

**A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT OF THE PROPOSED
DEVELOPMENT OF A STAFF VILLAGE AND ASSOCIATED INFRASTRUCTURE
ON PORTION 1 OF THE FARM FORT BROWN NO. 98, KWANDWE PRIVATE
GAME RESERVE IN THE ALBANY DISTRICT, EASTERN CAPE PROVINCE**

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Note: This report follows the minimum standard guidelines required by the South African Heritage Resources Agency for compiling Archaeological Phase 1 Impact Assessment (AIA) reports and is part of an Environmental Impact Assessment.

EXECUTIVE SUMMARY

Eastern Cape Heritage Consultants cc was appointed by CEN Integrated Environmental Management Unit to conduct a Phase 1 Archaeological Impact Assessment (AIA) for the proposed construction of a staff village and associated infrastructure in the Kwandwe Private Game Reserve in the Albany District, Eastern Cape Province.

The purpose of the study was to conduct a survey of possible archaeological sites for the proposed development to establish the range and importance of the archaeological sites/remains, the potential impact of the development and to make recommendations to minimize possible damage to these sites.

The archaeological visibility was good, but archaeological materials were only observed where the top soil has been eroded and in vehicle track. Mainly Middle Stone Age stone tools were observed. These stone tools were in secondary context and not associated with any other archaeological material. However, other significant sites/materials may be covered by soil and vegetation

The stone tools are considered to be of low cultural significance because they are in secondary context and not associated with any other archaeological remains. The development is close to the Great Fish River and freshwater shell middens may be exposed during the development. It is recommended that if freshwater mussel middens or any concentrations of other archaeological materials are uncovered during the development, it must be reported immediately to the Albany Museum and/or the Eastern Cape Provincial Heritage Resources Authority. Construction managers/foremen should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.

PROJECT INFORMATION

The type of development

The proposed development in the Kwandwe Private Game Reserve includes the construction of a staff village of approximately 40 residential units, an associated community facility, services and infrastructure.

The applicant

Kwandwe Private Game Reserve

The consultant

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Purpose of the study

The purpose of the study was to conduct a survey of possible archaeological sites for the proposed development of a staff village and associated infrastructure on Portion 1 of the Farm Fort Brown No. 98, Kwandwe Private Game Reserve in the Albany District, Eastern Cape Province. The survey was conducted to establish;

- the range and importance of possible exposed and *in situ* archaeological sites, features and materials,
- the potential impact of the development on these resources and,
- to make recommendations to minimize possible damage to these resources.

Site and location

The development is located within the 1:50 000 topographic reference map 3326BA Fort Brown (Map 1). The proposed site for development is situated approximately 18 kilometres north of Grahamstown close to the R67 main road connecting Grahamstown and Fort Beaufort. The development will take place on a relatively flat plain along the old road a few metres to the west near the south-eastern embankment of the Great Fish River and about 600 metres northwest of Fort Brown (Maps 1-4) (general GPS reading: 33.07.456S; 26.36.567E). The site is well covered by low bushes, shrubs and *Acacia karroo* trees (Figs. 1-2).

Relevant impact assessments, databases and collections

Binneman, J. 2013a. A phase 1 archaeological impact assessment of the proposed construction of an airstrip and family lodge on portion 3 (Koodoos run) (a portion of portion 2) of the farm Nooitgedagt No. 92 and Portion 2 (The Fort) of the farm Koesters Drift No. 129, Kwandwe Private Game Reserve in The Albany District, Eastern Cape Province. Prepared for CEN Integrated Environmental Management Unit. Port Elizabeth. Eastern Cape Heritage Consultants. Jeffreys Bay.

Binneman, J. 2013b. Amended study: A phase 1 archaeological impact assessment of two proposed sites for the construction of a family lodge on portion 3 (Koodoos Run) (a portion of portion 2) of the farm Nooitgedagt No. 92 and portion 2 (the fort) of the farm Koesters Drift No. 129, Kwandwe Private Game Reserve In The Albany District, Eastern Cape Province. Prepared for CEN Integrated Environmental Management Unit. Port Elizabeth. Eastern Cape Heritage Consultants. Jeffreys Bay.

The Albany Museum in Grahamstown houses collections and information from the wider region.

BRIEF ARCHAEOLOGICAL BACKGROUND

Literature review

The area has a rich documented historical past of conflict, change, adaptation and interaction between different groups and individuals (Mostert 1992). The pre-colonial archaeological history of the Kwandwe Game Reserve area is less clear, mainly because little scientific field research has been conducted here. The wider region is rich in archaeological remains and sites and includes many caves, rock shelters and rock paintings. There are also a large number of reports, references and accessioned material in museums of the region and nationally which provide us with a general background on the pre-colonial archaeology. From the archival information and limited field work, it is evident that the area has an interesting and complex archaeological past. The oldest evidence of early inhabitants in the region are large stone tools, called hand axes and cleavers from the Earlier Stone Age (ESA) dating to approximately between 1,5 million and 250 000 years old. Many of these tools were found in the Grahamstown area.

Middle Stone Age (MSA) stone artefacts dating between 250 000 and 30 000 years old are found throughout the region, but carry little information because they are not associated with any other archaeological material. Excavations at MSA sites adjacent to the study area include the well-known type site for the Howieson's Poort Industry (rock shelter with the same name) near Grahamstown (Stapleton & Hewitt 1927).

Later Stone Age open sites, dating to the past 20 000 years are also widely scattered throughout the area. The bulk of information for the wider region comes from the Cape Fold Mountains to the south of the study area where several sites were excavated. Among these are Wilton Large Rock Shelter (Deacon 1972), Melkhoutboom Cave (Deacon 1976) and Uniondale Rock Shelter (Leslie-Brooker 1987). Two rock shelters, Edgehill and Welgeluk excavated by Hall (1990) in the Koonap River Valley close to the study area, provide an excellent archaeological record of exclusive subsistence and cultural risk management strategies during the past 5 500 years for Eastern Cape Midlands. These sites also provided an excellent record of the utilization of riverine food resources such as freshwater mussels and fish. Another small shelter at Adam's Kranz in the Great Fish River valley has also been excavated. A hafted arrowhead was recovered from the site (Binneman 1994). The Eastern Cape Midland, Koonap River valley and the adjacent Winterberg Mountains to the north and Cape Fold Belt to the south are also rich in San and KhoiSan rock art.

Some 50 kilometres north-east of the study area, Derricourt (1977) excavated several mounds at Middledrift and Ann Shaw where he found a stone tool tradition in the bottom layers which he called the Middledrift Tradition, dating to some 5 000 years old. The origins of the upper deposits of these mounds are not clear, but it would appear that they were associated with pastoralist groups. Thin, fine, mainly undecorated pot shards, a KhoiSan burial and complete cow burials found in these mounds, would strongly suggest Khoi occupation. Early European travellers such as Beutler (Theal 1896) also found the Gonaqua Khoi in 1752 living here and along the Keiskamma River towards the nearby coast.

Although there are no records of Early Iron Age (first farming communities) sites or material from this area, it is possible that such settlements may be present in the region (Maggs 1973). Evidence in the form of thick walled well-decorated pot shards is present along the coast (Rudner 1968) and the nearest settlement was excavated just west of East London (Nongwaza 1994). Research in the Great Kei River Valley indicates that the first mixed farmers were already settled in the Eastern Cape A.D. 600 - 700 (Binneman 1996). At Ann Shaw, Derricourt

also excavated a Late/Historical Iron Age settlement with grain pits and ash heaps. The grain pits were of typical Nguni type jar-shaped vessels with a small opening.

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ARCHAEOLOGICAL INVESTIGATION

Methodology

The survey of the site proposed for the development of a staff village and associated infrastructure was conducted accompanied by armed game guards because of dangerous animals in the game reserve. The investigation was conducted on foot and GPS readings were taken with a Garmin and all important features were digitally recorded.

Limitations and assumptions

The site has been disturbed in the past by the construction of the old main road between Grahamstown and Fort Beaufort and small scale farming activities. The area comprises of reddish alluvial soil covered by low bushes and patches of dense *Acacia karroo* trees. Due to the relatively open terrain the archaeological visibility was good, but archaeological materials were only observed where the top soil has been eroded and in vehicle track (Figures 1-2). The experiences and knowledge gained from previous surveys on the property and other investigations in the wider Cape Midland region provided an information base to make assumption and predictions on the incidences and the significance of possible pre-colonial archaeological sites/material which may be located in the area, or which may be covered by the soil and vegetation.

Findings

The most common stone tools observed throughout the area investigated were of Middle Stone Age (MSA) origin (dating between 250 000 and 30 000 years old), but a fine hand axe of Earlier Stone Age (ESA) origin (dating between 1,5 million and 250 000 years old) was also located (Figure 2). These stone tools are located where reddish top soil were eroded or disturbed by vehicle tracks and the old main road. The tools are manufactured on quartzite and observed randomly without any recognized distribution patterns. Earlier Stone Age stone tools are found throughout the wider region. Most of the Middle Stone Age stone tools were thick, small 'informal' flakes (with typical faceted striking platforms), cores and chunks with few of other typical MSA tool types such as 'true' points and blades. The stone tools were in secondary context and not associated with any other archaeological material and of low cultural significance. The Albany Museum houses large collections of stone tools from the wider area and therefore no further action is required.

Apart from the stone tools no other archaeological remains such as bone, ostrich eggshell or pottery were observed during the investigation, but it is possible that such materials may be buried. The development is close to the Great Fish River in an area where it is expected to find pre-colonial archaeological campsites and freshwater mussel shell middens of KhoiSan and even possibly early farming communities.

There are no graves or buildings older than 60 years on the property. In general it would appear that the area is of low cultural sensitivity and that it is unlikely that any sensitive archaeological remains will be exposed during the development.

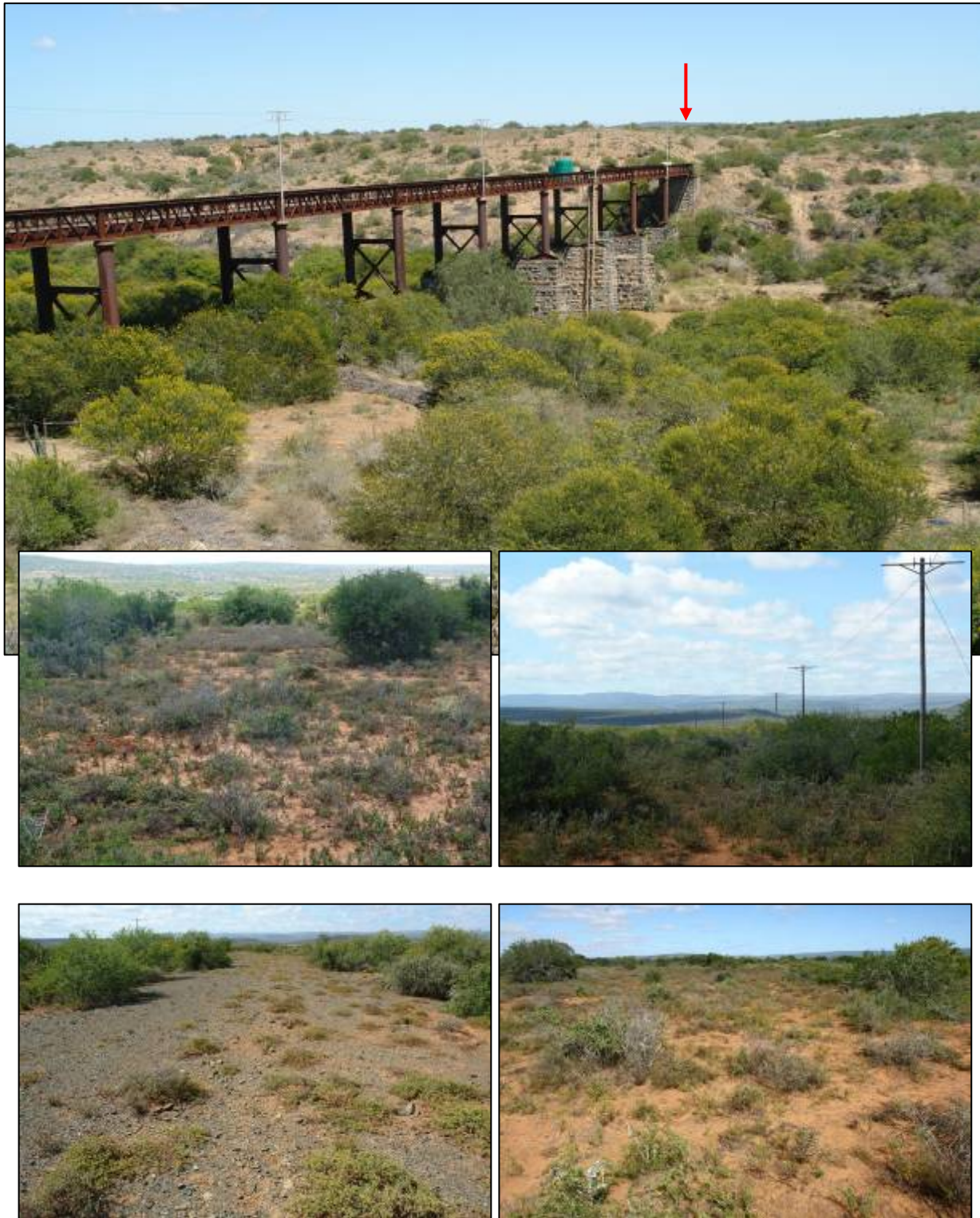


Figure 1. A view from the new bridge over the Great Fish River (with the old bridge in the foreground) towards the proposed site for the development of a staff village and associated infrastructure (marked by the red arrow, main image) and general views of the site itself (insert images).



Figure 2. A view of Middle Stone Age stone tools exposed in a vehicle track (main image), close-up images of the tools (top row and bottom left inserts) and an image of an Earlier Stone Age hand axes located (bottom right insert).

DISCUSSION AND MITIGATION

The main impact on archaeological sites/remains will be the physical disturbance of material and context. The clearing of the vegetation, levelling and other construction activities may expose, disturb and displace archaeological sites/material. However, from the investigation, it would appear that the proposed area earmarked for development is of low archaeological sensitivity and the visual impact on the surrounding cultural landscape will also be low. Mainly Middle Stone Age stone artefacts were observed, but they are considered to be of low cultural significance, because they are in secondary context and not associated with any other archaeological remains. The Albany Museum houses large collections of stone tools from the wider area. No further action is required and the developments may proceed as planned. Notwithstanding, important materials may be covered by soil and vegetation. Although it is unlikely that any sensitive archaeological remains will be exposed during the development, there is always a possibility that human remains and/or other archaeological and historical material may be uncovered. It is recommended/suggested that;

1. The proposed development will take place close to the Great Fish River, in an area where one would expect to find freshwater mussel middens. If such features or any other concentrations of archaeological material are exposed, work must stop immediately and reported to the archaeologist at the Albany Museum (046 6222312) or to the Eastern Cape Provincial Heritage Resources Authority (043 6422811).
2. Construction managers/foremen should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites. It is suggested that a person be trained to be on site to report to the site manager if sites are found.

GENERAL REMARKS AND CONDITIONS

Note: This is an Archaeological Impact Assessment (AIA) report compiled for the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) to enable them to make informed decisions regarding the heritage resources assessed in this report and only they have the authority to revise the report. This report must be reviewed by the ECPHRA where after they will issue their Review Comments to the EAP/developer. The final decision rests with the ECPHRA who must grant permits if there will be any impact on cultural sites/materials as a result of the development

This report is a Phase 1 Archaeological Impact Assessment and does not exempt the developer from any other relevant heritage impact assessments as specified below:

In terms of the National Heritage Resources Act, No. 25 of 1999 (section 38) ECPHRA may require a full Heritage Impact Assessment (HIA) to assess all heritage resources, that includes *inter alia*, all places or objects of aesthetical, architectural, historic, scientific, social, spiritual, linguistic, or technological significance that may be present on a site earmarked for development. A full Heritage Impact Assessment (HIA) should assess all these heritage components, and the assessment may include archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

It must be emphasized that this Phase 1 AIA is based on the visibility of archaeological sites/material and may not therefore reflect the true state of affairs. Sites and material may be covered by soil and vegetation and will only be located once this has been removed. In the event of such finds being uncovered during construction activities, ECPHRA or an archaeologist must be informed immediately so that they can investigate the importance of the sites and excavate or collect material before it is destroyed (see attached list of possible archaeological sites and material). The developer must finance the costs should additional studies be required as outlined above. The *onus* is on the developer to ensure that the provisions of the National Heritage Act No. 25 of 1999 and any instructions from ECPHRA are followed. The EAP/developer must forward this report to ECPHRA in order to obtain their Review Comments, unless alternative arrangements have been made with the heritage specialist to submit the report.

APPENDIX A: brief legislative requirements

Parts of sections 35(4), 36(3) and 38(1) (8) of the National Heritage Resources Act 25 of 1999 apply:

Archaeology, palaeontology and meteorites

35 (4) *No person may, without a permit issued by the responsible heritage resources authority—*

- (a) *destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;*
- (b) *destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;*
- (d) *bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.*

Burial grounds and graves

36. (3) (a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—
- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
 - (b) destroy, damage, alter, exhume, 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; or
 - (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

Heritage resources management

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as –
- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
 - (b) the construction of a bridge or similar structure exceeding 50m in length;
 - (c) any development or other activity which will change the character of the site –
 - (i) exceeding 5000m² in extent, or
 - (ii) involving three or more erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA, or a provincial resources authority;
 - (d) the re-zoning of a site exceeding 10 000m² in extent; or
 - (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must as the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

APPENDIX A: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM INLAND AREAS: guidelines and procedures for developers

Human Skeletal material

Human remains, whether the complete remains of an individual buried during the past, or scattered human remains resulting from disturbance of the grave, should be reported. In general human remains are buried in a flexed position on their side, but are also found buried in a sitting position with a flat stone capping. Developers are requested to be on alert for the possibility of uncovering such remains.

Freshwater mussel middens

Freshwater mussels are found in the muddy banks of rivers and streams and were collected by people in the past as a food resource. Freshwater mussel shell middens are accumulations of mussel shell and are usually found close to rivers and streams. These shell middens frequently contain stone tools, pottery, bone, and occasionally human remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m² in extent, should be reported to an archaeologist.

Large stone cairns

They come in different forms and sizes, but are easy to identify. The most common are roughly circular stone walls (mostly collapsed) and may represent stock enclosures, remains of wind breaks or cooking shelters. Others consist of large piles of stones of different sizes and heights and are known as *isisivane*. They are usually near river and mountain crossings. Their purpose and meaning is not fully understood, however, some are thought to represent burial cairns while others may have symbolic value.

Stone artefacts

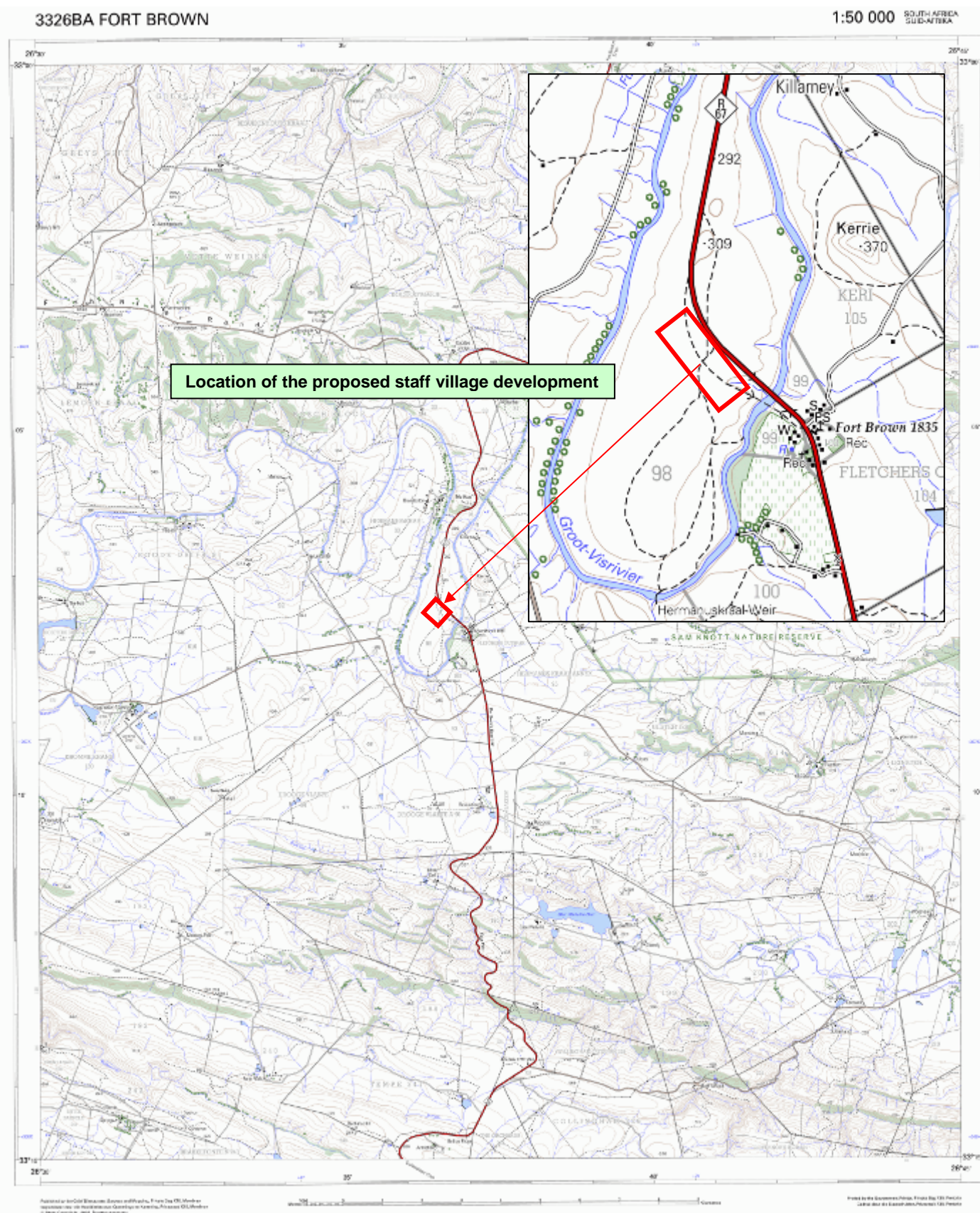
These are difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately and archaeologists notified.

Fossil bone

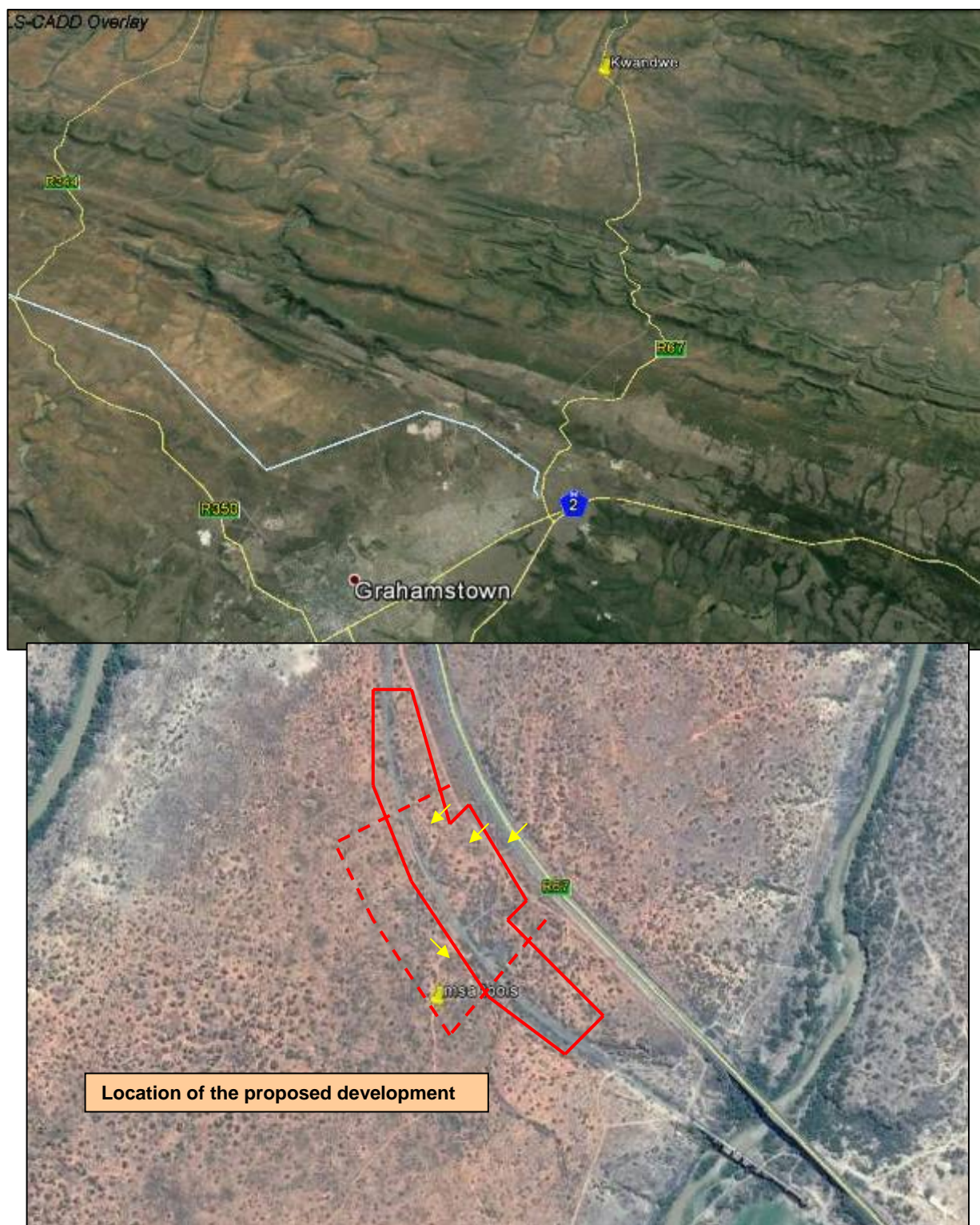
Fossil bones may be found embedded in geological deposits. Any concentrations of bones, whether fossilized or not, should be reported.

Historical artefacts or features

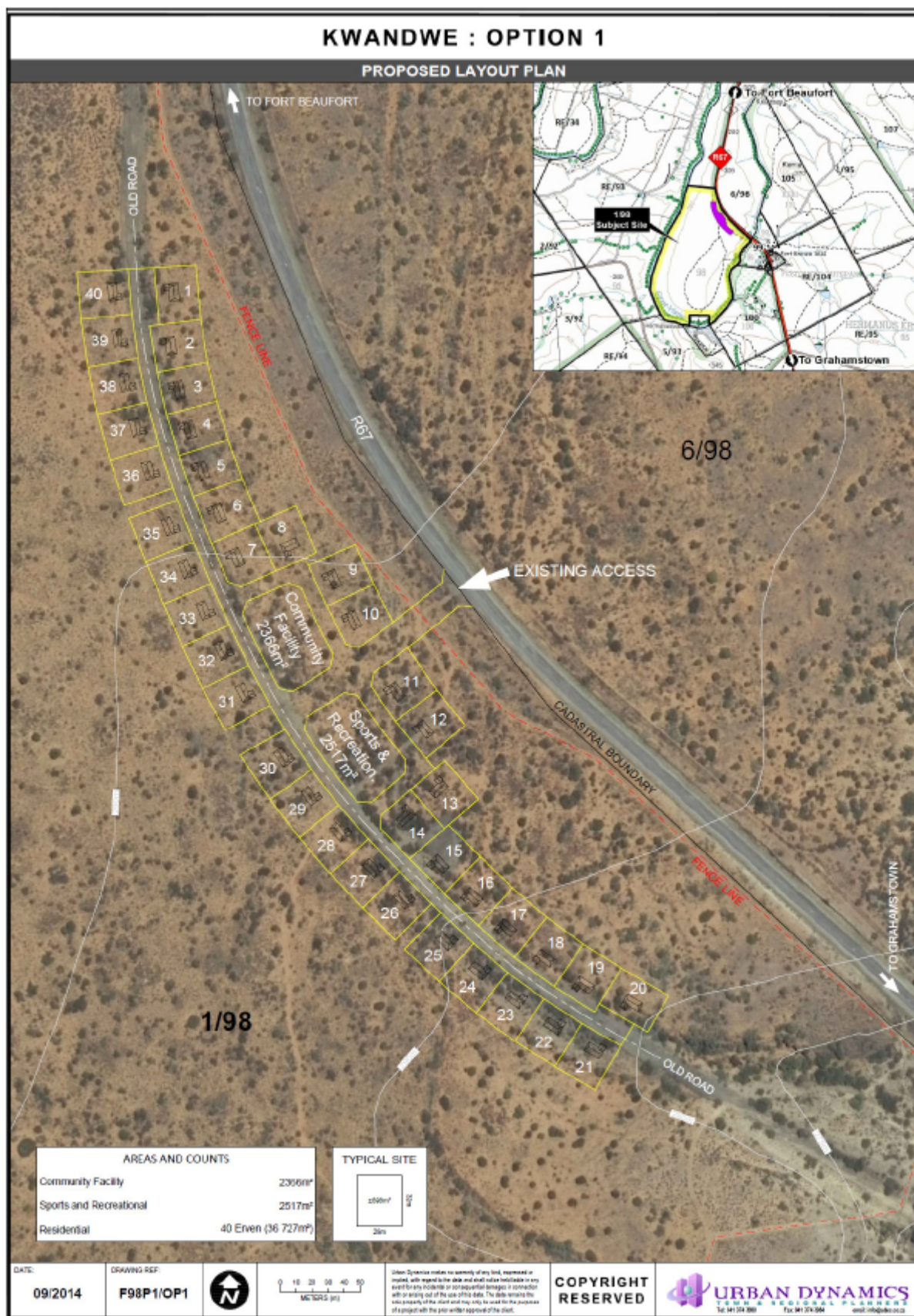
These are easy to identify and include foundations of buildings or other construction features and items from domestic and military activities.



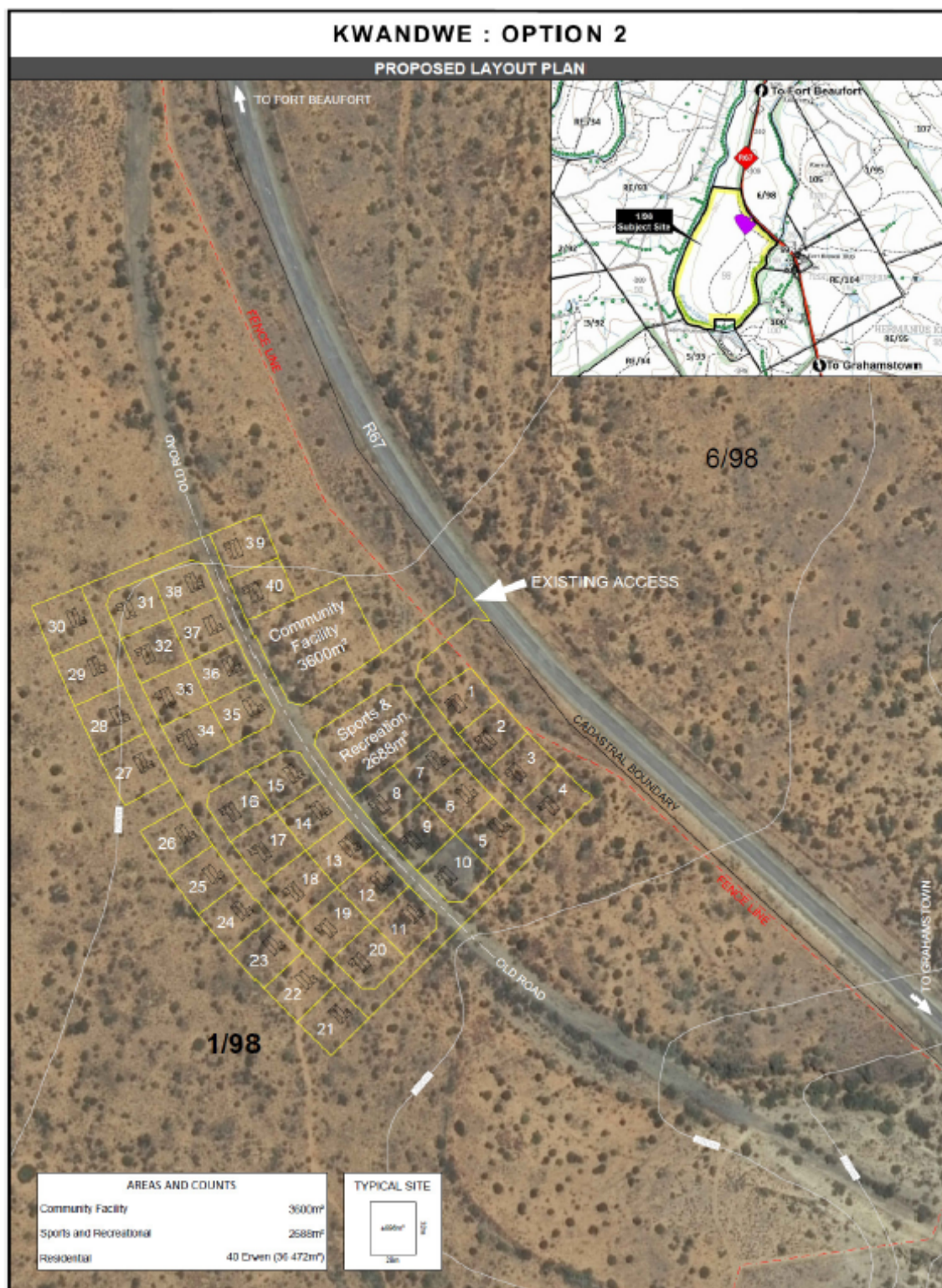
Map 1. 1:50 000 Maps indicating the location of the proposed site for the development of a staff village and associated infrastructure. The red lines outline the approximate size of the development.



Map 2. An aerial images indicating the location of the proposed site for the development of a staff village and associated infrastructure. The red lines outline the approximate size of the development and the yellow peg and arrows where occasional Middle and Earlier Stone Age stone tools were observed.



Map 3. The layout plan of option 1 for the proposed development of a staff village and associated infrastructure (map courtesy CEN Integrated Environmental Management Unit).



Map 4. The layout plan of option 2 for the proposed development of a staff village and associated infrastructure (map courtesy CEN Integrated Environmental Management Unit).