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**PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT
PROPOSED GAMKA PRIVATE WILDERNESS RESERVE
CALITZDORP**

Prepared for

WITHERS ENVIRONMENTAL CONSULTANTS

By

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Executive summary

Withers Environmental Consultants requested that the Agency for Cultural Resource Management undertake a specialist Phase 1 Archaeological Impact Assessment (AIA) of the proposed Gamka Private Wilderness Reserve near Calitzdorp, in the Western Cape Province.

The proposed wilderness reserve will comprise approximately 3000 ha and comprise the consolidation and rezoning of some 32 properties for the purpose of the development of 12 Resort even and a reserve manager's house.

In addition, the developer is also proposing the upgrading of existing access roads and the construction of several new 2-track roads, and a water pipeline.

The extent of the proposed development area (approximately 60 ha) falls within the requirements for an archaeological impact assessment as required by Section 38 of the South African Heritage Resources Act (No. 25 of 1999).

The aim of the study is to locate and map archaeological sites and heritage remains that may be negatively 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.

Agriculture covers about 25 ha of the affected properties, while the rest of the farms in the proposed reserve have natural vegetation with very little infrastructure on them, other than a few farm tracks and some fencing.

The mountains in the area (the Swartberg and Bakenkop) are high, rugged and steep-topped.

By far the most interesting archaeological occurrence located during the study is a possible Later Stone Age herder site found in the proposed development area close to Resort Erven 2, and alongside the main access road onto the property.

This site has been called GMK 1.

The archaeological remains comprise large numbers of stone tools in quartz, dolerite, quartzite, silcrete and chalcodony, occurring in an area about 0.5 ha in extent. It is also very significant that several elliptical grindstones were found on the site. Recent research suggests that such grooved stones date between ca. the 11th-14th centuries AD.

Despite the fact that the immediate surrounding area is highly degraded and eroded (as a result of overgrazing), and the archaeological remains occur in a visibly disturbed context, indications are that site is possibly the first pre-colonial herder camp to be located in this region of the Klein Karoo.

As a result, the site has been graded **medium-high** local significance.

This site will not be directly impacted by the proposed development, however.

Early Stone Age and some Middle Stone Age tools were also located during the baseline study, but are very thinly dispersed over the development area.

These remains have been graded **low** local significance.

The specialist Phase 1 AIA of the proposed Gamka Private Wilderness Reserve has rated the potential impacts to significant archaeological material as being low in Resort Erven 1-12 and the reserve manager's house.

The study has also rated the potential impacts to archaeological material as being low to negligible in the proposed access roads, and water pipeline.

Secondary (or long-term cumulative) impacts may, however, impact negatively on the archaeological site GMK 1 located alongside the main access road to the affected property.

Examples of such impacts include the increased presence of people in the area as a result of the development, as well as impacts relating to construction of resort units, piling of materials, upgrading of the main access road, and the construction of the water pipeline.

With regard to the proposed Gamka Private Wilderness Reserve, the following recommendations are therefore made:

- A controlled surface collection of archaeological heritage remains must be made from GMK 1.
- A small excavation could also be considered as a means of determining the age of archaeological remains that occur on the site.
- Heritage remains may be used for possible display purposes in a suitable structure in the proposed nature reserve.
- Should any human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to the South African Heritage Resources Agency (Mrs Mary Leslie @ 021 462 4502).

INTRODUCTION

1. Background and brief

Withers Environmental Consultants requested the Agency for Cultural Resource Management to undertake a specialist Phase 1 Archaeological Impact Assessment (AIA) of the proposed Gamka Private Wilderness Reserve near Calitzdorp, in the Western Cape Province.

The proposed Wilderness Reserve will comprise approximately 3000 ha and comprise the consolidation and rezoning of some 32 properties for the purpose of the development of 12 Resort Zone II erven and a reserve manager's house.

In addition, the developer is proposing the upgrading of existing access roads and the construction of several new 2-track roads, primarily for game viewing purposes, as well as a water pipeline.

The 32 properties are currently zoned Agriculture Zone I, but will be rezoned to Resort Zone II (for the proposed development), and Open Space III for operating the proposed Private Wilderness Reserve.

The affected properties include various portions of the Farms Huisrivier No. 14, Majies Valley No. 2, Oudehuiskloof No. 1, Farms 70 and 71, and Opzoek No. 73.

The extent of the proposed development area (approximately 60 ha) falls within the requirement for an archaeological impact assessment as required by Section 38 of the South African Heritage Resources Act (No. 25 of 1999).

The aim of the study is to locate and map archaeological sites and remains that may be negatively 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 60 ha development ha areas;
- to identify and map any sites of archaeological significance within the proposed development area;
- to assess the sensitivity and conservation significance of archaeological sites within the proposed development area;
- 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 area.

3. THE STUDY SITE

A 1:50 000, site locality map is illustrated in Figure 1.

An aerial photograph of the study area and the proposed development is illustrated in Figure 2.

The proposed Gamka Private Wilderness Reserve lies within a rugged part of the Little Karoo, approximately 13-km west north west of Calitzdorp and about 30 km due east of Ladismith. The property is located between the foothills of the Swartberg Mountains to the north, the Gamka River to the east, and the Huisrivier Pass (R62) to the south.

Most of the properties in the proposed wilderness area have been used in the past. Land adjacent to the floodplain of the Gamka River is used for various crops (mainly Lucerne), fruit and vineyards. Some of the lands in the proposed reserve area are still used for grazing of cattle and goats.

The proposed development will be nestled into appropriate gaps within dense thicket vegetation along the Ouhoutskloofspruit on various portions of the Farm Huisrivier No. 14 (refer to Figure 2).

Existing and proposed vehicle tracks on the property will be used for game drive routes and hiking trails and for providing access to the proposed development nodes.

4. APPROACH TO THE STUDY

4.1 Method of survey

The site visit and assessment took place on the 15th and 16th of March 2005.

The approach followed in the archaeological study entailed a systematic foot survey of each of the proposed 2000m²-resort erven and the reserve manager's house.¹

The immediate surrounding areas were also searched for archaeological remains, including approaches to each of the proposed erven, including the reserve manager's house.

The proposed new access roads and the proposed water pipeline were also searched and/or assessed for archaeological remains.

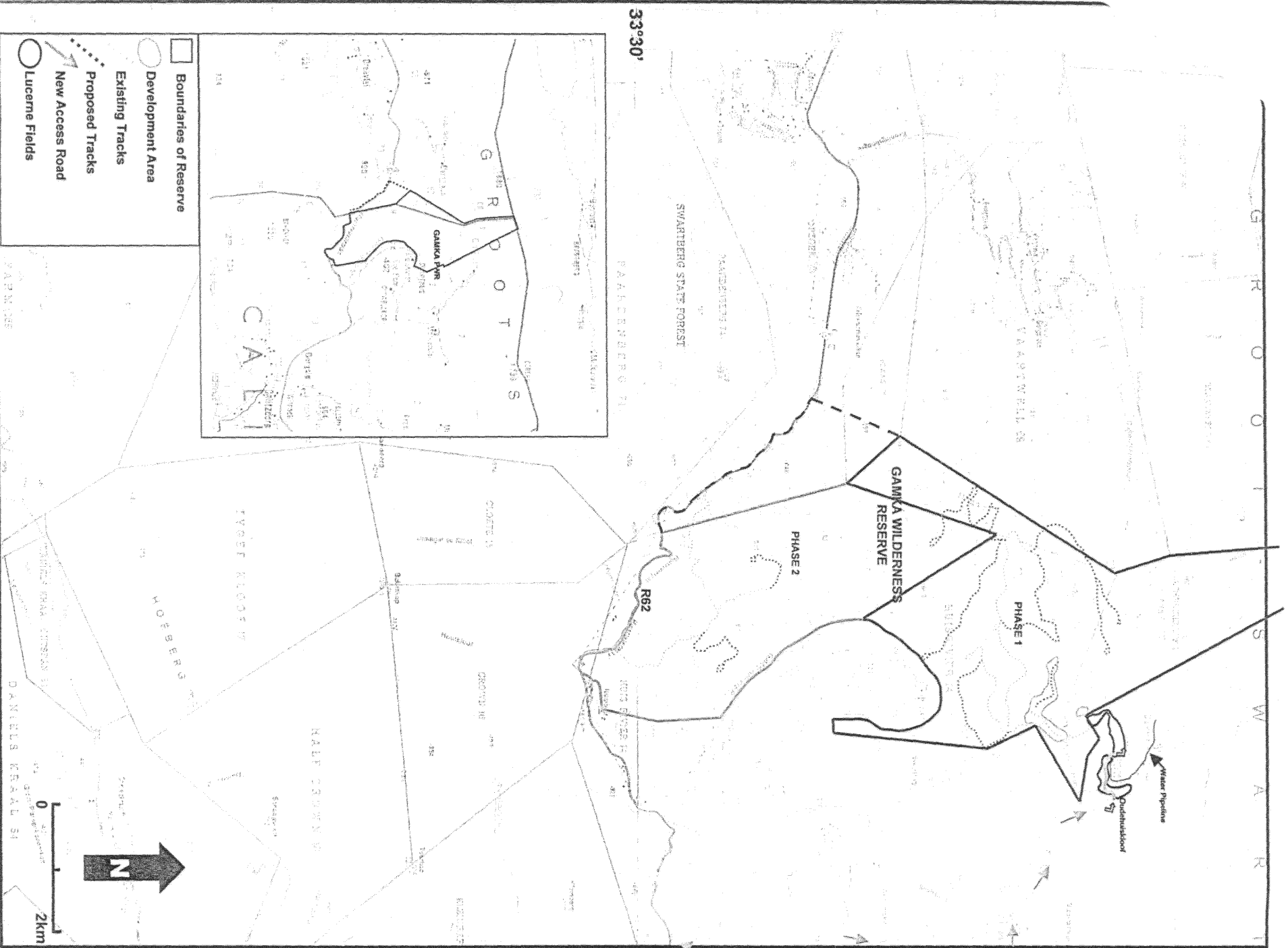
Archaeological occurrences were recorded and given a co-ordinate, using a Garmin Gecko 201 GPS set on map date

4.2 Limitations

Dense Thicket and Fynbos vegetation types cover most of the proposed 60 ha development area, resulting in extremely low archaeological visibility (Figures 3 & 4).

Much of the development area is inaccessible on foot, the only access being by way of 4x4 vehicle on two track paths. The mountains in the area (the Swartberg and Bakenkop) are high, rugged and steep-topped.

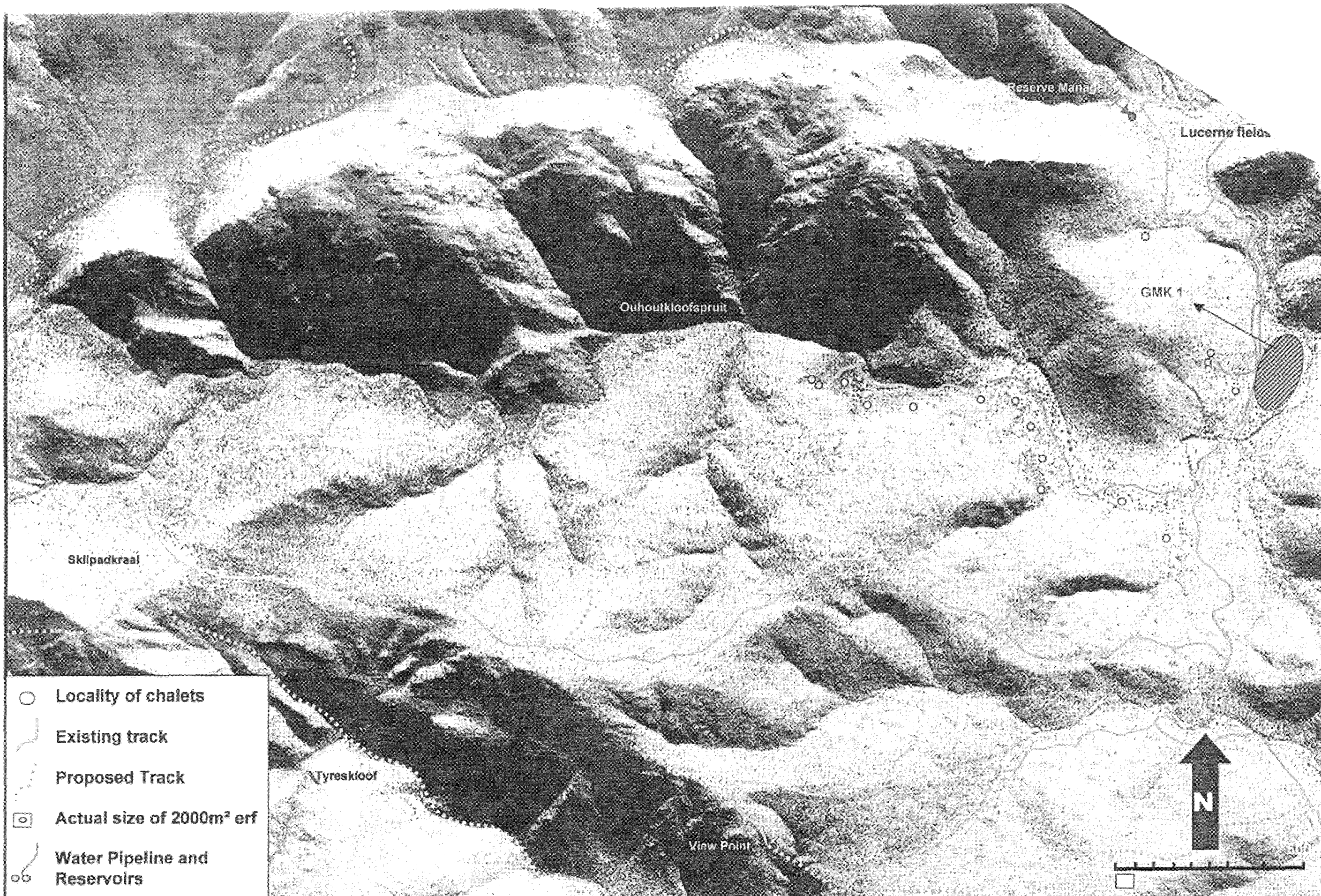
¹ A photographic record and GPS co-ordinates for each of the proposed 12 erven has been made



Access off R62

1°30' PROPOSED GAMKA PRIVATE WILDERNESS RESERVE, CALITZDORP

FIGURE 1



PROPOSED GAMKA PRIVATE WILDERNESS RESERVE, CALITZDORP : SITE DEVELOPMENT PLAN : 12 UNITS

FIGURE 2

cess to the proposed resort erven and associated infrastructure was, however, easy and there were no limitations associated with this aspect of the proposed project.

5. LEGISLATIVE REQUIREMENTS

5.1 The National Heritage Resources Act (Act No. 25 of 1999)

5.1.1 Structures (Section 34 (1))

No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the South African Heritage Resources Agency (SAHRA), or Heritage Western Cape.

5.1.2 Archaeology (Section 35 (4))

No person may, without a permit issued by the SAHRA or Heritage Western Cape, destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object.

5.1.3 Burial grounds and graves (Section 36 (3))

No person may, without a permit issued by SAHRA or Heritage Western Cape, destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority.

6. IMPACT ASSESSMENT AND DESCRIPTION

GMK 1 (GPS reading S ° 33 26 485 E 21 ° 36 830)

The remains of a possible Stone Age herder campsite were located about 100 m from Resort Erven 2 (refer to Figure 2).

The site is located between the main access road onto the property and a small stream/river (the Ouhoutkloofspruit) that feeds into the Gamka River about 1 km further to the north east.

The receiving environment is well vegetated, with relatively steep slopes above the access road, flattening out below the road and alongside the river.

The archaeological remains at GMK 1 occur in a primary (i.e. archaeological) context, albeit in a highly disturbed one. Disturbance has been caused mainly as a result of overgrazing, heavy trampling and erosion (Figures 5 & 6).

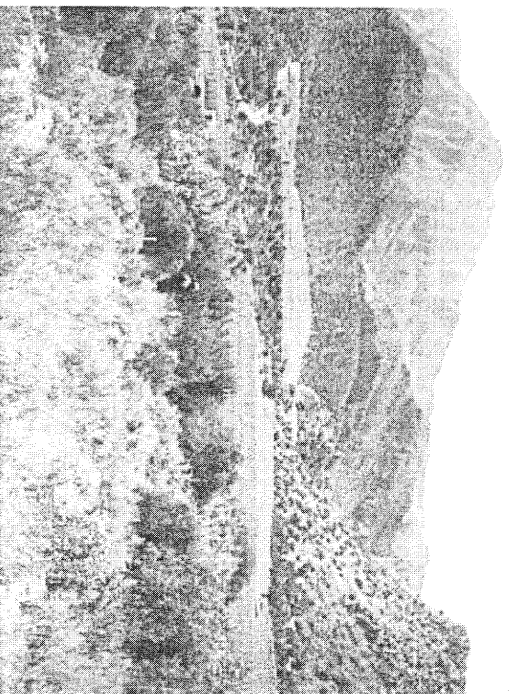


Figure 3 Site context. Note Lucerne Fields in the foreground.



Figure 4. Site context.



Figure 5. GMK 1. Note disturbed context of site.



Figure 6. GMK 1. Note disturbed context in which artefacts were located.

The archaeological remains comprise relatively large numbers of stone tools, mostly in quartz, dolerite and quartzite, but some in silcrete and chalcedony, occurring in an area about 0.5 ha in extent. The scatters of tools are exposed and visible on the surface of highly eroded beds of compacted brown clays.

The quartz, quartzite and dolerite would have been available locally, but the source of the silcrete and chalcedony is unknown.

The majority of the tools are typical of the Later Stone Age² (LSA), comprising both retouched, utilised and unmodified flakes, small irregular cores, blade tools, bladelets, hammerstones, upper grindstones, ground stone pieces, and chunks.

Several Middle Stone Age (MSA) flakes were also found.

While the tools are spread quite widely, but relatively thinly and unevenly over the surrounding landscape, several larger more discreet scatters of tools were noted. One such scatter located behind bushes a few meters from the main access road, comprised numerous stone tools, including flakes, blades, cores, and several hammerstones and grindstone fragments (refer to Figure 6). A very large ostrich eggshell bead was also found among the scatter of tools.

Several smaller scatters of tools concentrated mainly around drainage lines and a small donga were also noted.

No clear evidence of spatial patterning occurs, but there is ample evidence of flaking activity on the site.

No pottery was found.

It is also very significant that several elliptical grindstones were located on the site (Figures 7 & 8). The grindstones – one with traces of red ochre, were found fairly isolated from the general scatter of stone tools.

² A term referring to the last 20 000 years of precolonial history in southern Africa.

Recent research suggests that elliptical grooved stones such as these date sometime between ca. the 11th and 14th centuries AD (Dr Karim Sadr, Department of Geography and Archaeology, University of Witwatersrand pers. comm.).

According to Dr Sadr (pers. comm.), such grooved stones have not previously been recorded in this region of the Klein Karoo. Their known distribution has so far been confined to the southwestern Cape.

Despite the fact that the immediate surrounding area is highly degraded and eroded (as a result of overgrazing), and the archaeological remains occur in a visibly disturbed context, indications are that site is possibly the first pre-colonial herder camp to be located in this region of the Klein Karoo.

As a result, the site has been graded **medium-high** local significance.

It is important to note, however, that the site will not be directly impacted by the proposed development.



Figure 7. Elliptical grooved stone.



Figure 8. Elliptical grooved stone.

Other finds

Several Early Stone Age³ (ESA) and Middle Stone Age⁴ (MSA) tools were also located during the baseline study of the proposed project, but are very thinly dispersed over the development area.

One quartzite MSA flake was found during a search of proposed Resort Erven 1.

Four ESA tools, including two incomplete handaxes, one cleaver, and two large irregular cores, (GPS reading S° 33 26 479 E 21° 36 729) were found on the relatively steep east facing slopes within Resort Erven 2 (Figure 9).



Figure 9. ESA tools in proposed Resort Erven 2.

One MSA quartzite flake was found during a search of proposed Resort Erven 7.

One large ESA quartzite core was found during a search of proposed Resort Erven 9.

One MSA quartzite point and one MSA quartzite flake was found during a search of proposed Resort Erven 11 and 12.

The above remains have all been graded **low** local significance.

6.1 Proposed access roads

No archaeological heritage remains were located during an assessment and a search of the proposed 2-track access roads. The high altitude roads are located in rugged, densely vegetated areas, resulting in extremely low archaeological visibility (Figures 10-12). Given the location of the proposed access roads, it is considered unlikely that any significant archaeological heritage remains would be located in these (high altitude) areas.

There are also no kloofs or rocky outcrops located close to the proposed access roads, which might otherwise contain protected rock art sites.

³ A term referring to the period between 2 million and 200 000 years ago.

⁴ A term referring to the period between 200 000 and 20 000 years ago.



Figure 10. Context for proposed access road.

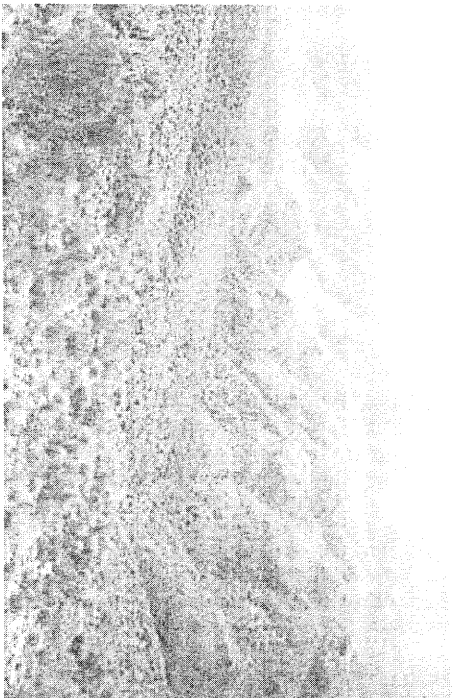


Figure 11. Context for proposed access road.



Figure 12. Context for proposed access road.

.2 Proposed water pipeline

No archaeological heritage remains were found during a search of the proposed water pipeline (refer to Figure 2).

It should be noted, however, that the proposed pipeline route is located alongside (or at least close to) GMK 1.

The first section of the proposed pipeline route crosses highly disturbed agricultural lands, while the major portion of the route is located alongside the main access road to the affected properties (refer to Figure 2).

7. IMPACT STATEMENT

The specialist Phase 1 AIA of the proposed Gamka Private Wilderness Reserve has rated the potential impacts to significant archaeological material as being **low** in Resort Erven 1-12 and the reserve manager's house.

The study has also rated the potential impacts to archaeological material as being **low** in the proposed access roads, and water pipeline.

The probability of locating significant archaeological remains during implementation of the project (for example vegetation clearing operations) is likely to be improbable.

Secondary (or long term cumulative) impacts may, however, impact negatively on the possible Stone Age herder campsite located close to Resort Erven 2 and alongside the main access road to the proposed reserve.

Examples of such impacts include the increased presence of people in the area as a result of the proposed development, as well as impacts relating to construction of resort units, piling of materials, upgrading of access roads, and the construction of the water pipeline.

Human burials may also be exposed or uncovered during earthworks and excavations.

8. RECOMMENDATIONS

With regard to the proposed Gamka Private Wilderness Reserve, the following recommendations are made:

- A controlled surface collection of archaeological heritage remains must be made from GMK 1. This site is potentially threatened by the proposed development.
- A small excavation could also be considered a means of determining the age of archaeological remains that occur on the site.
- Heritage remains may be used for possible display purposes in a suitable structure in the proposed nature reserve.
- Should any human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to the South African Heritage Resources Agency (Mrs Mary Leslie @ 021 462 4502).