

**ARCHAEOLOGICAL IMPACT ASSESSMENT
PROPOSED DEVELOPMENT OF PORTIONS 59, 62 & 63
OF THE FARM BRAKKLOOF NO. 443 KNYSNA, AT
PLETTENBERG BAY**

Prepared for:

CALIDRIS

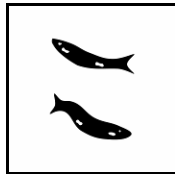
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Executive Summary

The Agency for Cultural Resource Management was commissioned to undertake an Archaeological Impact Assessment for a proposed mixed-use housing development on Portions 59, 62 and 63 of the Farm Brakkloof No. 443 (Knysna), in Plettenberg Bay.

The proposed development site is situated on the Robberg Road, within view of the Robberg Nature Reserve. Studies have shown that large numbers of archaeological sites occur in Plettenberg Bay. Nelson Bay Cave is situated in the Robberg Nature Reserve and is a National Monument.

The applicant wishes to develop three housing clusters on the site; namely a resort component with about 250 units, including a hotel, chalets and apartments; a townhouse component with approximately 100-150 units and a high density apartment component with about 100-150 units. The extent of the property is about 50 ha.

Portion 59 was previously cultivated for agricultural purposes, while Portion 62 and 63 was mined for gravel, sand and road construction material.

No development footprint has yet been identified and the archaeological study was commissioned in order to help compile an environmental constraints map that would help to identify archaeological sensitive areas and to guide any proposed development on the property.

Aikman Associates Heritage Management has been commissioned to undertake a Heritage Impact Assessment (HIA) of the proposed development. The Archeological Impact Assessment forms part of the HIA.

A 2-day survey of the proposed development site was undertaken. Almost the entire property is infested with invasive alien vegetation (mainly Hakea), while Strandveld and Fynbos are also very thick on the ground. A large portion of the study site is virtually impenetrable, resulting in very poor archaeological visibility. There is only one access road onto the property.

The following significant findings were made:

- Several thousand Early Stone Age flake tools (including handaxes) were found lying on a flat rocky ledge overlooking the old diggings, and in the surrounding area. Possible activity areas may also be present on the site, but this cannot be confirmed without more detailed mapping and contextual analysis. Insofar as it can be established, the extent of this important Acheulean Stone Age quarry site has been mapped by a professional land surveyor in consultation with the archaeologist. The site has been rated as having High local significance.
- Relatively large numbers of Early and Middle Stone Age tools were found lying, among the spoil dumps associated with mining activities in the heavily wooded kloof and stream channel below the rocky ledge, but these tools all occur in a severely disturbed context.

- Large numbers of tools were documented in the gravel road in the south western portion of the proposed development site. It is clear that these occurrences all occur below the top soils, and were only exposed during road construction activities.

Apart from a few flakes which occur on a disturbed patch of land (where a modern structure once stood), no other archaeological remains were located over the remainder of the property, which is covered in dense, almost impenetrable vegetation.

The AIA has shown that the proposed housing development of the affected portions of land on the Farm Brakkloof in Plettenberg Bay will impact negatively on archaeological remains. Earthmoving operations will very likely expose, or uncover Early and Middle Stone Age tools below the top soils, over much of the proposed development site.

An increased presence in the number of people living on the property (as a result of the development) may also impact negatively on the important archaeological site called Quarry Site. This potential risk constitutes a long term (cumulative impact) that will need to be carefully managed throughout the Construction and Operational Phase of the proposed development. It is these impacts that are sometimes more difficult to mitigate, as they do not require immediate archaeological attention, but longer term management interventions. Quarry Site has therefore been 'Red-Flagged' as an archaeologically sensitive area and threatened landscape.

With regard to the proposed development of Portion 59, 62 and 63 of the Farm Brakkloof No. 443, the following recommendations and mitigation actions are therefore made:

- The 'Quarry Site' as it has been mapped by the land surveyor should be declared a 'No Go' development area. A buffer of at least 100 m must also be established around the site.

In addition, a Conservation Management Plan (CMP) must be developed and implemented, that ensures the long term protection of this important site, during both the Construction and Operational Phase of the proposed development.

It is possible that Quarry Site could be developed as a public viewing site, but this would have to be done with strict and sustainable management guidelines in place. Heritage Western Cape would also need to be consulted in this regard. It would also be required that an ESA specialist be contracted by the developers to investigate the site in more detail which may require more detailed mapping. Such an initiative would clearly be viewed as a positive impact arising out of the proposed development as it will allow for detailed research of an important and rare archaeological occurrence.

- Earthmoving operations must be monitored by a professional archaeologist during the Construction Phase of the proposed development. This includes associated infrastructure such as internal roads and engineering services. All finds located during monitoring must be documented, mapped, logged and collected for analysis.

- Should any unmarked human remains be disturbed, exposed or uncovered during excavations and earthworks, these should immediately be reported to Heritage Western Cape (Mr Nic Wiltshire, or Ms Belinda Mutti 021 483 9685).

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1. INTRODUCTION

1.1 Background and brief

Calidris Development Management Services, on behalf of Shock Proof Investment 171 (Pty) Ltd requested that the Agency for Cultural Resource Management conduct an Archaeological Impact Assessment (AIA) for a proposed mixed-use housing development on Portions 59, 62 and 63 of the Farm Brakkloof No. 443 (Knysna), in Plettenberg Bay. The proposed development falls within the Bitou Municipality.

The applicant wishes to develop three housing clusters on the site; namely a resort component with about 250 units, that includes a hotel, chalets and apartments; a townhouse component with approximately 100-150 units, and a high density apartment component with about 100-150 units. The extent of the property is about 50 ha.

The subject property, which is situated inside the current urban edge, is zoned Agriculture. The proposed development site will therefore have to be rezoned and subdivided in order for the proposed development activities to take place.

No development footprint has yet been identified and the archaeological study was commissioned in order to help compile an environmental constraints map that would help to identify archaeological sensitive areas and to guide any proposed development on the property.

Aikman Associates Heritage Management has been commissioned to undertake a Heritage Impact Assessment (HIA) of the proposed development. The Archeological Impact Assessment forms part of the HIA.

The HIA forms part of the Environmental Impact Assessment (EIA) process that is being conducted by Calidris Development Management Services.

The aim of the study is to locate and map archaeological sites and remains that may be impacted by the planning, construction and implementation of the proposed project, to assess the significance of the potential impacts and to propose measures to mitigate against the impacts.

2. TERMS OF REFERENCE

The terms of reference for the archaeological study were:

- to determine whether there are likely to be any archaeological sites of significance within the proposed development site;
- to identify and map any sites of archaeological significance within the proposed development site;
- to assess the sensitivity and conservation significance of archaeological sites within the proposed development site;

- to assess the status and significance of any impacts resulting from the proposed development, and
- to identify mitigatory measures to protect and maintain any valuable archaeological sites that may exist within the proposed development site.

3. THE STUDY SITE

A locality map is illustrated in Figure 1.

A Google aerial photograph of the proposed development site is illustrated in Figure 2.

The proposed development site is situated on the Robberg Road, about 1.5 kms from the entrance to the Robberg Nature Reserve. There is only one gravel access road onto the site. A large portion of the property is infested with invasive alien vegetation (mainly *Hakea*) and thick dead woody material and is virtually impenetrable. Strandveld and Fynbos are also very thick on the ground (Figures 4-22). Several small intermittent streams intersect the site which drains through the eastern portion. A wetland also occurs in the south east. The proposed development site in the north was previously cultivated for agricultural purposes (plough lines are still visible), while the southern portion was previously mined for gravel, sand and road construction material. Surrounding land use is residential (alongside Robberg Road) and vacant agricultural land. The grave of Andrew Abraham Stockenström Le Fleur, founder of the Griqua Peoples Reformation Movement (1867-1941) is located on the adjacent property (refer to Figure 2).



Figure 1. Locality map



Figure 2. Aerial photograph of the study site



Figure 3. View of the site facing north alongside Robberg Road



Figure 4. View of the site facing west, with the access road on the left of the plate



Figure 5. View of the site facing north east.



Figure 8. View of the site facing north



Figure 6. View of the site facing north



Figure 9. View of the site facing west from Robberg Road



Figure 7. View of the site facing north east



Figure 10. View of the site facing west from Robberg Road



Figure 11. View of the site facing south east



Figure 14. View of the site facing east



Figure 12. View of the site facing south east



Figure 15. View of the site facing south



Figure 13. View of the site facing south east



Figure 16. View of the site facing south



Figure 17. View of the site facing south



Figure 20. View of the site facing south



Figure 18. View of the site facing south



Figure 21. View of the site facing south



Figure 19. View of the site facing south



Figure 22. View of the site facing south

4. STUDY APPROACH

4.1 Method

The approach followed in the archaeological study entailed (where possible) a fairly systematic foot survey of the proposed development site. A GPS track path of the archaeological survey was created. The track path has been saved to a DVD and submitted with a digital copy of the report. Archaeological remains documented during the study were plotted and photographed, using a Garmin Oregon 300 GPS unit, set on map datum wgs 84. A spreadsheet of the waypoints and a description of the archaeological occurrences are also presented in Table 1.

It is important to note that, due to the very large number of artefacts located during the study, not every occurrence was assigned a GPS reading.

The site visit and assessment took place on the 3rd and 4th March, 2010.

A desktop study was also undertaken.

The archaeologist also met on site with the land surveyor (Mr Sean McMillan) to map the extent of the Stone Age `quarry site' (refer to Figures A and B in Appendix). This site was previously brought to the attention of archaeologists Mr Curtis Marean, as well as Mr Nick Wiltshire at Heritage Western Cape, who are aware of its existence.

4.2 Constraints and limitations

More than 90% of the proposed development site is covered in dense invasive alien vegetation, and Strandveld and Fynbos are also very thick on the ground resulting in very poor archaeological visibility. There is also only one access road onto the site, so mobility was also severely constrained. The entire south eastern portion of the property, particularly, is extremely heavily wooded and was impossible to access.

4.3 Identification of potential risks

- A rare, Early Stone Age quarry site may be negatively impacted by the proposed development.
- It is anticipated that Early and Middle Stone Age tools will be exposed and uncovered (below the top soils) during earthmoving operations, in the Construction Phase.

4.4 Results of the desk top study

Plettenberg Bay is well known for its rich archaeological heritage. The majority of sites documented so far occur on, or close to, the Robberg Nature Reserve, where more than 20 caves and shelters have been recorded (Kaplan 1993). This includes the Middle Stone Age site known as Nelson Bay Cave, which is also a National Monument. In 2009, the archaeologist located several more cave sites with Middle Stone Age tools and potential MSA deposits in the steep coastal cliffs at Vyekraal, south of the Robberg Nature Reserve.

Diffuse scatters of Early Stone Age (ESA) as well as Middle Stone Age (MSA) tools have been recorded on the cliffs overlooking Robberg Beach (Kaplan 1993). MSA and ESA sites have been documented at Platbank, Uiteindelik, and Beacon Island, for example.

Substantial Later Stone Age shell midden deposits have been documented on the rocky shore at the popular Lookout Beach, in Plettenberg Bay (Kaplan 2009).

A number of AIAs have also been done in Plettenberg Bay, between the Beacon Isle Hotel and Robberg Nature Reserve, mainly in response to increased residential development and demand for coastal property. These studies have been undertaken under the aegis of the National Heritage Resource Act (No. 25 of 1999).

Early Stone Age and Middle Stone Age implements were documented during a study for the proposed Whale Rock Estate and Phase 3 of the proposed Robberg Estate residential developments (Kaplan 2000a, b). Both properties are situated on the Robberg Road, overlooking the Robberg Vlei.

Relatively large numbers of Middle Stone Age tools and some Early Stone Age tools were also documented during a study for the proposed Brackenridge development and Nature Reserve, which is also situated on the Robberg Road (Kaplan 2001).

In more recent times, the coastal area around Robberg Beach was the site of the first European settlement in South Africa, which in turn was the scene of early interactions between European and indigenous people. A large collection of oriental ceramics, metal fittings, as well as ships navigational instruments were discovered in the top of a sand dune adjacent to Robberg Estate (Hart & Halkett 1993). It was assumed at the time that the finds related to the camp of the survivors of the heavily laden Portuguese vessel the Sao Goncalo, which sank off Plettenberg Bay in 1630. Excavations at the site by A. Smith (1986) located what appeared to be a workshop area, where iron was being smelted and forged. This led to the conclusion that the site was probably the remains of the Sao Gancalos' survivors' camp and workshop area (Smith 1986).

5. RESULTS OF THE STUDY

Despite the very low archaeological visibility over most of the proposed development site, large numbers of Stone Age material were documented during the AIA. Most of the material was found associated with the old mining works in the south western portion of the site (refer to Figure 2).

While many hundreds of tools were found, and photographed, not all were assigned GPS readings. A number of occurrences, were however, documented (refer to GPS track path and Table 1). These include the following:

BRK A: Large numbers, perhaps several hundred, Early and Middle Stone Age tools were found in the gravel road alongside the south western boundary of the study site (Figures 23-28). While the finds occur along almost the entire extent of the section of road, up till the farm gate/boundary (and beyond), several larger occurrences of tools were noted. All the tools are in locally available quartzite and occur on the surface of the road, or embedded in compact orange and grey sands, below the top soils. The most commonly occurring tools include large modified and unmodified flakes, including side-

struck flakes, smaller triangular-shaped flakes with faceted platforms, a few denticulate flakes, chunks, large round cores, broken and flaked cobbles, blade tools, several small and large bifacial handaxes and a few cleaver-like flakes, some of which have been retouched.



Figure 23. BRK A. Gravel road



Figure 26. BRK A. Scale in cm



Figure 24. BRK A, Gravel road



Figure 27. BRK A. Scale in cm



Figure 25. BRK A. Scale in cm



Figure 28. BRK A. Scale in cm

BRK B: A high density scatter of tools, numbering about 80-90 implements occur in a small gravel clearing about 10 m to the east of the gravel road. The tools comprise mostly MSA lithics including triangular-shaped flakes, retouched tools and chunks. A cluster of about 50 flake tools and a hammerstone were counted in a 1 x 1 m area. A few ESA tools were also found lying on the patch of compact ground, including a cleaver and some large flakes, but the majority of the finds are mostly MSA (Figure 29).

BRK C: A small, diffuse scatter of mainly MSA tools (flakes, cores and blade tools), including a few large ESA flakes occur in a large gravel patch alongside the gravel road (Figure 30).

BRK D: A small scatter of a few ESA flakes occurs in a gravel patch and small footpath alongside the road (Figure 31).

BRK E: Relatively large numbers of MSA flakes and ESA tools (including a bifacial handaxe and large patinated flakes) occur on an extensive patch of gravel south of the elevated rocky ridge (Figure 32)

The extent of these sites (BRK B-E) have been mapped and are included in the archaeological sensitive area (refer to Figures A and B in Appendix).



Figure 29. BRK B



Figure 31. BRK D



Figure 30. BRK C



Figure 32. BRK E

Quarry Site: By far the largest concentration of tools, are clustered around a flat elevated ridge overlooking a heavily wooded kloof (Figure 33 and refer to Figure 2). Several thousand tools occur on the ridge and in the immediate surrounding area which is quite heavily disturbed as a result of mining and related road works (Figures 34 & 35). These include mostly ESA tools, including many waste tools such as flakes (including broken flakes), chunks, flaked chunks and cobbles, cores and manuports, as well as formal tools such as retouched flakes, blade tools, cleavers, choppers and handaxes (both bifacial and unifacial). Unmodified flake tools far outweigh formal retouched tools on the site. It is clear that the ridge was a focus of human activity and possible activity areas are discernable. For example, a cluster of 11 handaxes were documented on the north western side of the flat ridge (Figure 36), while many tools and flakes are scattered about on the ridge itself, which appears not to have been disturbed. Several clusters of tools and flakes also seem to be associated with large (sitting) boulders on the flat ridge (Figure 35). Detailed mapping and more refined contextual analysis may help to determine such activity areas. A selected collection of tools is illustrated in Figures 37 and 38.

The extent of 'Quarry Site', insofar as the edges of the site could be determined have been mapped in detail (refer to Figures A and B in Appendix).

The site has been rated as having High local significance.



Figure 33. Quarry Site



Figure 35. Quarry site and possible activity area



Figure 34. Quarry site with Robberg in the distance



Figure 36. Cluster of handaxes



Figure 37. Collection of ESA tools from the 'Quarry Site' Scale is in cm



Figure 38. Collection of ESA tools from the 'Quarry Site' Scale is in cm

Spoil Dumps 1-10: Early and Middle Stone Age tools were documented while investigating the heavily wooded kloof (site of the old sand and gravel diggings) and stream channel below the rocky ledge ('Quarry Site'). These tools are primarily associated with large (gravel) spoil dumps, which are a relict from the old diggings and mining, while a few isolated occurrences were found on flat outcroppings of quartzitic sandstones in the stream channel.

Spoil Dumps 1-10 have been mapped (refer to GPS track path and Table 1) and all contain tools, ranging from a few implements (Spoil Dump 1, 2, 5, 6, 9 & 10) to more diffuse and larger scatters of tools that includes unmodified and retouched flakes and blade tools, chunks, large cores, smaller round cores, a few hammerstones, flaked cobbles and chunks, and formal tools such as bifacial and unifacial handaxes and cleavers. Spoil Dumps 9 and 10 are located north and northwest of a heavily wooded and clogged wetland area, which is barely accessible due to thick vegetation cover.

A collection of tools from Spoil Dumps 1 and 8 are illustrated in Figures 42-44.



Figure 39. Overlooking Spoil Dumps 1-8 from the rocky ledge



Figure 40. Spoil Dumps 4-7



Figure 41. Spoil Dump 8



Figure 43. Collection of tools from Spoil Dump 8
Scale is in cm



Figure 42. Collection of tools from Spoil Dump 1
Scale is in cm



Figure 44. Spoil Dump 8 Scale is in cm

Parking area: A few MSA flakes were found on a disturbed patch of land where a modern structure once stood. One flake was found embedded in the compact brown sands.

6. DISCUSSION

The south western portion of the proposed development site is a sensitive archaeological landscape. It is clear that the rocky ridge ('Quarry Site') overlooking the kloof and stream channel was a focus of activity for Stone Age people at the time, providing commanding view to the north and the surrounding area, but also a source of raw material for the manufacture of stone tools. It is a landscape feature that must have drawn the attention of the inhabitants of the time. Several thousands of tools occur on the site and in the surrounding area. While many of the tools in the surrounding area most likely occur in a disturbed context, those that are scattered about the flat rocky ledge, appear to be fairly undisturbed and mostly in-situ. Several activity areas have also been identified. Such sites are quite rare in the archaeological landscape and the Acheulean Quarry Site has been rated as having High local significance and worthy of closer attention.

It is clear that the many hundreds of tools documented in the gravel access road (BRK A) as well as those described alongside the road (BRK B-E) occur below the top soils and were only exposed during road construction and related activities.

Spoil Dumps 1-10 are clearly associated with the old diggings on the site.

The archaeological study has indicated that any proposed development on Brakkloof will therefore have to proceed very carefully. Quarry Site including BRK A-E has been 'Red Flagged' and If development does proceed to a Construction Phase, the site will require more detailed and contextual archaeological investigation. ESA quarry sites are quite rare and the sites proximity to Nelson Bay Cave and the Robberg Peninsula does suggest that the surrounding area is a rich archaeological landscape.

7. IMPACT STATEMENT

The archaeological impact assessment has shown that the proposed housing development of the affected portions of land on the Farm Brakkloof No. 443 in Plettenberg Bay will impact negatively on archaeological remains. Earthmoving operations will very likely expose, or uncover Early and Middle Stone Age tools below the top soil, over the proposed development site.

An increased presence in the number of people living on the property (as a result of the development) may also impact negatively on the very important archaeological site called 'Quarry Site'. This potential risk constitutes a long term (cumulative impact) that will need to be carefully managed throughout the Construction and Operational Phase of the proposed development. It is these impacts that are sometimes more difficult to mitigate, as they do not require immediate archaeological attention, but longer term management strategies. Quarry Site and surrounding sites (BRK A-E) has therefore been 'Red-Flagged' as an archaeologically sensitive and threatened landscape and will require appropriate interventions.

It is unlikely given the nature of the geology of the site, but unmarked pre-colonial human remains may also be uncovered or exposed during earthmoving operations, particularly, excavations for bulk services (water, sewerage, etc) and foundations.

8. RECOMMENDATIONS AND MITIGATION ACTION

With regard to the proposed development of Portions 59, 62 and 63 of the Farm Brakkloof No. 443, in Plettenberg, the following recommendations are made

- The 'Quarry Site' as it has been mapped by the land surveyor should be declared a 'No Go' development area. A buffer of at least 100 m must also be established around the site.

In addition, a Conservation Management Plan (CMP) must be developed and implemented, that ensures the long term protection of this important site, during both the Construction and Operational Phase of the proposed development.

It is possible that Quarry Site could be developed as a public viewing site, but this would have to be done with strict and sustainable management guidelines in place. Heritage Western Cape would also need to be consulted in this regard. It would also be required that an ESA specialist be contracted by the developers to investigate the site in more detail which may require more detailed mapping. Such an initiative would clearly be viewed as a positive impact arising out of the proposed development as it will allow for detailed research of an important and rare archaeological occurrence.

- Earthmoving operations must be monitored by a professional archaeologist during the Construction Phase of the proposed development. This includes associated infrastructure such as internal roads and engineering services. All finds located during monitoring must be documented, mapped, logged and collected for analysis.
- Should any unmarked human remains be disturbed, exposed or uncovered during excavations and earthworks, these should immediately be reported to Heritage Western Cape (Mr Nic Wiltshire, or Ms Belinda Mutti 021 483 9685).

9. REFERENCES

Hart, T. & Halkett, D. 1993. A Phase 1 archaeological assessment of portion 44 of the farm Brakkloof No. 443, Plettenberg Bay. Report prepared for Barry Dole Associates. Archaeology Contracts Office, University of Cape Town

Kaplan, J. 2009. Information compiled for Lookout Local Nature Reserve, Plettenberg Bay, including proposed Management Guidelines. Report prepared for Blue Pebble Environmental Agency. Agency for Cultural Resource Management.

Kaplan, J. 2000a. Archaeological study, portion 60 of Whale Rock Farm No. 443, Plettenberg Bay. Report prepared for Blue Dot Properties (Pty) Ltd.

Kaplan, J. 2000b. Archaeological study, Phase 2 and portion of portion 59 – Phase 3, Robberg Estate, Plettenberg Bay. Report prepared for Blue Dot Properties (Pty) Ltd

Kaplan, J. 1993. The state of archaeological information in the coastal zone between the Orange River and Ponto do Ouro, Report prepared for the Department of Environmental Affairs and Tourism. Agency for Cultural Resource Management.

Smith, A.B. 1986. Excavations at Plettenberg Bay, South Africa of the camp-site of the survivors of the wreck of the Sao Goncalo, 1630.

APPENDIX



Figure A. Aerial photograph of the study site illustrating the extent of the Stone Age `Acheulean quarry site and the No-Go development area

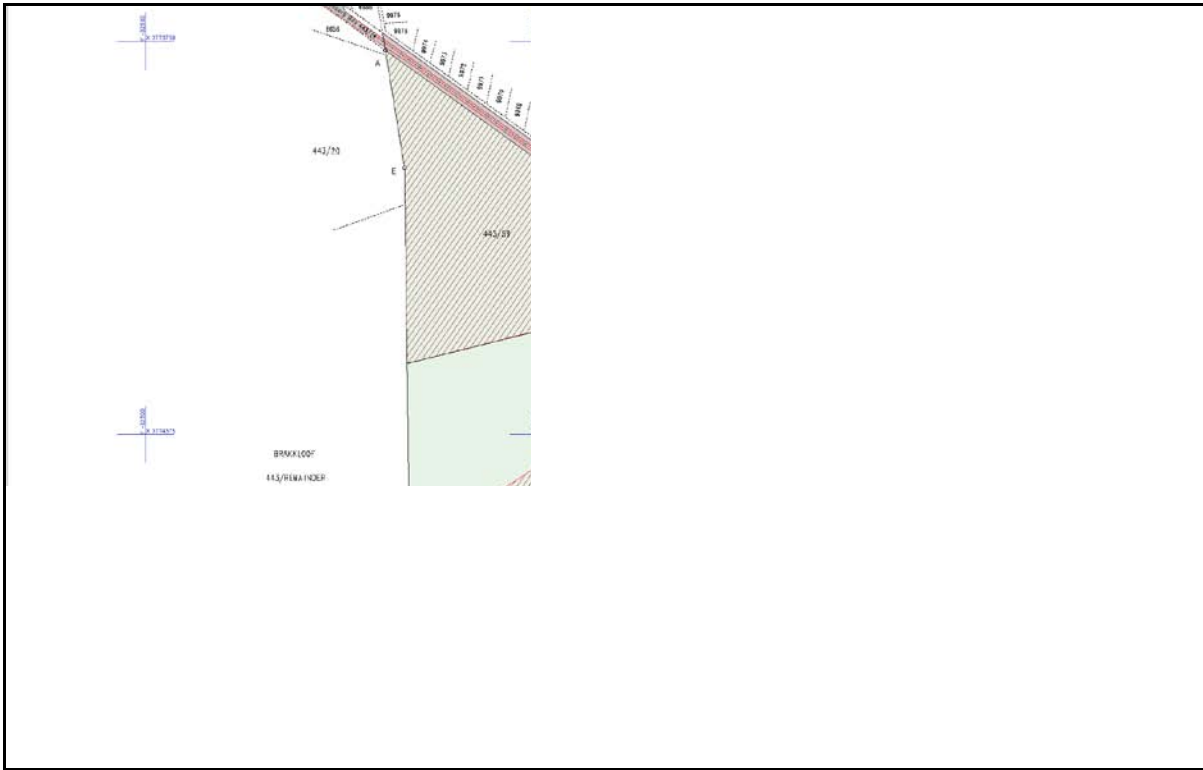


Figure B. Cadastral layout plan illustrating the extent of the quarry site

Site	Name	Long	Lat	Findings
BRK	Portion 59, 62 and 63 of the Farm Brakkloof No. 443 (Knysna) at Plettenberg Bay			
BRK A		S34 05.944	E23 21.419	Large numbers of tools in gravel access road
BRK B		S34 05.947	E23 21.431	A scatter of tools, numbering about 80-90 implements occur in a small gravel clearing about 10 m to the east of the gravel road.
BRK C		S34 05.952	E23 21.442	A diffuse scatter of mainly MSA tools (flakes, cores and blade tools), including a few large ESA flakes occur in a larger gravel patch alongside the gravel road
BRK D		S34 05.943	E23 21.439	A small scatter of large ESA flakes occurs in a gravel patch and small footpath alongside the road.
BRK E		S34 05.947	E23 21.447	Relatively large numbers of MSA flakes and ESA tools (including a large bifacial handaxe and large patinated flakes) occur on a large patch of gravel south of the elevated rocky ridge
Quarry Site		S34 05.931	E23 21.436	As described, comprises 1000's of MSA and ESA tools on flat rocky ledge and in surrounding area. Quarry site with possible activity areas also present. Extent of the site has been surveyed & Red flagged as 'No-Go' Development area
Spoil Dump 1		S34 05.827	E23 21.549	A few MSA and ESA tools, including handaxe on spoil dump
Spoil Dump 2		S34 05.836	E23 21.571	A few MSA and ESA flakes on large spoil dump
Spoil Dump 3	GPS reading not captured			About 20-30 MSA and ESA Implements on large spoil dump
Spoil Dump 4		S34 05.853	E23 21.551	Relatively large numbers of ESA and MSA tools, including chunks, chunks, retouched flakes, cores, massive flakes on large spoil dump

Spoil Dump 5		S34 05.884	E23 21.525	Diffuse scatter of ESA and MSA flakes on spoil dump
Spoil Dump 6		S34 05.816	E23 21.544	A few MSA flakes on a spoil dump
Spoil Dump 7		S34 05.800	E23 21.549	About 20 ESA and MSA tools, including 2 handaxes on a large spoil dump
Spoil Dump 8		S34 05.802	E23 21.572	Relatively large numbers of MSA and ESA tools on a series of large spoil dumps, including blades, flaked chunks, cores, hammerstone, large cores, a large chopper.
Spoil Dump 9		S34 05.826	E23 21.708	A few MSA flakes and one ESA flaked chunk on spoil dump of gravel
Spoil Dump 10		S34 05.794	E23 21.669	A few MSA flakes, one long blade tool, and 1 ESA flake found on a small flat spoil dump
Parking		S34 05.818	E23 21.442	A few MSA flakes were found in the parking area
Grave		S34 05.928	E23 21.839	Grave of Andrew Abraham Stockenstrom Le Fleur (1867-1941)

Table 1. Spreadsheet of site observations