

# **ARCHAEOLOGICAL IMPACT ASSESSMENT**

## **Illegal agricultural development and proposed new vineyard development on the Farm Oorkant, Kakamas North Settlement No 341, near Augrabies, Kai! Garib Municipality, Northern Cape**

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

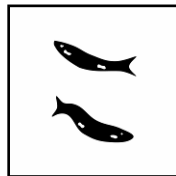
Prepared for:

**GROENBERGENVIRO Pty Ltd**  
PO Box 1058, Wellington, 7654  
E-mail: [Elaniem@iafrica.com](mailto:Elaniem@iafrica.com)

Applicant:

**CAESPAN FARMS Pty Ltd**

By



ACRM

5 Stuart Road, Rondebosch, 7700  
M: 082 321 0172  
E-mail: [acrm@wcaccess.co.za](mailto:acrm@wcaccess.co.za)

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## **Executive summary**

### *1. Introduction*

ACRM was instructed by GroenbergEnviro to conduct an Archaeological Impact Assessment (AIA) for an illegal agricultural development, and a proposed new vineyard development on the farm Oorkant, Kakamas North Settlement 341, near Augrabies, Kail Garib Municipality in the Northern Cape.

The illegal development, established in 2018 without environmental authorisation, comprises raisin drying racks that cover a footprint area of about 5ha. The AIA for this component of the study forms part of a Section 24G Application process.

The proposed new vineyard development will cover a footprint area of about 25ha. Water for the new vineyards will be supplied from a pump station located on the banks of the Gariiep River/Orange. Existing pipelines and farm roads will be used, and no new access roads will need to be constructed.

### *2. Legal requirements*

In terms of Section 38 (1) (c) (iii) of the National Heritage Resources Act 1999 (Act 25 of 1999), a Heritage Impact Assessment (HIA) of the proposed project is required if the footprint area of the development is more than 5000m<sup>2</sup> in extent.

### *3. Aim of the AIA*

The overall purpose of the AIA is to assess the sensitivity of archaeological resources in the affected areas, to determine the potential impacts on such resources, and to avoid and/or minimize such impacts by means of management and/or mitigation measures.

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.

### *4. Limitations*

There were no limitations associated with the field study. Access to the site was easy and archaeological visibility was very good.

### *5. Findings*

A field assessment of the proposed 25ha footprint area, and the existing illegal agricultural development took place on 15<sup>th</sup> July 2020, in which the following observations were made:

➤ A few isolated Middle Stone Age (MSA) and Later Stone Age (LSA) stone tools, including a small cobble hammerstone, and a small piece of indigenous clay pottery were recorded in the footprint area of the proposed new vineyard development.

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- Marginal scatters of MSA and LSA implements were recorded on patches of quartz gravels alongside the drainage channel in the western portion of the site, but these occur outside the area of the proposed vineyard development.
- No tools were found in the footprint area of the illegal raisin drying project.

### *5.1 Grading*

The small number and isolated context in which they were found means that the archaeological resources have been graded as having *low* (Grade 3C) significance.

### *6. Built environment/historical structures*

In terms of the built environment, no old buildings, historical structures or features, or any old equipment was found in the proposed footprint area.

### *7. Graves*

No graves or typical grave features such as stone cairns were encountered during the study.

### *8. Impact statement*

The results of the study indicate that the proposed development of new vineyards, and the illegal raisin drying project on the Farm Oorkant Kakamas North Settlement 341 will not have an impact of great significance on archaeological resources.

### *9. Conclusion*

The receiving environment is not a sensitive or threatened archaeological landscape.

The impact significance of the proposed vineyard development, and the existing illegal agricultural development on archaeological heritage is assessed as LOW.

### *10. Recommendations*

1. No mitigation of archaeological resources is required.
2. No archaeological monitoring is required.
3. Regarding the illegal raisin drying operation established in 2018, (subject of the Section 24G Process), no archaeological mitigation is required.

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## 1. INTRODUCTION

ACRM was instructed by GroenbergEnviro on behalf of CapeSpan Farms (Pty) Ltd to conduct an Archaeological Impact Assessment (AIA) for an illegal agricultural development, and a proposed new vineyard development on the farm Oorkant, Kakamas North Settlement No. 341, near Augrabies, Kai! Garib Municipality in the Northern Cape (Figures 1 & 2).

The proposed vineyard development will cover a footprint area of about 25ha. Water for the new vineyard development will be supplied from a pump station located on the banks of the Orange/Gariep River. Water for new vineyards will also be supplied via existing pipelines. Existing farm roads will be used, and no new access roads will need to be constructed.

The illegal development, established in 2018 without environmental authorisation, comprises raisin drying racks that cover a footprint area of about 5ha. The AIA for this component of the study forms part of a Section 24G Application process which is designed to legally correct an unauthorised development.

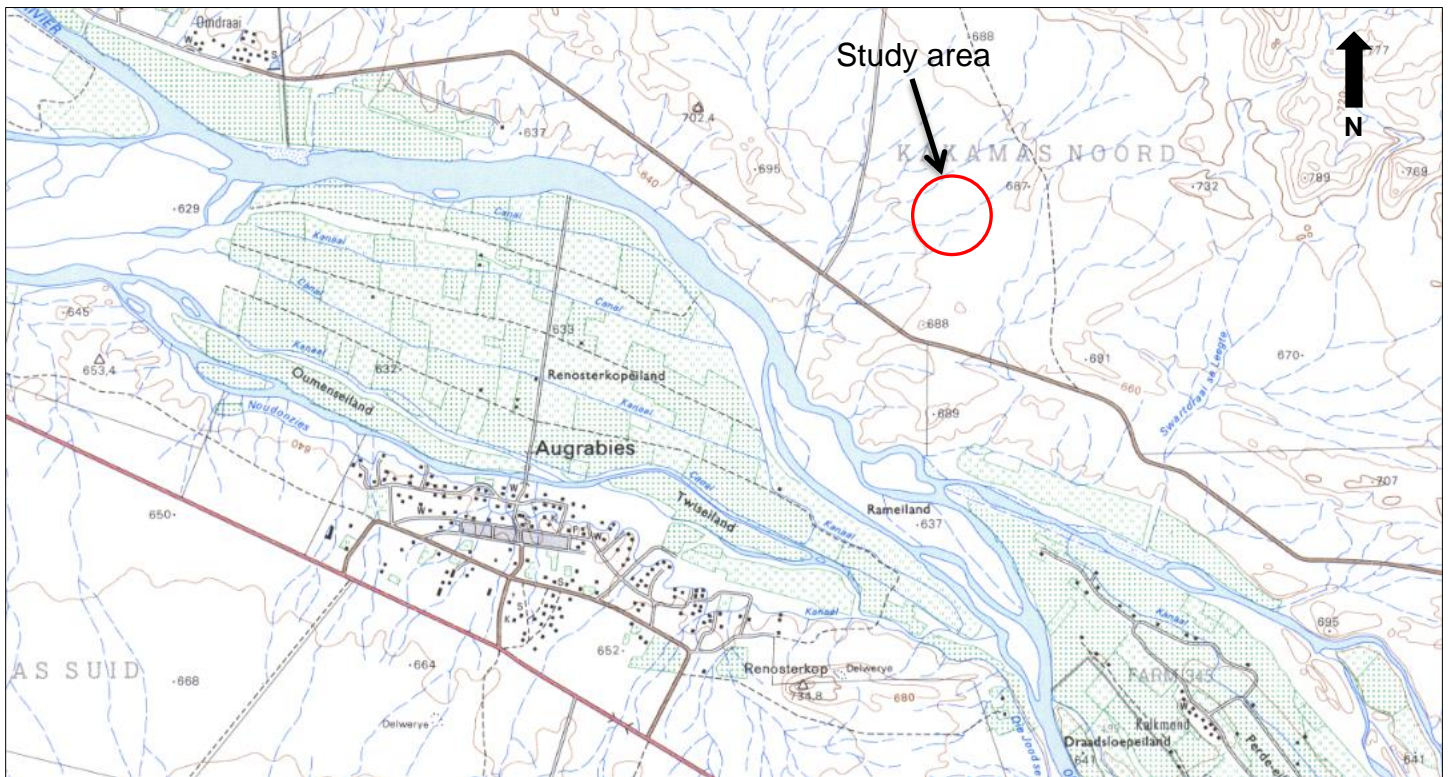


Figure 1. Locality Map (2820CB Augrabies). Red polygon illustrates the location of the study area



Figure 2. Google satellite map illustrating the location of the proposed development site (blue pin) in relation to the town of Augrabies.

## 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 m<sup>2</sup> 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. TERMS OF REFERENCE**

The terms of reference for the archaeological study were to:

- Determine whether there are likely to be any important archaeological resources that may potentially be impacted by the proposed new vineyard development;
- Indicate any constraints that would need to be considered in considering the development proposal
- Identify potentially sensitive archaeological areas
- Determine whether any important heritage resources may have been impacted by the illegal raisin drying development (the Section 24G Application Process), and
- Recommend mitigation action.

### **4. THE STUDY SITE**

Oorkant/Kakamas North Settlement 341 is located about 4.5kms north east of Augrabies (across the Orange/Gariep River), and about 25kms north west of Kakamas on the gravel road to Riemvasmaak, with the turnoff to the farm on the righthand side of the road.

The proposed development site comprises mostly level lands that slope gently to the south, on a substrate of shallow red sands (Figure 3). There is barely any surface stone covering the large area. One or two outcroppings of quartz, and patches of gravelly sands occur in places. A few sporadic trees and bushes also occur, but mostly alongside a dry drainage channels in the western portion of the farm (Figures 4-8). Some diggings and a few soil test pits were also noted in this area. A 20m wide gravel road cuts through the middle of the site, with a network of two-track gravel roads cutting across the remainder of the property. There are no significant landscape features on the proposed development site. Hard dorbank surfaces of gravel, and outcroppings of quartz occur along the western boundary, alongside the drainage channel, but these areas are not suitable for vineyard production (Dawid Dege pers. Comm).

The illegal raisin drying project which was established in 2018 is, located in the north eastern portion of the site (Figure 9).

Apart from targets set up for target shooting practice, the proposed 25ha site is undeveloped. Surrounding land use is agriculture (vineyards/table grapes), game farming (on the adjacent farm Tierkop), and recreation (mountain biking).

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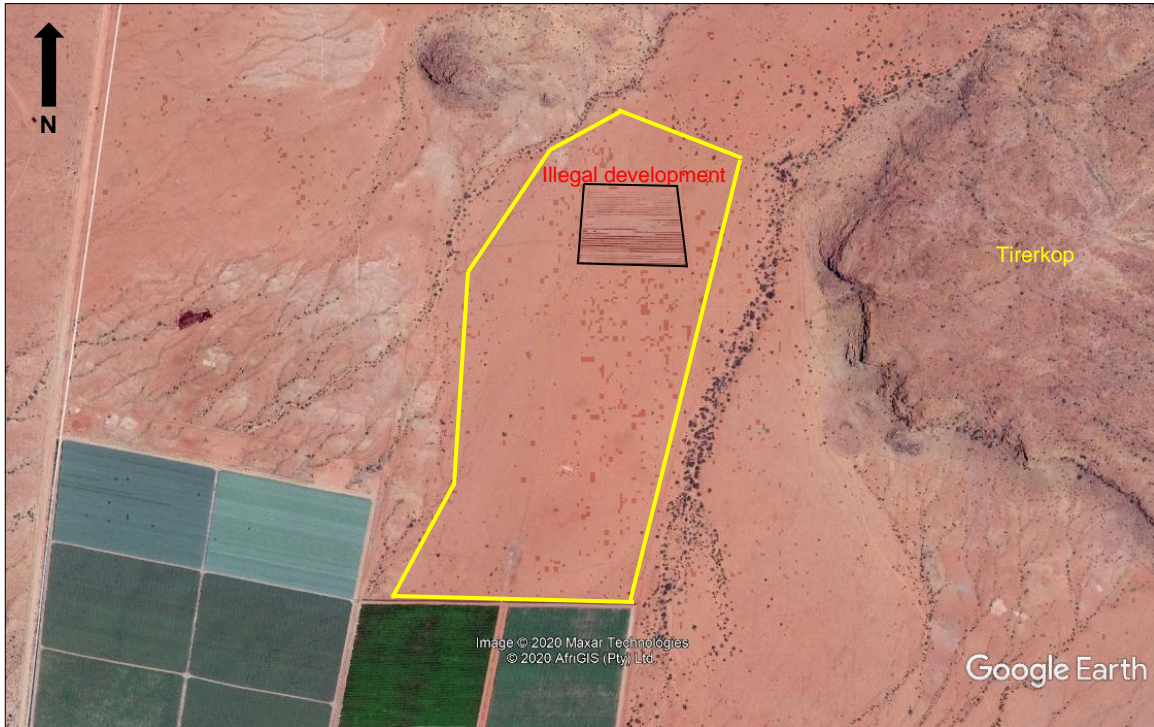


Figure 3. Google aerial map of the footprint area for the proposed new vineyard development (yellow polygon) and indicating the illegal raisin development in the north eastern corner of the site.



Figure 4. Panoramic view of the site facing south east with Tierkop in the distance.



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Figure 5. View of the proposed site facing south.



Figure 6. View of the proposed site facing south east, with Tierkop to the left of the plate



Figure 7. View of the proposed development site facing south west



Figure 8. View of the proposed development site facing north west



Figure 9. Illegal raisin development in the north eastern corner of the site. View facing south west

## **5. STUDY APPROACH**

### **5.1 Method of survey**

The overall purpose of the HIA is to assess the sensitivity of archaeological resources in the affected area, to determine the potential impacts on such resources and to avoid and/or minimize such impacts by means of management and/or mitigation measures.

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.

Survey track paths were captured and the position of identified archaeological occurrences was fixed by a handheld GPS unit set on the map datum WGS 84.

A desktop study was carried out to assess the heritage context surrounding the proposed development site. The literature survey included unpublished commercial reports sourced primarily from the South African Heritage Resources Information System (SAHRIS).

### **5.2 Constraints and limitations**

There were no constraints or limitations associated with the study. Access to the site was easy and archaeological visibility was very good.

### **5.3 Identification of potential risks**

The results of the study indicate that there are no archaeological risks associated with a proposed new vineyard development on the Farm Oorkant, Kakamas North Settlement 341, near Augrabies.

### **5.4 Results of the desk top study**

One of the earliest archaeological survey undertaken in the area was by Morris and Beaumont (1991) who undertook a combined impact assessment, and mitigation of sites on Renosterkop Peak, known historically to pre-colonial local Namneiqua pastoralists as !Nawabdanas. Several, low-density scatters of Middle Stone Age (MSA) and Later Stone Age (LSA) material were identified on and around the hill, which is also the site of the historic Renosterkop Tin Mine (circa 1940). Archaeological investigation of a Ceramic LSA surface scatter (Renosterkop 1) and a small LSA rock shelter (Renosterkop 2) were undertaken by Morris and Beaumont (1991), who showed that the two sites likely pre-date the late 18<sup>th</sup> Century. Morris and Beaumont (1991) were also able to show, based on extensive historical research, a rapidly changing cultural and linguistic landscape from as early as the mid 1700's, up until the violent Northern Border (frontier) War of 1869/9.

Morris and Beaumont (1991) also note that many indigenous skeletons, most dating to the 18<sup>th</sup> and 19<sup>th</sup> Centuries were exhumed from the area, along the banks of the Orange River near Augrabies in the late 1930s. A pre-colonial grave was also recorded at the

base of the Renosterkop Hill, during an HIA for a proposed new vineyard development on the farm (Kaplan 2016).

Large numbers of LSA, MSA and some older Early Stone Age (ESA) implements were also recorded on the flatlands on the farm Renosterkop during an AIA for a proposed new vineyard development (Kaplan 2016), while limited numbers of tools were recorded on the farm Renosterkop extension, south of the R359 (Kaplan 2017). Large numbers of MSA tools were also recorded on the Farm Orange Hills near the entrance to Augrabies (Kaplan 2018).

Kaplan (2020) recently recorded small numbers of mostly isolated LSA and a few MSA tools on the farm Tierkop during a survey for a proposed new vineyard development. Tierkop is situated directly adjacent Oorkant.

Orton (2012) also recorded low density scatters of LSA, MSA and ESA tools during a survey for a proposed solar energy farm near the Augrabies Falls National Park about 12kms from Renosterkop. Orton (2012) also describes a Stone Age sequence in the Augrabies Falls area where much of the information has been generated by excavations of open scatters containing stone tools, pottery and ostrich eggshell, as well as excavations of several small shelters near the falls, and the town of Augrabies (Morris & Beaumont 1991).

Small numbers of MSA tools were documented by Van Schalkwyk (2013) during a HIA for a township development near Augrabies, while Pelser (2012) recorded small numbers of LSA as well as ESA implements during an AIA for a solar energy farm near the National Park. Kaplan (2018) also documented relatively large numbers of LSA and MSA lithics, including activity areas, on the farm Orange Falls, just outside the urban edge of the town. Several other impact assessment reports were not available on the SAHRIS website at the time of writing (e.g. Van Schalkwyk 2011, & Beaumont 2008).

Morris (2014) notes that there are substantial herder encampments along the floodplain of the Orange River, but these tend to be short duration visits by small groups of hunter-gatherers. Most of these camps have, however, been destroyed by intensive farming alongside the river, and would no longer be archaeologically visible in the landscape.

## **6. FINDINGS**

A field assessment of the proposed new vineyard development and the existing illegal raisin drying project, was undertaken on 15<sup>th</sup> July 2020 (Figure 10).

A spreadsheet of waypoints and a description of archaeological finds are presented in Table 1.

A very, small number of tools were recorded in the 25ha footprint area of the proposed new vineyard development. Notable finds include a small fragment of unburnished grit tempered pottery (Point 621) and a small pebble hammerstone (Point 818).

Dispersed (i. e. low density) scatters of tools, mostly flakes, chunks and cores, in banded ironstone and quartz were recorded on patches of quartz gravels alongside the drainage

channel and the western boundary of the study site. No formal tools were found and the remains most likely represent discarded flakes and flake debris.

A collection of tools recorded during the study, and the context in which they were found are illustrated in Figures 11-7.

### 6.1 Grading of archaeological resources

Overall, the small, number and isolated context in which they were found means that the archaeological remains have been graded as having *low* (Grade 3C) significance.

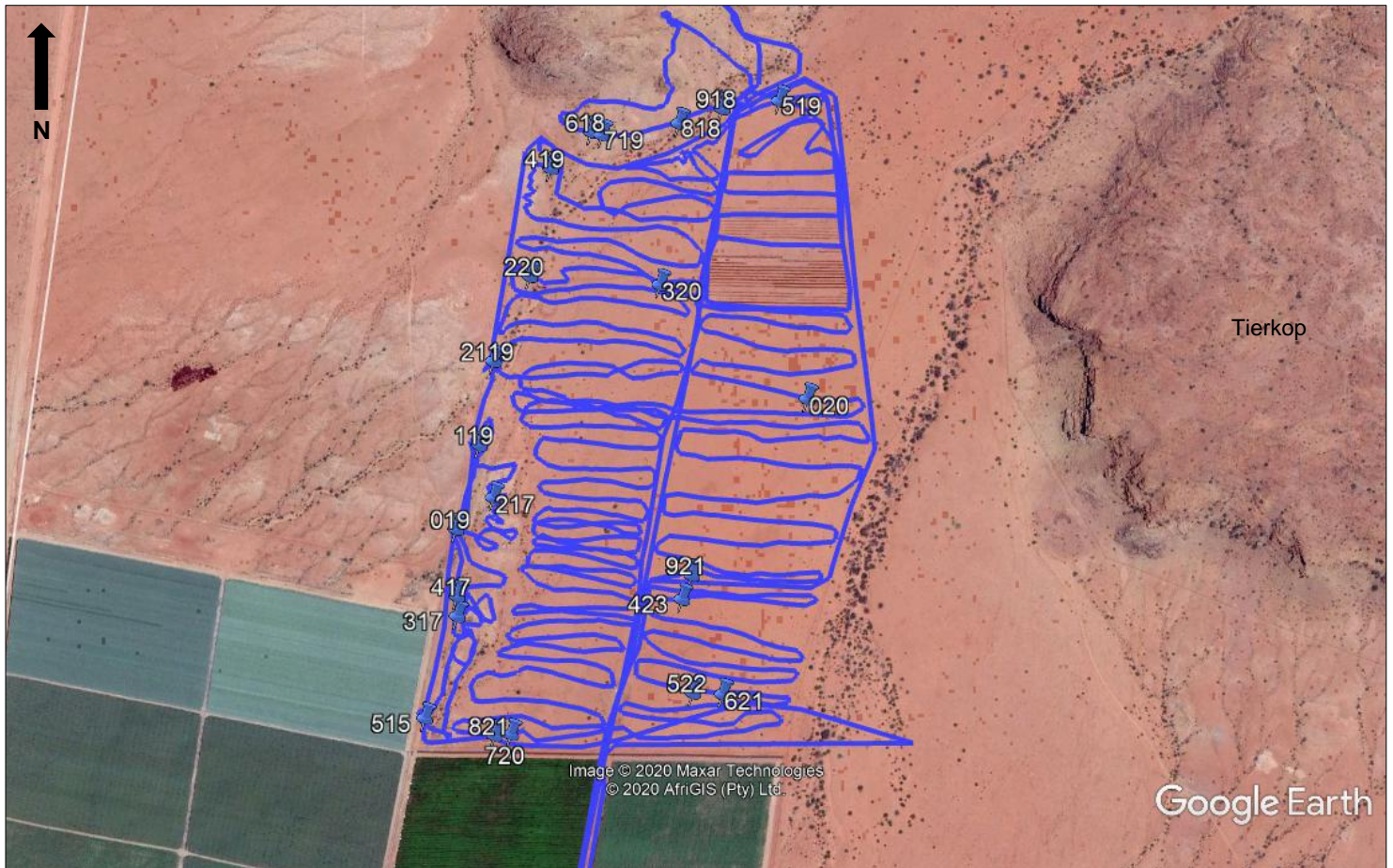


Figure 10. Trackpaths in blue and waypoints of archaeological finds

Point/ Site	Farm name	Lat/long	Description of finds	Grading	Mitigation
	Oorkant 341		BI = Banded ironstone	NCW = not conservation worthy	
423		S28° 37.819' E20° 27.814'	MSA quartzite flake		
522		S28° 37.888' E20° 27.823'	Broken BI flake	NCW	None required
621		S28° 37.889' E20° 27.848'	Small grit tempered pot sherd	NCW	None required
720		S28° 37.919' E20° 27.670'	Quartz flake/blade	NCW	None required
821		S28° 37.920' E20° 27.657'	BI chunk	NCW	None required
921		S28° 37.801' E20° 27.822'	BI MSA flake	NCW	None required

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020		S28° 37.672' E20° 27.919'	BI retouched flake	NCW	None required
2119		S28° 37.644' E20° 27.656'	Thin scatter of a few BI, & quartz flakes & chunks	NCW	None required
220		S28° 37.581' E20° 27.687'	Dispersed scatter of BI & quartz flakes, chunks & round core	NCW	None required
320		S28° 37.587' E20° 27.796'	BI utilized flake	NCW	None required
419		S28° 37.502' E20° 27.704'	Thin scatter of a few BI & quartz flakes & chunks	NCW	None required
519		S28° 37.452' E20° 27.896'	BI chunk		
618		S28° 37.475' E20° 27.738'	BI chunk and flake	NCW	None required
719		S28° 37.475' E20° 27.738'	BI utilized/retouched flake	NCW	None required
818		S28° 37.469' E20° 27.812'	Pebble hammerstone	NCW	None required
918		S28° 37.458' E20° 27.848'	BI chunk		
019		S28° 37.767' E20° 27.624'	Very thin scatter of a few BI & quartz flakes & chunks	NCW	None required
119		S28° 37.705' E20° 27.644'	BI flake	NCW	None required
217		S28° 37.744' E20° 27.656'	A few BI quartz flakes & chunks	NCW	None required
317		S28° 37.831' E20° 27.625'	A few BI & quartz flakes & chunks		
417		S28° 37.817' E20° 27.625'	Thin scatter of a few BI & quartz flakes & chunks	NCW	None required
515		S28° 37.907' E20° 27.598'	MSA quartzite flake	NCW	None required

Table 1. Spreadsheet of waypoints and description of archaeological finds



Figure 11. Point 2119. View facing south east



Figure 12. Site 220. View facing north east



Figure 13. Site 217. View facing south west



Figure 14. Collection of tools. Ruler scale is in cm



Figure 15. collection of tools. Ruler scale is in cm



Figure 16. Collection of tools. Ruler scale is in cm



Figure 17. Collection of tools. Ruler scale is in cm

## 6.2 Illegal raisin drying development (S24G Process)

No archaeological remains were found during an assessment of the illegal raisin drying development situated in the north eastern portion of the site. Given the results of the larger study it is unlikely that important archaeological resources would have been impacted by the project.



### 6.3 Built environment

No old buildings, structures, features or old equipment were recorded in the study area..

### 6.4 Graves

No graves or typical grave features, or grave cairns were encountered during the study.

## 7. ASSESSMENT OF IMPACTS

In the case of the proposed (new) vineyard development on the Farm Oorkant Kakamas Noord Settlement No. 341, it is expected that impacts on archaeological heritage resources, will be *LOW* (Table 2).

Potential impacts on archaeological heritage	
Extent of impact:	Site specific
Duration of impact;	Permanent
Intensity	Low
Probability of occurrence:	Probable
Significance without mitigation	Low
Significance with mitigation	Negative
Confidence:	High

Table 2. Assessment of archaeological impacts.

## 8. CONCLUSION

The impact significance of the proposed new vineyard development on archaeological heritage is assessed as *LOW* and therefore, there are no objections to the authorization of the project.

## 9. RECOMMENDATIONS

Regarding a proposed new vineyard development on the Farm Oorkant, Kakamas North Settlement 341 near Augrabies, the following recommendations are made:

1. No mitigation of archaeological resources is required prior to proposed new development activities commencing.
2. No archaeological monitoring is required.
3. Regarding the illegal raisin drying development established in 2018, (subject of the Section 24G Process), no further archaeological mitigation is required.

## 10. REFERENCES

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