

**ARCHAEOLOGICAL IMPACT ASSESSMENT  
PROPOSED DEVELOPMENT OF AGRICULTURAL LAND  
AND CONSTRUCTION OF AN OFF-CHANNEL STORAGE  
DAM ON PORTION 18 OF THE FARM UITNOORD NO. 129  
ROBERTSON**

Prepared for:

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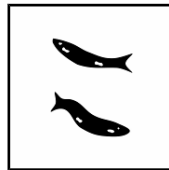
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## **Executive summary**

EnviroAfrica cc requested that the Agency for Cultural Resource Management conduct an Archaeological Impact Assessment for the proposed development of a portion of agricultural land, including the construction of an off-channel storage dam, on Portion 18 of the Farm Uitnoord No. 129 near Robertson in the Western Cape.

The total area of the land to be developed (under vines) is about 46 ha (which includes a separate 6 ha portion of land), while the construction of the proposed off-channel storage dam will inundate an area of about 6.85 ha. Existing roads and infrastructure will be utilised by the proposed development, but some new infrastructure is also envisaged including construction/upgrading of existing roads and building of a pipeline from the new dam to an existing farm dam alongside the road. The affected lands are currently zoned Agriculture, but have not been utilised for agricultural activities in the past. However, a large portion of the affected lands are already quite severely disturbed and degraded. The remains of a large (gravel) quarry is visible alongside the road, while the local Robertson Pistol Club currently lease a portion of the property for a shooting range that includes an administrative building, large parking area, and target ranges. Several gravel roads, a, Telkom servitude, and older sandy jeep tracks intersect the site. The northern portion of the proposed site is less disturbed, but is quite densely vegetated. Deep erosion dongas and extensive sheet and slope wash are also quite visible on the steeper north eastern slopes of the property. Where the agricultural lands have not been physically altered, the area is overlain by soft sands, with little visible surface stone.

A one day site visit and survey took place on 08 February, 2011, that included an assessment of the proposed site for the off-channel storage dam, and an assessment of the proposed approximately 40 ha of agricultural lands. The separate 6 ha portion of land south of the road has already been cleared and ploughed and so these lands were not inspected by the archaeologist.

The aim of the study is to locate and map archaeological occurrences that may be impacted by the proposed development, to assess the significance of the potential impacts and to propose measures to mitigate the impacts.

The following findings were made:

More than 80 archaeological occurrences (numbering nearly 100 implements) were documented during the study. All the occurrences have been mapped with a hand held GPS unit. Many of the finds have also been photographed. Seventy-five occurrences were documented on the proposed agricultural lands, while only 10 occurrences were mapped on the proposed dam site. Most of the tools were found in areas that have previously been physically disturbed or modified (for eg, roads, scraped areas, Telkom servitude), or the result of natural processes, such as sheet wash, erosion and formation of dongas. Most of the tools appear to occur below the sandy overburden, on hard compact gravels, as there is very little surface stone over the undisturbed portions of the property.

More than 99% of the implements found comprise Middle Stone Age flakes tools, a few flake blades, chunks and several round cores. One formal convex scraper was also found. One possible Early Stone Age handaxe was documented near the edge of the

quarry. Except for one quartz flake and one small silcrete chunk, all the implements are in locally available quartzite. No Later Stone Age material was recovered. No evidence of any factory or workshop site, or the result of any human settlement was identified. No organic remains such as pottery, bone or ostrich eggshell was found.

It is maintained that the study has captured good information on the archaeological heritage present, and that the proposed development will not have an impact of great significance on these and potentially other (important) archaeological remains that might be exposed during vegetation clearing operations and preparation of the lands for planting.

The Archaeological Impact Assessment has therefore identified no significant impacts to pre-colonial archaeological material that will need to be mitigated prior to proposed development activities.

The development should be allowed to proceed.

Should any unmarked human remains be uncovered or exposed during preparation of the affected lands for development, these must be immediately reported to the archaeologist, or Heritage Western Cape.

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## 1. INTRODUCTION

EnviroAfrica cc on behalf of Eilandia Plase (Pty) Ltd requested that the Agency for Cultural Resource Management conduct an Archaeological Impact Assessment for the proposed development of a parcel of agricultural land, including the construction of an off-channel storage dam, on Portion 18 of the Farm Uitnoord No. 129 near Robertson in the Western Cape (Figure 1).

The total area of land to be developed is about 46 ha, including a separate 6 ha portion of land south of the main road, while construction of the off-channel storage dam will at its maximum inundate an area of about 6.85 ha. Existing roads and infrastructure will be utilised by the proposed development, but some new infrastructure is envisaged including construction/upgrading of existing roads and a pipeline from an existing farm dam alongside the road, to the proposed new storage dam. The affected lands are currently zoned Agriculture, but have not been utilised for agriculture in the past.

The aim of the study is to locate and map archaeological occurrences that may be impacted by the proposed development, to assess the significance of the potential impacts and to propose measures to mitigate the impacts.

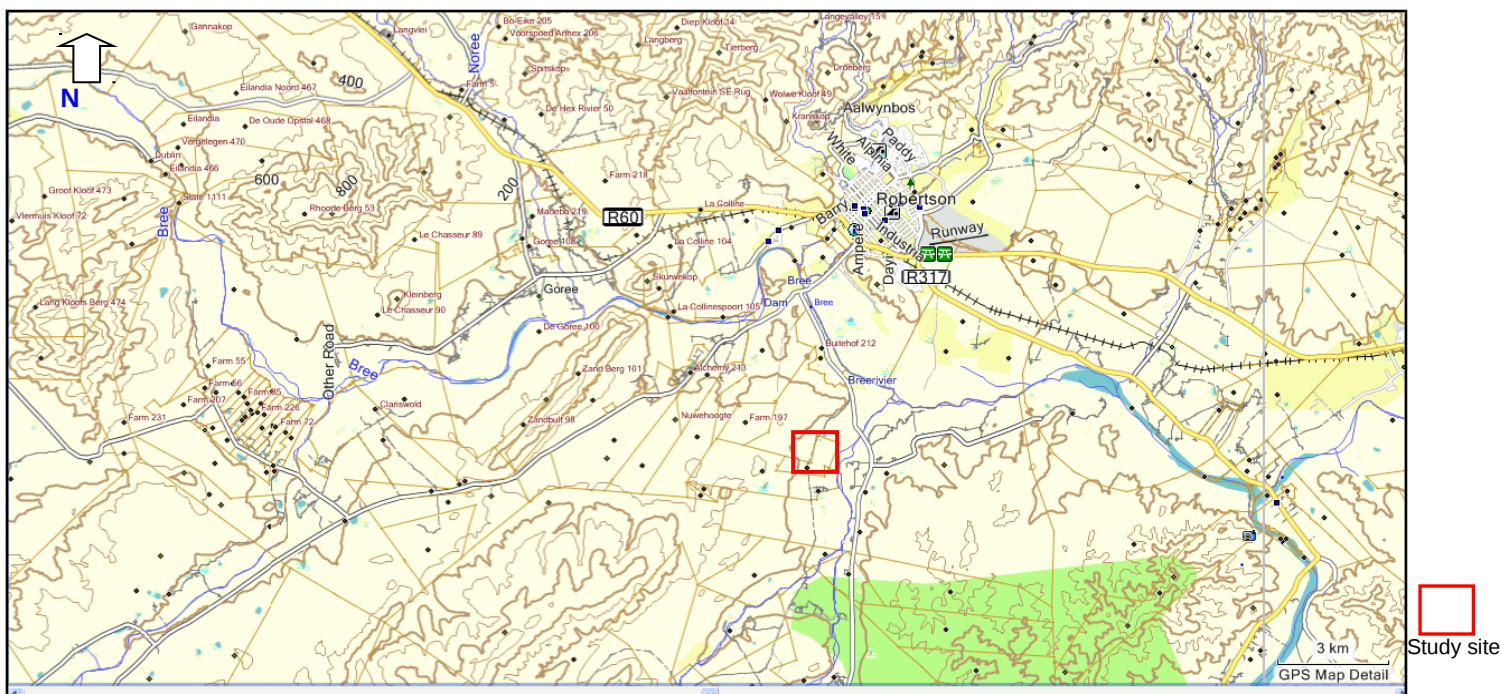


Figure 1. Locality map

## 2. TERMS OF REFERENCE

The terms of reference for the archaeological study were:

- to determine whether there are likely to be any important archaeological sites within the proposed agricultural lands and in the proposed site of the storage dam;
- to identify and map archaeological occurrences within the affected lands;

- to assess the sensitivity and conservation significance of archaeological sites within the affected lands;
- to assess the status and significance of any impacts resulting from the proposed development, and
- to identify measures to protect any valuable archaeological sites that may exist within the affected lands

### **3. THE STUDY SITE AND DESCRIPTION OF THE AFFECTED ENVIRONMENT**

An aerial photograph of the study site is illustrated in Figures 2 and 3. The farm known as Uitnoord is located about 6 kms south of Robertson and about 3 kms west of the road between Robertson and McGregor. Access to the property is via the Koringrivier turnoff, on a gravel road.

#### **3.1 Proposed off-channel storage dam**

About 14 deep test pits have already been excavated on the proposed site for the off-channel storage dam, which is located a few hundred metres to the north west of an existing pistol shooting range, with the estimated centre of the dam wall at the co-ordinates S 33° 51'.40" E 19° 51' 33" (on map datum WGS85). The ± 5 m deep test pits comprise homogenous clays, with some dispersed gravel (quartzite and quartz) inclusions. At full supply, the dam will inundate an area of about 6.85 ha. The wall height will be about 15 m and will comprise a clay core. A pipeline will be laid from the proposed dam to an existing dam alongside the road, where water will be pumped to the new dam which will be used to irrigate the fields. The affected lands are set within a natural catchment area surrounded by hills and kopjes. The proposed site is covered by dense bush, scrubs, Euphorbia, with sporadic trees occurring in places. There is a natural drainage channel/small eroded stream running more or less through the centre of the property. Some sheet wash and several deep dongas occur on the proposed site (Figures 4 & 5).

#### **3.2 Proposed agricultural lands**

The agricultural lands alongside (i.e. north of) the road are already quite severely disturbed and modified. The west facing slopes are fairly steep but the remainder of the land is mostly flat and undulating. A large gravel quarry is located alongside the road, which was used as source material when the road was first built. The existing Robertson Pistol Shooting Club leases a relatively large portion of the land in the west, which comprises a parking area, administrative buildings and target ranges. The surrounding area has also been heavily scraped. A, Telkom servitude crosses the site in the west and the north. Extensive sheet and slope wash and several deep erosion dongas also occur, mostly notably in the north east and south. The northern portion is less disturbed, but is quite densely vegetated. Most of the site is also covered in thick bush, with extensive tree cover across the northern portion. Where there is no physical disturbance or alteration of the lands, the top soils comprise mostly soft wind blown sands and there is little visible surface stone (Figures 6-12).





Figure 2. The study site in a regional context



Figure 3. Close up aerial photograph of the proposed study site





Figure 4. View of the proposed dam site facing north east



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





Figure 6. View of the agricultural lands facing south west



Figure 7. View of the agricultural lands facing north



Figure 9. View of the agricultural lands facing south



Figure 8. View of the agricultural lands facing south



Figure 10. View of the agricultural lands facing south



Figure 11. View of the agricultural lands facing south



Figure 12. View of the agricultural lands facing south west

## 4. STUDY APPROACH

### 4.1 Method

The approach followed in the archaeological study entailed a reasonably detailed foot survey of the proposed development, that included an assessment of the proposed agricultural lands (about 35 ha) and the proposed off-channel storage dam (6.8 ha). The 6 ha portion of land south of the road has already been cleared and ploughed and so these lands were not inspected by the archaeologist.

Specific target areas included previously disturbed or altered areas such as test pits and associated spoil dumps, gravel roads and tracks, the Telkom servitude, scraped areas, sheet washed slopes, erosion dongas and the quarry.

A GPS track path of the archaeological survey was created, which has been saved to a DVD and submitted with a digital copy of the report.

All archaeological occurrences documented during the study were plotted in situ, using a hand held Garmin Oregon 300 GPS unit, set on map datum wgs 84.

A spreadsheet of the waypoints and a description of each of the archaeological occurrences are also included with the report (refer to Table 1 in the Appendix).

The site visit and assessment took place on the 8<sup>th</sup> February, 2011.

A desk top study was done.

### 4.2 Constraints and limitations

The survey was quite severely constrained by very dense vegetation resulting in low archaeological visibility. However, it is felt that this has not materially affected the results and conclusions of the study.



### 4.3 Identification of potential risks

Stone Age tools may be exposed during preparation of the site for agricultural development.

### 4.4 Results of the desk top study

Several AIA's have been done in Robertson and the surrounding area of Bonnievale further to the south east. Intensive vineyard and fruit production characterizes the rural agricultural landscape in this region and much of the natural vegetation in the flat plains and river valleys has already been transformed by these activities. But archaeological occurrences have still been found, nevertheless. Early Stone Age tools (ESA) were first documented during a study of the proposed Silverstrand Golf Course and residential development situated alongside the Breede River in Robertson (Kaplan 2003), while ESA tools were also documented during a study north of the town (Kaplan 2006) inside the urban edge. A very diffuse scatter of ESA and some Middle Stone Age (MSA) tools were found alongside the Robertson airport, south of the town (Kaplan 2007). And in Bonnievale, isolated ESA occurrences were documented on the Farm Bosjemansdrift near the Parmalat Factory (Kaplan 2009). MSA tools were also documented during a study of the farm Wolvendrift between Bonnievale and Robertson (Kaplan 2010). Very recently, more than 200 mainly MSA occurrences and a few ESA tools including handaxes were documented on the Farm de Goree about 6 kms north of Robertson (Kaplan 2011). According to Jayson Orton (pers. comm. 2010), a few MSA flakes were documented during an AIA for a proposed Eskom substation in Robertson. Tourist brochures also describe rock paintings in hills north of the R60, between Robertson and Ashton.

## 5. RESULTS OF THE SURVEY

Eighty-five archaeological occurrences were documented during the baseline study (refer to Table 1 and Figure A in Appendix).

### 5.1 Proposed off-channel storage dam

Ten archaeological occurrences (UIT4-UIT13), numbering 14 stone implements were documented on the proposed site for the off-channel storage dam (Figure 13). The tools occur fairly randomly over the landscape, and comprise MSA flake tools and chunks, including a large flake (UIT13) and one double-sided retouched flake/point (UIT5). Most of the implements occur in a disturbed context, on a sheet washed slope near the top of the dam wall, in the natural stream channel and alongside an erosion donga. There is very little surface stone covering the site which is overlain by wind blown sands.



Figure 13. Collection of tools from the proposed off-channel storage dam. Scale is in cm

## 5.2 Proposed agricultural lands

At least 75 archaeological occurrences (numbering about 85 tools) were documented in the agricultural lands alongside the road. Most of the tools appear to occur below the sandy overburden, on hard clays/mixed gravels, in areas that have been previously disturbed, either by natural processes or man-made activities. Apart from one possible Early Stone Age (ESA) bifacial handaxe (UIT61) found near the edge of the quarry and one large ESA chunk (UIT80) embedded in a compact clay (scraped) surface near the pistol shooting range, all the implements documented are assigned to the Middle Stone Age. While several of the flakes found were either retouched or partially retouched on one or both sides, most of the tools found are unmodified and/or utilised, triangular shaped, or flatter chunky flakes with faceted or prepared platforms, of which a few are broken or snapped. Several small round cores (UIT23, UIT24, UIT28), and one large prepared core (UIT46) as well as several flaked chunks were also found. Two flake blades (UIT13 & UIT70) were also noted. One convex scraper (UIT32) was found.

While most of the tools are spread quite thinly and randomly over the surrounding landscape, larger numbers appear to occur in the north east, on extensive sheet washed slopes, or in the Telkom servitude. One small silcrete chunk (UIT63) was found in a sandy footpath in the northern portion of the property. No tools were noted in the large worked out quarry, but a few tools were found nearby or close to the edge. Apart from the silcrete chunk and one quartz flake (UIT83) found near the pistol shooting range, all the tools are in readily available, rough quartzite.

A collection of the tools and the context in which some of them were found are illustrated in Figures 14-19.



Figure 14. Collection of tools from the agricultural lands. Scale is in cm



Figure 15. Collection of tools from the agricultural lands. Scale is in cm





Figure 16. Sheet washed slopes in the north east. Note the Telkom servitude to the right of the plate



Figure 18 Collection of tools from the agricultural lands. Scale is in cm



Figure 17. Collection of tools from the agricultural lands. Scale is in cm



Figure 19. Possible Handaxe (UIT61) Scale is in cm

### 5.3 Significance of the archaeological finds

85 archaeological occurrences, numbering nearly 100 stone implements, were documented during the Archaeological Impact Assessment of Portion 18 of the Farm Uitnoord No. 129. All the tools found were point plotted with a hand-held GPS (refer to Figure A in the Appendix). More than 99% of the tools are assigned to the Middle Stone Age, with only two ESA tools found, including one possible handaxe. No evidence of any factory or workshop site, or the result of any human settlement was identified. Most of the finds are spread quite thinly and unevenly over the surrounding landscape, and occur where some kind of physical disturbance or alteration of the landscape has already taken place. Most of the finds occur below the sandy overburden and are probably not in-situ, and have been displaced, or moved around in one way or the other.

Studies undertaken so far in the Robertson and Bonnievale area have shown that MSA occurrences, are the most prominent type of tools in the landscape with a corresponding

much lower density of ESA tools represented. All the occurrences were also found in already altered or highly modified landscapes. Later Stone Age remains are virtually non-existent in the lands so far investigated. It is also likely that more recent Khoekhoen Herder encampments that were once visible in the area have now been ploughed over and obliterated by agricultural activities and the emergence and dominance of early settler farming communities.

The archaeological remains documented on the Farm Uitnoord have therefore been rated as having low significance.

## **6. IMPACT STATEMENT**

It is maintained that the archaeological study has captured good information on the archaeological heritage present and that the proposed development of agricultural lands including the construction of an off-channel storage dam will not have an impact of great significance on these and potentially other archaeological remains. The affected landholdings are already quite severely disturbed and modified. While it is likely that additional Stone Age tools will be exposed during removal of top soils and preparation of the site for planting (of vines), it is maintained that the finds will not be very different from those that have already documented and described above. It is also expected that no (new) important finds would be uncovered that have not already been identified during the study.

## **7. CONCLUSION**

The Archaeological Impact Assessment of the proposed development of agricultural lands, on Portion 12 of the Farm Uitnoord No. 129 near Robertson, including the construction of an off-channel storage dam, has identified no significant impacts to pre-colonial archaeological material that will need to be mitigated prior to proposed development activities.

Should any human remains be disturbed, exposed or uncovered during any excavations and earthworks, these should immediately be reported to the archaeologist, or to Heritage Western Cape (Ms Jenna Lavin or Ms Belinda Muti 021 483 9692). Burial remains should not be disturbed or removed until inspected by the archaeologist.

The development should be allowed to proceed as planned.

## **8. REFERENCES**

Kaplan, J. 2011. Archaeological Impact Assessment proposed development of agricultural lands on Portion 18 of Farm 100 (De Goree) near Robertson. Report prepared for Boland Enviro. ACRM Cape Town.

Kaplan, J. 2010. 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

Kaplan, J. 2009. Archaeological Impact Assessment proposed development on Portion 100 (Portion of Portion 58) of the Farm Bosjemansdrift Bonnievale. Report prepared for Envirodinamik. ACRM Cape Town

Kaplan, J. 2007. Archaeological Impact Assessment proposed housing development Erf 7545 Robertson. Report prepared for EnviroAfrica. ACRM Cape Town

Kaplan, J. 2006. Phase 1 Archaeological Impact Assessment proposed development Erf 3 Robertson. Report prepared for Boland Enviro. Agency for Cultural Resource Management.

Kaplan, J. 2003. Archaeological study proposed development Silverstrand Golf and Country Estate, Robertson. Report prepared for Ecosense. Agency for Cultural Resource Management.

## **Appendix**

Site	Name of Farm	Lat/Long	Finds
UIT (Uitnoord)	Portion 12 of Farm		



	Uitnoord 129, Robertson		
UIT1		S33 51.711 E19 51.679	Several MSA chunks and flakes
UIT2		S33 51.714 E19 51.616	Large MSA retouched flake
UIT3		S33 51.714 E19 51.595	MSA flake
UIT4		S33 51.629 E19 51.419	MSA flake
UIT5		S33 51.629 E19 51.423	Large MSA flake
UIT6		S33 51.534 E19 51.498	X 2 MSA flakes
UIT7		S33 51.531 E19 51.497	Chunk
UIT8		S33 51.525 E19 51.471	MSA double sided retouched flake
UIT9		S33 51.647 E19 51.433	MSA flake
UIT10		S33 51.650 E19 51.435	Chunk
UIT11		S33 51.653 E19 51.444	MSA flake
UIT12		S33 51.693 E19 51.522	MSA flake
UIT13		S33 51.563 E19 51.482	Broken MSA flake blade
UIT14		S33 51.716 E19 51.570	Snapped MSA flake
UIT15		S33 51.877 E19 51.876	MSA flake
UIT16		S33 51.874 E19 51.874	MSA flake
UIT17		S33 51.873 E19 51.870	MSA flake
UIT18		S33 51.784 E19 51.818	Broken MSA flake
UIT19		S33 51.750 E19 51.720	MSA flake
UIT20		S33 51.749 E19 51.714	Broken flake
UIT21		S33 51.742 E19 51.726	Large flake/flaked chunk
UIT22		S33 51.772 E19 51.811	Chunk
UIT23		S33 51.772 E19 51.809	<b>Core</b>
UIT24		S33 51.780 E19 51.817	<b>Core</b>
UIT25		S33 51.779 E19 51.821	Chunk
UIT26		S33 51.780 E19 51.815	Chunk
UIT27		S33 51.780 E19 51.822	Chunk
UIT28		S33 51.777 E19 51.825	<b>Core</b>
UIT29		S33 51.770 E19 51.837	MS flake
UIT30		S33 51.767 E19 51.824	Large MSA flake
UIT31		S33 51.552 E19 51.777	Large chunk
UIT32		S33 51.561 E19 51.798	Possible <b>MSA scraper</b>
UIT33		S33 51.515 E19 51.819	X 2 MSA flakes
UIT34		S33 51.514 E19 51.847	Chunk
UIT35		S33 51.514 E19 51.876	MSA flake
UIT36		S33 51.520 E19 51.871	MSA flake
UIT37		S33 51.509 E19 51.894	MSA flake
UIT38		S33 51.508 E19 51.889	MSA flake
UIT39		S33 51.475 E19 51.906	MSA flake
UIT40		S33 51.457 E19 51.922	MSA flake and chunk
UIT41		S33 51.461 E19 51.924	X 2 MSA flakes & 1 flaked chunk
UIT42		S33 51.464 E19 51.926	Chunk
UIT43		S33 51.458 E19 51.926	MSA flake
UIT44		S33 51.458 E19 51.932	Chunk
UIT45		S33 51.515 E19 51.973	MSA flake
UIT46		S33 51.510 E19 51.941	<b>MSA core</b>
UIT47		S33 51.514 E19 51.928	MSA flake
UIT48		S33 51.510 E19 51.914	MSA flake
UIT49		S33 51.509 E19 51.912	Large MSA flake
UIT50		S33 51.509 E19 51.908	Chunk
UIT51		S33 51.508 E19 51.896	X 2 MSA flakes
UIT52		S33 51.506 E19 51.897	Chunk
UIT53		S33 51.459 E19 51.927	Chunk and MSA flake
UIT54		S33 51.457 E19 51.925	MSA flake
UIT55		S33 51.463 E19 51.955	Chunk
UIT56		S33 51.463 E19 51.955	Chunk
UIT57		S33 51.500 E19 51.973	MSA flake and chunk

UIT58		S33 51.501 E19 51.972	Chunk
UIT59		S33 51.506 E19 51.971	MSA flake
UIT60		S33 51.506 E19 51.987	MSA flake
UIT61		S33 51.504 E19 51.987	<b>ESA handaxe</b> near quarry
UIT62		S33 51.470 E19 52.026	Broken flake
UIT63		S33 51.377 E19 52.183	Small <b>silcrete chunk</b>
UIT64		S33 51.319 E19 52.209	MA flake
UIT65		S33 51.374 E19 52.097	Large chunk
UIT66		S33 51.318 E19 52.072	Flat MSA flake
UIT67		S33 51.455 E19 52.035	MSA flake
UIT68		S33 51.467 E19 52.030	MSA flake
UIT69		S33 51.479 E19 52.032	MSA flake edge of quarry
UIT70		S33 51.514 E19 52.014	MSA flake/blade
UIT71		S33 51.636 E19 51.968	Broken MSA flake
UIT72		S33 51.637 E19 51.965	Chunk
UIT73		S33 51.639 E19 51.963	Chunk
UIT74		S33 51.642 E19 51.924	Broken flake
UIT75		S33 51.616 E19 51.843	Chunk and MSA flake
UIT76		S33 51.579 E19 51.871	MSA flake
UIT77		S33 51.579 E19 51.875	MSA flake
UIT78		S33 51.567 E19 51.859	X 2 MSA flakes
UIT79		S33 51.658 E19 51.830	Flake on spoil dump
UIT80		S33 51.668 E19 51.873	Large <b>ESA chunk</b>
UIT81		S33 51.670 E19 51.995	Flaked chunk
UIT82		S33 51.670 E19 51.984	Chunk
UIT83		S33 51.661 E19 51.883	Quartz flake
UIT84		S33 51.661 E19 51.880	MSA Flake
UIT85		S33 51.648 E19 51.869	Chunk

Table 1. GPS waypoints and description of archaeological finds

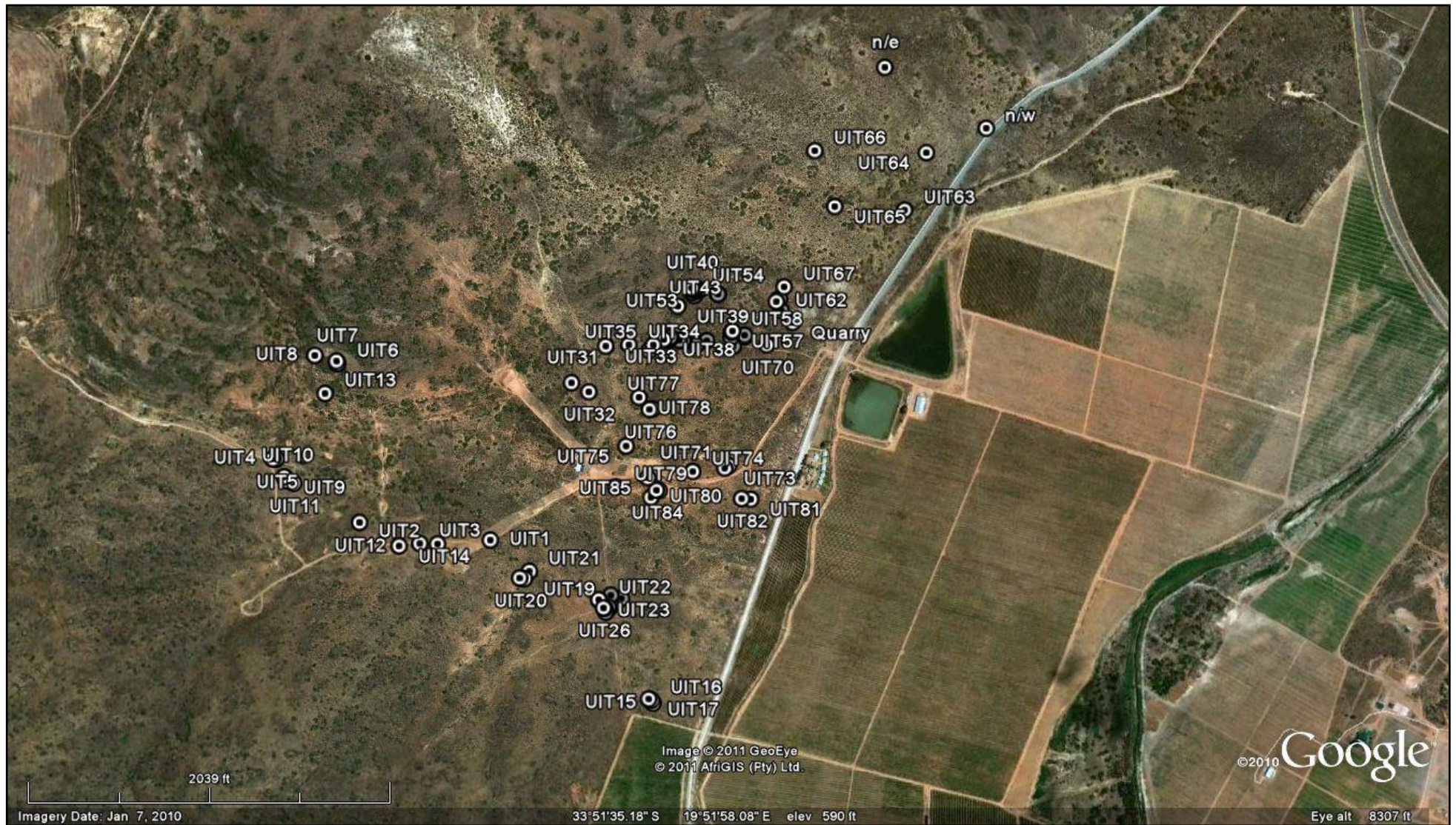


Figure A. Aerial photograph of the study site and Illustration of waypoints

