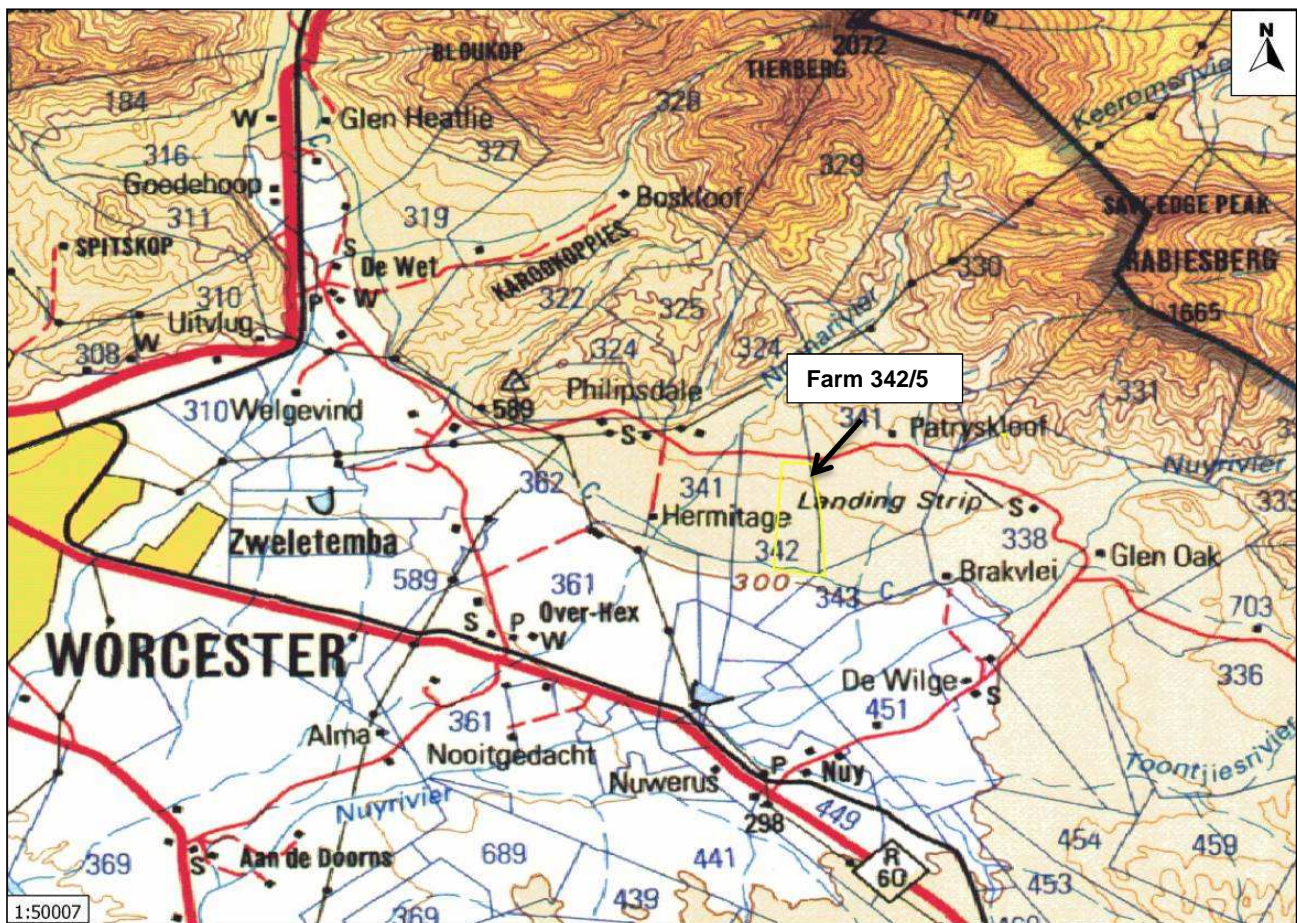


Figure 1. Map indicating the location of the proposed development site (yellow polygon). Arrow indicates the study site. Government topo-cadastral map 3319.

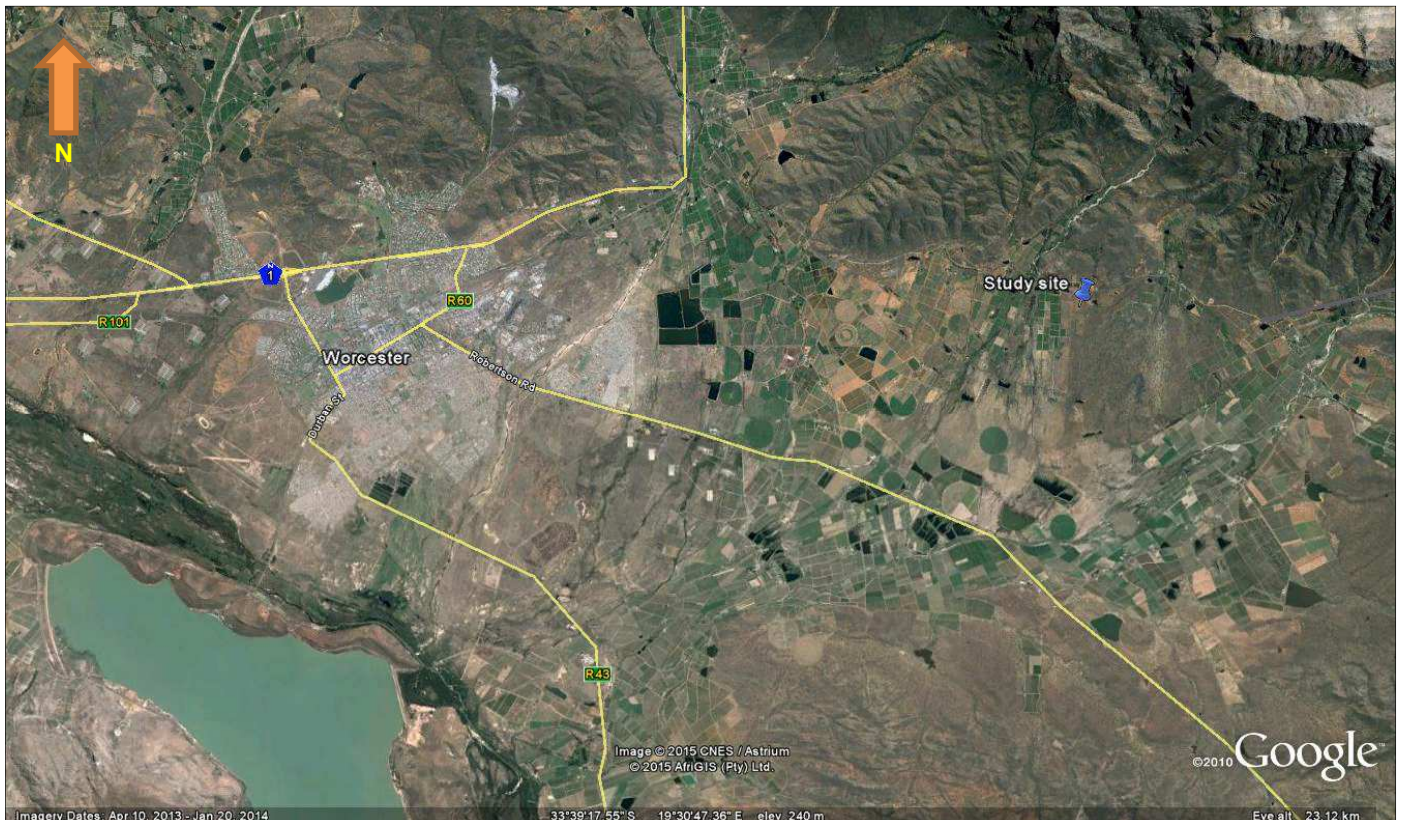


Figure 2. Google aerial map indicating the location of the proposed development site in relation to the town of Worcester.

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 site is located on the Farm De Nonna, about 12 kms east of Worcester in the Nuy Valley (Figure 3). The property lies about 1 km east of the Nonna River and 4.5 km west of the Nuy River. The site is located directly alongside (i. e. south of) the Nuy Road, and is a fairly level strip of land that slopes gently from north to south. It is covered in thick natural veld (thicket, shrubs, succulents & geophytes), on a gravel and silty clay substrate. There is an old dam in the northern portion which the owner intends repairing for the proposed development. There are no drainage lines or any wetland areas within or adjacent to the site. According to the applicant the property was cultivated more than 25 years ago, and has since reverted back to natural vegetation. Large piles of rocks in the south eastern portion of the site appear to confirm this. Gravel roads have been constructed, while numerous small tracks create the impression of the site having been divided into blocks. More than 20 soil test pits have been excavated alongside these small tracks. There are no significant landscape features on the proposed development site. Large degraded areas and a dump site surround the old farm dam. Overall, the proposed development site is already quite disturbed (Figures 4-9).

Surrounding land use and infrastructure is predominantly agriculture-related and includes vineyards, recently cultivated lands, extensive areas of natural veld, farm dams, a school sports field, farm workers housing, and farm homesteads on neighboring properties.

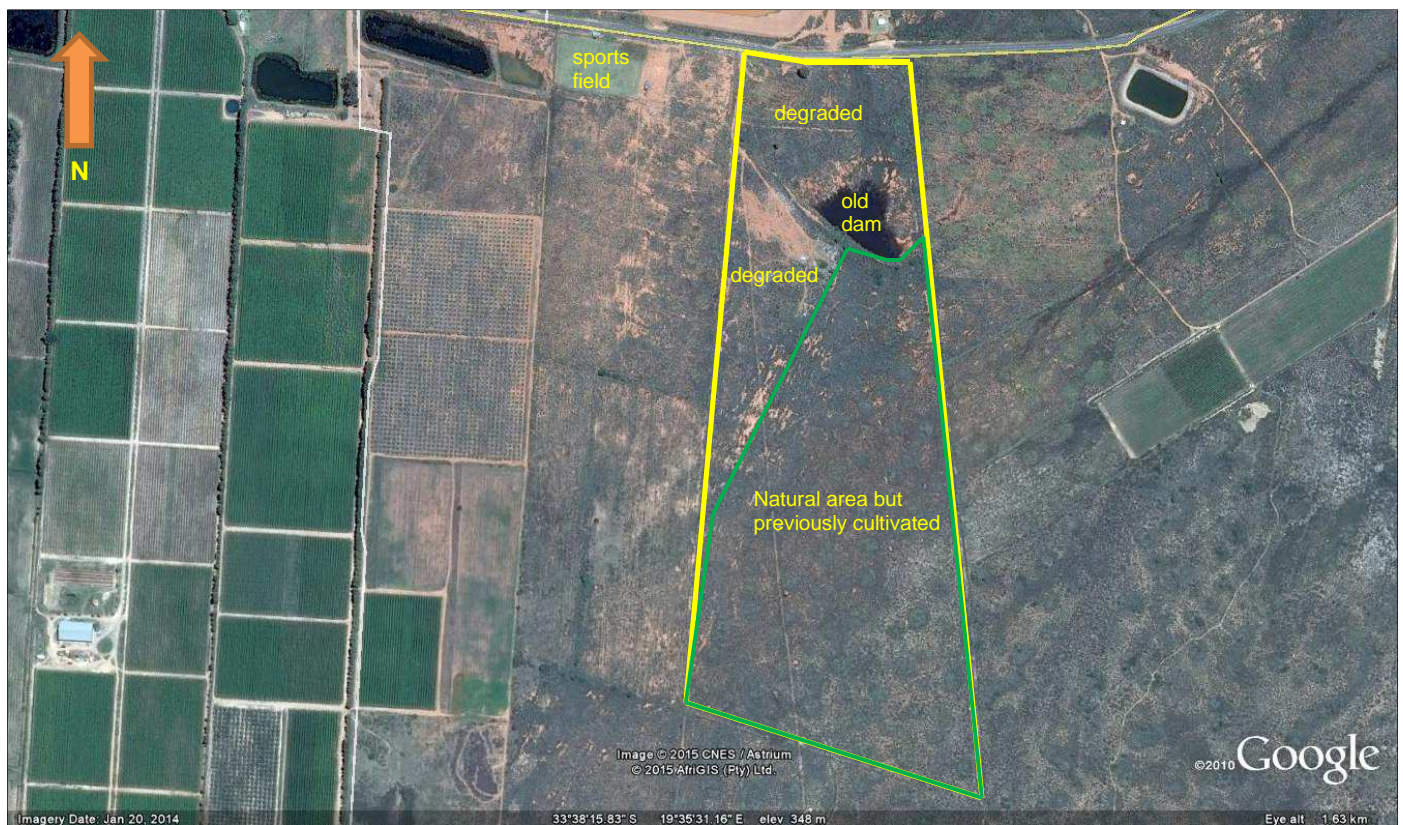


Figure 3. The proposed development site (outlined in yellow).



Figure 4. View of the proposed site facing north west toward the Nuy Road



Figure 5. Degraded area in the northernmost section of the development site. View facing south east. Extensive dumping has taken place here.



Figure 6. View of the proposed site facing south



Figure 7. View of the proposed site facing west.



Figure 8. View of the proposed site facing south west



Figure 9. Natural areas within the development site, looking north towards the dam wall in the distance

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 point plotted using a hand held GPS unit set on the map datum WGS 84.

A track path of the survey was also captured. While the entire property was not assessed due to thick vegetation cover, the results indicate that the density of archaeological heritage across the proposed site is fairly low. Where detected, areas of exposed/eroded surfaces and recent disturbances to surface sediments (e.g. soil test pits) were inspected for archaeological traces.

The survey of the site was undertaken by J. Kaplan of ACRM on 29 May, 2015.

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

4.2 Constraints and limitations

Most of the development site is covered in dense natural vegetation, resulting in low archaeological visibility. Large patches of veld were inaccessible, notably in the south western portion which is covered in thick Gannabos. However, the archaeologist was still able to cover a large portion of the site on foot (refer to track paths in Figure 10).

Previous work undertaken by the archaeologist in the Breede River Valley allowed for an adequate assessment of the overall nature, significance and sensitivity of the archaeological record in the affected environment.

4.3 Identification of potential risks

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

It cannot be ruled out that important Middle Stone Age implements may be uncovered during clearing of agricultural land, but this is likely to be improbable. The study has captured a good record of the archaeological heritage present in the core footprint area, most of which occurs in a disturbed (*ex-situ*) context.

4.4 Archaeology of the study area

More than 20 archaeological studies have been undertaken by ACRM and others in the Worcester region, which includes farms surrounding the smaller satellite towns of Rawsonville, Goudini and Slanghoek (Kaplan 2015a, 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 assigned to the Middle Stone Age (MSA), with much smaller numbers assigned to the Early and Later Stone Age (ESA & LSA). This is a pattern that is repeatedly replicated in the Breede River Valley (Kaplan 2015b).

Later Stone Age (LSA) sites are less visible in the area, but some evidence for this late expression of the Stone Age has 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 pottery alongside the R60 (Kaplan 2011) may confirm 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 has also been recorded alongside the Modderivier south of the Kwaggaskloof Dam (Kaplan 2010d).

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

5. RESULTS OF THE STUDY

Between 80 and 100 stone implements were recorded during the study of Farm 342/5, where more than 99.9% of the tools are assigned to the Middle Stone Age. Only one Later Stone Age, miscellaneous retouched, indurated shale flake (Site 417) was found. No ESA tools were located during the study. Apart from the indurated shale flake, all of the tools are in locally available quartzite.

The majority of remains comprise unmodified flakes (including a few broken/snapped flakes) and chunks (refer to Table 1 in Appendix A). Several miscellaneous retouched/utilized flakes were also found, but no formally retouched tools such as points or scrapers were found. Two well-crafted pointed flakes were found (Site 431), including a possible hollow based, partially modified flake (Site 463). Only two cores were found (Figures 11-14) during the study.

A few highly dispersed scatters of tools were recorded, notably on the large patch of exposed gravel in the northern portion of the subject property (Sites 411 & 413), while a low density scatter of flakes and chunks, including a large flaked chunk was found on a highly eroded patch of gravel alongside an eroded donga near the fence line in the north western portion (Site 428) (Figures 15 & 16).

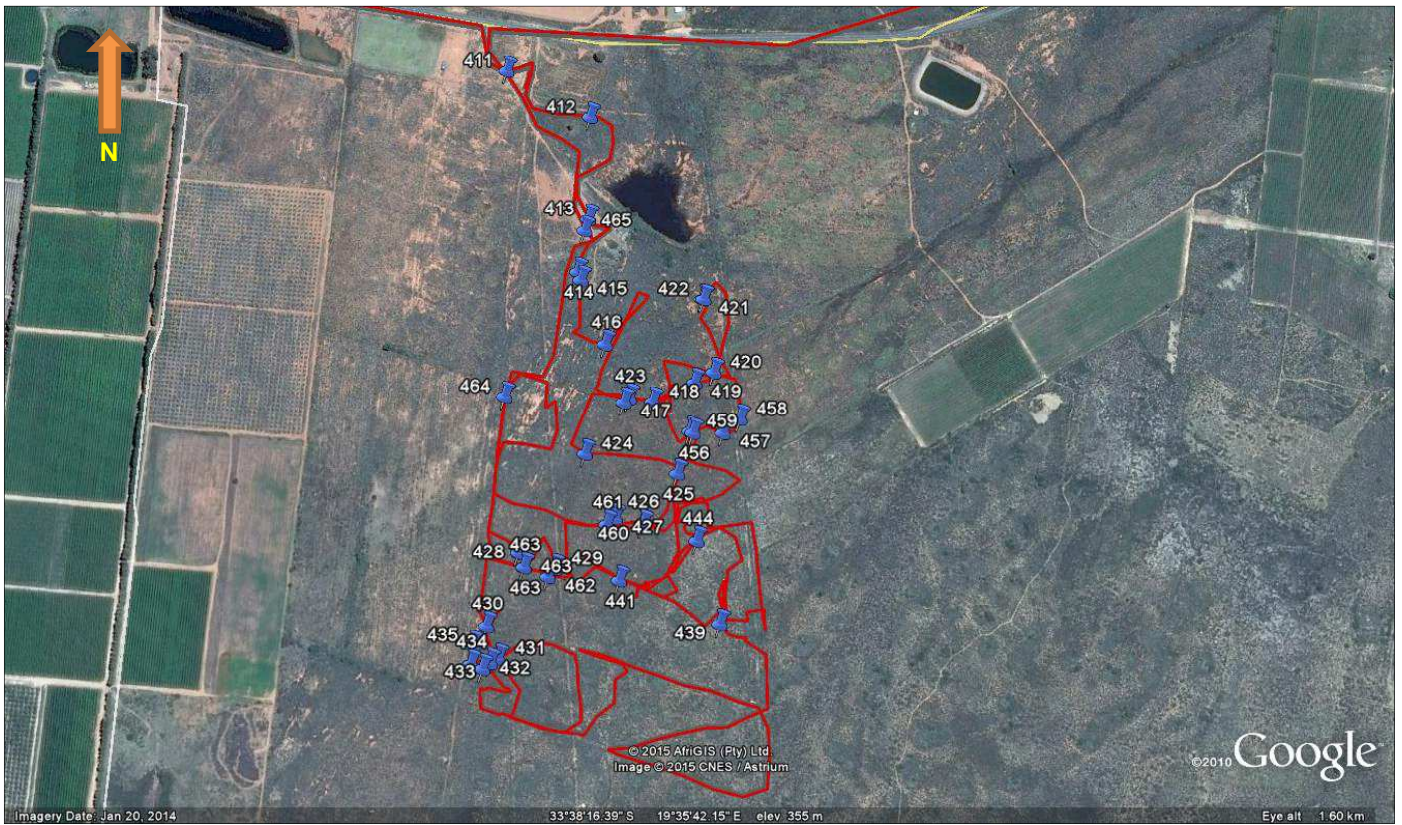


Figure 10. Google aerial photograph of the study site (outlined in yellow) including track paths (in red) and waypoints of archaeological finds



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



Figure 12. Collection of tools documented during the study. Scale is in cm



Figure 13. Collection of tools documented during the study. Scale is in cm



Figure 14. Collection of tools documented during the study. Scale is in cm



Figure 15. Context in which tools were found (Site 428)



Figure 16. Context in which tools were found (Site 411)

5.1 Grading of archaeological resources

The relatively small numbers, and mostly 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.

No evidence of any factory site or human settlement was found, while no formal tools, or any cultural remains such as pottery or ostrich eggshell was encountered.

5.2 Graves

No visible graves or typical surface grave markers were found in the proposed footprint area. Large piles of rocks were found in the heavily vegetated south eastern portion of the site, and while initially thought to be possible farm worker graves (although some of the piles are too large and extensive & no grave goods were noted), according to the applicant (Mr Poen Jordaan pers comm.) and subsequently verified by a farm worker, the piled stone was removed from the surrounding fields when the land was planted out with feed more than 25 years ago.

6. IMPACT STATEMENT

The results of the study indicate that the proposed development of new vineyards on Farm 342/5 (De Nonna), near Worcester, will not have an impact of great significance on the archaeological heritage.

7. CONCLUSION

The HIA has captured a good record of archaeological resources present on the proposed site. The study has shown that clearing and development of agricultural land on Farm 342/5 will not impact on any important or significant archaeological heritage.

Most of the archaeological remains (i. e. stone implements) that were recorded during the study occur below the sandy top soils, on eroded and washed gravels. The density of resources is also very low across the site, although dense vegetation cover did result in low archaeological visibility. The number of cores (n = 2) found, however, suggest low incidence of flaking activity. It is maintained that the majority of the tools recorded (mostly flakes & chunks) therefore, most likely represent discarded flakes or flake debris. No factory site or evidence of human settlement was noted.

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.

8. RECOMMENDATIONS

With regard to the development of agricultural land on Portion 5 of Farm 342 De Nonna, near Worcester, the following recommendations are made.

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

9. REFERENCES

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Appendix A

Spreadsheet of waypoints and description of archaeological remains

Heritage Impact Assessment development of agricultural land on Farm 342/5, near Worcester

Site	Name of farm	Lat/long	Description	Grading	Suggested mitigation
	Farm 342/5 De Nonna				
411		S33 38.024 E19 35.525	A very dispersed scatter of a few MSA quartzite flakes, and chunks on a large disturbed, washed and eroded pebbly gravel patch near the entrance to the farm	3C	None required
412		S33 38.057 E19 35.600	Quartzite chunk	3C	None required
413		S33 38.132 E19 35.601	Several quartzite chunks and flakes on a large scraped patch alongside the dam. Lots of dumping	3C	None required
414		S33 38.171 E19 35.593	Broken MSA quartzite flake, MSA quartzite flake, two chunks of pebble gravel patch.	3C	None required
415		S33 38.177 E19 35.596	Large flaked chunk/flat core and chunk	3C	None required
416		S33 38.223 E19 35.619	Quartzite chunk/tractor damage in road	3C	None required
417		S33 38.265 E19 35.637	Chunky quartzite MSA flake, miscellaneous retouched indurated shale flake/blade on small hummock covered in aloes	3C	None required
418		S33 38.264 E19 35.661	Quartzite MSA flake	3C	None required
419		S33 38.250 E19 35.697	Quartzite MSA flake	3C	None required
420		S33 38.242 E19 35.713	Large quartzite chunk	3C	None required
421		S33 38.189 E19 35.702	2 MSA quartzite MSA flakes, chunk on small quartz pebble patch	3C	None required
423		S33 38.262 E19 35.641	Quartzite chunk	3C	None required
424		S33 38.303 E19 35.605	Chunky quartzite MSA flake	3C	None required
425		S33 38.315 E19 35.684	Quartzite chunk	3C	None required
426		S33 38.351 E19 35.656	Cortex chunk	3C	None required
427		S33 38.348 E19 35.632	Lovely MSA quartzite flake, large utilized flake/chunk on small gravel patch	3C	None required
428		S33 38.374 E19 35.551	Large quartzite chunk, flat/worked out/broken core , MSA flake, alongside small erosion gully and patch of gravel.	3C	None required
429		S33 38.384 E19 35.582	Quartzite chunk	3C	None required
430		S33 38.426 E19 35.526	Very dispersed scatter of a few quartzite chunks, 3 quartzite MSA flakes, and small chunk on larger patch of washed and eroded gravels alongside fence (refer to Figure).	3C	None required
431		S33 38.448 E19 35.537	Nice MSA quartzite flake	3C	None required

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432		S33 38.455 E19 35.524	Round core	3C	None required
433		S33 38.451 E19 35.531	Quartzite chunk & MSA flake	3C	None required
434		S33 38.452 E19 35.514	Large quartzite chunk	3C	None required
435		S33 38.439 E19 35.515	Quartzite chunk	3C	None required
439		S33 38.420 E19 35.724	Quartzite chunk	3C	None required
441		S33 38.391 E19 35.637	Quartzite MSA flake in sandy track	3C	None required
456		S33 38.286 E19 35.697	Quartzite chunk	3C	None required
457		S33 38.285 E19 35.723	MSA quartzite flake	3C	None required
458		S33 38.275 E19 35.737	MSA quartzite flake and chunk in gravel road near fence line	3C	None required
459		S33 38.285 E19 35.694	Quartzite chunk	3C	None required
460		S33 38.352 E19 35.656	Quartzite flake and chunk on small patch of gravel alongside small track	3C	None required
461		S33 38.352 E19 35.625	2 MSA quartzite flakes on gravel patch alongside small track	3C	None required
462		S33 38.390 E19 35.577	Several quartzite MSA flakes on pebble gravel patch alongside track	3C	None required
463		S33 38.384 E19 35.556	Beautiful MSA hollow based pointed quartzite flake	3C	None required
464		S33 38.263 E19 35.534	MSA quartzite flake	3C	None required
465		S33 38.141 E19 35.598	MSA quartzite flake embedded in gravel road	3C	None required

Table 1. Spreadsheet of waypoints and description of archaeological finds