

**A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT FOR THE PROPOSED INFRASTRUCTURE DEVELOPMENT AND UPGRADES WITHIN THE GREAT FISH RIVER NATURE RESERVE, MAKANA LOCAL MUNICIPALITY, RAYMOND MHLABA LOCAL MUNICIPALITY AND THE NGQUSHWA LOCAL MUNICIPALITY, EASTERN CAPE PROVINCE.**



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## **A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT FOR THE PROPOSED INFRASTRUCTURE DEVELOPMENT AND UPGRADES WITHIN THE GREAT FISH RIVER NATURE RESERVE, MAKANA LOCAL MUNICIPALITY, RAYMOND MHLABA LOCAL MUNICIPALITY AND THE NGQUSHWA LOCAL MUNICIPALITY, EASTERN CAPE PROVINCE.**

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

### **EXECUTIVE SUMMARY**

JG AFRIKA, on behalf of the Eastern Cape Parks & Tourism Agency (ECPTA), appointed Eastern Cape Heritage Consultants cc to conduct a Phase 1 Archaeological Impact Assessment (AIA) for the proposed infrastructure development and upgrades within the Great Fish River Nature Reserve (GFRNR) located between Makhanda (Grahamstown) and Alice in the Eastern Cape Province. Vegetation clearing needs to be done along the perimeter fence of the reserve, airfield strips and internal roads needs to be upgraded, specified farm dams will be extended or closed and the construction of houses and associated infrastructure for staff is proposed. The GFRNR comprises of three areas that have been consolidated to form a single management unit namely: the Double Drift Game Nature Reserve (23 500 ha), the Andries Vosloo Kudu Nature Reserve (6 500 ha) and the Sam Knott Nature Reserve (15 500 ha).

The proposed activities will take place within a cultural landscape of high significance due to the location of several heritage resources within the GFRNR, such as pre-colonial archaeological sites, colonial period military sites, European farmhouses and associated buildings and graves as well as Xhosa cultural sites and sites associated with living heritage such as rain trees, the *umhlawayelo* river ritual and *isivivane* stone cairns (Webley 1996). There will however be no direct impact on any of the known heritage resources within the GFRNR as a result of the proposed activities. Due to the cultural significance of the wider area within the GFRNR it is important that special care must be taken where upgrading and maintenance is done near any of the heritage sites along the perimeter fence and elsewhere within the reserve such as historical buildings or graves. Should there be any doubt about the impact of the use of heavy machinery or equipment on any of these sites a historian / heritage practitioner must be appointed to assess the site/s and to make recommendations for mitigation (if required). In general, the majority of the heritage resources within the reserve are not well maintained and as a result the recommendation in the Protected Area Management Plan 2019-2029 for the GFRNR namely that their Heritage Management Plan must be revised, is supported.

The survey was conducted to establish the range and importance of possible archaeological sites/remains, the potential impact of the activities and to make recommendations to minimize possible damage to these sites. Access to the sites that are proposed to be developed for housing and associated infrastructure for staff and the upgrading of airstrips was easy because the roads were in a better condition in comparison to other areas within the reserve. It wasn't possible to investigate all the dams identified for expansion since the access roads were totally overgrown with vegetation and were in a bad condition in general. The internal roads identified for maintenance will be upgraded within the existing road reserves. The archaeological visibility was poor at most of the sites as well as along the perimeter fence due to the dense grass and other vegetation and no archaeological sites/material were observed at any of the areas identified for the infrastructure development and maintenance. Occasional Early Stone Age (ESA) and Middle Stone Age (MSA) stone tools have been observed in the GFRNR in the past as well as at the nearby Kwandwe Private Nature Reserve (Binneman 2015) and Late Stone Age (LSA) sites that includes Rock Art site within the GFRNR have been reported. It is

therefore possible that similar archaeological sites/material may be present within the areas identified for the activities that are currently covered by soil or vegetation. The stone tools that were observed at other locations within and in close proximity to the the reserve were in secondary context and not associated with any other archaeological material.

The proposed activities will take place near the Great Fish River, the Kat River and the Keiskamma River in an area where one would expect to find freshwater mussel middens. It is recommended that if such features or any other concentrations of archaeological material are exposed, it must be reported to the archaeologist at the Albany Museum in Makhanda (Grahamstown) or to the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) so that a systematic and professional investigation can be undertaken. Furthermore, all clearing and construction activities must be monitored and managers/foremen should be informed before clearing/construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites. The ECO can be trained to monitor the clearing of the vegetation and to report finds. It is further recommended that an archaeologist/heritage specialist should conduct a walkthrough of the proposed dams identified for upgrading as well as any new roads that will be developed after these areas have been cleared of vegetation. In general, the proposed areas for the infrastructure development and upgrades appear to be of low archaeological sensitivity and the activities may proceed as planned.

## **PROJECT INFORMATION**

### **Type of development**

The following activities will form part of infrastructure development and upgrades:

- a) Perimeter fence and perimeter road (jeep track) and associated gabion structures:**
  - Repair and maintenance to sections of the perimeter fence around the reserve;
  - A new 3m wide and approximately 100km long road (jeep track) running along the perimeter fence where currently no road exists; and,
  - Installation of new gabions structures along this perimeter track.
  
- b) Internal roads and associated culvert and/or gabion structures:**
  - Upgrading of sections of the existing internal gravel road network measuring approximately 3m wide and with a cumulative length of approximately 75km;
  - Installation of new culverts and/or gabions along the internal road alignment; and,
  - In addition, a few sections of new road will also be developed to connect to the existing road sections along the alignment. The width will not exceed 3m.
  
- c) Dams and pipeline infrastructure associated with existing boreholes:**
  - Upgrading of three (3) existing dams at Botha's Post, Ballysaggart and Inkerman. Each of these dams have a current capacity not exceeding 600kℓ. Once upgraded by means of excavation, each dam will have a new capacity of approximately 2 000kℓ. The height of each dam wall, after upgrading, will not exceed 5m;
  - Decommissioning of eleven (11) unwanted dams by removal of dam walls and the earth to be spread over the area of the dams; and,
  - Installation of new pipeline infrastructure associated with three existing boreholes. Water pipelines will be installed between the boreholes and existing dams to be upgraded. Such pipelines will not be larger than 0.065m in diameter. Location of these pipe alignments must still be confirmed, but will be placed along existing roads and tracks where possible.



**d) Airfields (runway) strips:**

- Refurbishment of the airfield (runway) strips at Kamadolo and Double Drift. The Kamadolo airfield strip will also be extended by 100m x 15m, thereby increasing the footprint of the airfield by 1 500m<sup>2</sup> (0.15ha).

**e) Accommodation units:**

- Construction of a security manager's house (approximately 160 m<sup>2</sup> in size) and installation of twelve (12) modular field ranger accommodation units (approximately 42 m<sup>2</sup> each) distributed into three (3) clusters of four (4) units each. The required services in terms of water and sanitation will be installed. The accommodation units will be using septic tanks and French drains. The cumulative length of the water and sewage pipelines will not exceed 1km and will have a diameter less than 0.065m. A single 6,000ℓ tank would suffice for each cluster, while a 1,750ℓ tank will be installed for the security manager's house.

**f) Workshop and fuel storage:**

- The development of a fuel storage facility and vehicle workshop to be located right next to each other with a combined footprint of approximately 280m<sup>2</sup>. The volume of fuel to be stored at the proposed storage facility will be approximately 5m<sup>3</sup>.

**Applicant**

Eastern Cape Parks & Tourism Agency (ECPTA)

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**Purpose of the study**

The purpose of the study was to conduct a Phase 1 Archaeological Impact Assessment (AIA) for the proposed infrastructure development and upgrades within the Great Fish River Nature Reserve (GFRNR), Makana Local Municipality, Raymond Mhlaba Local Municipality and Ngushwa Local Municipality, 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 areas for the proposed activities are located within the 1:50 000 topographic reference maps 3326 BA Fort Brown (Map1), 3326 BB Breakfast Vlei (Map 2), 3226 DD Alice and 3226 Fort Beaufort. The proposed infrastructure development and upgrades will take place within the GFRNR that includes several farms in the Makana Local Municipality, Raymond

Mhlaba Local Municipality, and the Ngqushwa Local Municipality, Eastern Cape Province. The GFRNR is located between Makhanda (Grahamstown) and Alice (Map 3) and the reserve nestles between the steep river valleys and inter-basin ridges of the Great Fish River catchment area, characterised by dense, semi-succulent, thorny scrub or thicket and notable variations in topography and elevation (Protected Area Management Plan 2019-2029). The proposed activities related to the upgrading of the perimeter fence and the upgrading/construction of new roads will take place where most of the major vegetation types occur within the reserve such as Subtropical Fish River Thicket, savanna and grassland while the remaining activities will take place in relatively flat areas covered by grass and other vegetation (Maps 4-9, figures 1-10). Some of the areas have been disturbed in the past by agricultural and other activities. The major rivers within the GFRNR are the Great Fish River, the Kat River and the Keiskamma River.

### **Selected relevant impact assessments, databases and collections**

Booth, C. 2020. Revised phase 1 archaeological impact assessment (AIA) for the proposed Albany Wind Energy Facility (WEF) and associated infrastructure, situated near Grahamstown, Makana Local Municipality, Eastern Cape Province. EOH Coastal & Environmental Services. Grahamstown. Booth Heritage Consulting. Grahamstown.

Binneman, J. 2015. 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. Prepared for CEN Integrated Environmental Management Unit. Port Elizabeth. Eastern Cape Heritage Consultants. Jeffreys Bay.

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. N Prepared for CEN Integrated Environmental Management Unit. Port Elizabeth. Eastern Cape Heritage Consultants. Jeffreys Bay.

Van Ryneveld, K. 2012. Phase 1 archaeological impact assessment: Ripplemead Packshed, Portion of Grootplaats 4 (Near Peddie), Ngqusha Municipality, Eastern Cape, South Africa. Isi-xwiba Consulting. Queenstown. Archaeomaps Archaeological Consultancy, Beacon Bay.

Anderson, G. 2011. Heritage survey of the proposed Peddie Energy 19 MW photovoltaic facility. Eastern Cape Province. Coastal & Environmental Services. East London. Umlando Archaeological Surveys & Heritage Management. Richards Bay

The Albany Museum in Makhanda (Grahamstown) houses collections and information from the Great Fish River Nature Reserve and 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 archaeology as well as the colonial history of the GFNR has been described in detail by Lita Webley in her

report for the Eastern Cape Cultural Resource Pilot Project on the Great Fish River Reserve (Webley 1996) and will not be repeated here. It is however important to note that the proposed activities will take place within a cultural landscape of high significance due to the location of several heritage resources within the GFRNR, such as pre-colonial archaeological sites, colonial period military sites, European farmhouses and associated buildings and graves as well as Xhosa cultural sites and sites associated with living heritage such as rain trees, the *umhlawayelo* river ritual and *isivivane* stone cairns (Webley 1996). A small shelter at Adam's Kranz in the Great Fish River Nature Reserve has also been excavated and apart from other archaeological material dating from the Later Stone Age a hafted arrowhead, the first to be found in southern Africa, was recovered from the site (Binneman 1994). There were also reports of finds of Early Stone Age and Middle Stone Age artefacts as well as badly faded rock paintings and a freshwater shell midden from other locations in the GFNR. In addition to these finds there is a collection of historical material from the Botha's Post area in the Albany Museum (Webley 1996). The information contained in the Webley report on the Great Fish River Reserve has been included in the Great Fish River Heritage Management Plan and there are also references and recommendations to heritage resources within the GFRNR in the Protected Area Management Plan 2019 - 2029.

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 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 Makhanda (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 Makhanda (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. 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 Middeldrift and Ann Shaw where he found a stone tool tradition in the bottom layers which he called the Middeldrift 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.

At Ann Shaw approximately 2 kilometres from Middeldrift, 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.

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).

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## ARCHAEOLOGICAL INVESTIGATION

### Methodology

The Reserve Manager was contacted prior to the investigation to inform him about the visit and to gain access to the reserve. The field study was conducted in the company of a ranger: Mr. Siphon Mpolweni who has more than 30 years' experience of the reserve. His knowledge of the area was invaluable during the survey and he was able to point out cemeteries and graves along

the route that were overgrown with vegetation and which would have been difficult to find in normal circumstances (Figure 10). He was also consulted about possible locations of archaeological remains, graves and historical buildings and features. All previous relevant survey information for the immediate and adjacent areas was studied before the investigation started and this included the Great Fish River Heritage Management Plan as well as the GFNR's Protected Area Management Plan 2019 - 2029. A Google Earth aerial image study was also conducted of the area prior to the investigation. A large area needed to be assessed for the purpose of the survey but Mr. Mpolweni was able to select the most practical routes to access the majority of proposed activities. GPS readings were taken and all important features were digitally recorded.

### **Limitations and assumptions**

It was not possible to do a complete survey of the areas due to the short grass and dense vegetation in places which made it difficult to locate *in-situ* archaeological sites/materials. Some areas on the property have been cleared of vegetation in the past and there are number of vehicle tracks where the archaeological visibility was relatively good. The experiences and knowledge gained from several other investigations in the wider surrounding region provided background information to make assumption and predictions on the incidences and the significance of possible pre-colonial archaeological sites/material which may be located in the areas, or which may be covered by soil and vegetation.

### **Site surveys**

#### Perimeter fence and perimeter road (jeep track) and associated gabion structures

(General GPS reading: perimeter - south: 33.8.314S; 26.49.137E)

(General GPS reading: perimeter - east: 33.5.853S; 26.56.110E)

(General GPS reading: perimeter - west: 33.0.342S; 26.42.616E)

(General GPS reading: perimeter - north 32.57.470S; 26.49.031E)

The proposed sections for the repair and maintenance of the perimeter fence around the reserve that includes a 100 km long road (jeep track) where no road exists and the installation of new gabion structures are situated within the different types of topography found in the reserve that ranges from mountainous areas with steep cliffs (eastern perimeter) to relatively flat areas covered by dense grass and vegetation (northern perimeter) - (Map 8, figures 1-2).

The archaeological visibility was poor along the majority of the route due to the dense vegetation but the visibility was better in some areas that were less overgrown or that have been disturbed in the past by other activities. No archaeological sites/materials were observed and in general it would appear unlikely that any archaeological remains of significance will be found *in situ* or exposed during the development. There are no known graves or buildings older than 60 years that will be directly impacted by the proposed activity but it is important to take note of some of the historical heritage features that are situated a short distance from the perimeter fence such as the Sam Knott Memorial Building (western perimeter), the Knott Memorial Church with a cemetery (GPS reading: 32.57.470S 26.49.038E) located less than a hundred metres north of the church (northern perimeter), and the Keiskamma Military Barracks and Military Graves (eastern perimeter) - (Maps 10-11, figures 2 and 10).

#### Internal roads and associated culvert and/or gabion structures:

The proposed sections for the upgrading of the existing internal gravel roads and the installation of new culverts and/or gabions along the internal road alignment were difficult to

survey due to the bad condition of the roads and the dense vegetation in places. Spot checks were done from a vehicle and on foot where possible, but the areas surveyed were already disturbed as a result of the construction of the existing gravel roads and the associated culverts and gabions. (Map 9, figure 3). The archaeological visibility was relatively good within the existing internal gravel roads, but no sites/materials were observed. In general it would appear unlikely that any archaeological remains of significance will be found *in situ* or exposed during the development. There are no known graves or buildings older than 60 years located on any of the proposed sections for the upgrading and maintenance of the identified gravel roads. As a result of the dense vegetation it was not possible to survey the few sections of new road that will also be developed to connect to the existing road sections along the alignment. An archaeological walkthrough of the proposed new roads will therefore need to be conducted after vegetation clearing has been done.

#### Dams and pipeline infrastructure associated with existing boreholes:

The upgrading of three (3) existing dams are proposed at different locations within the reserve. Two (2) of the roads leading to the proposed dams are in a very bad condition and are completely overgrown which made it impossible to reach the dams for the purpose of the survey. The capacity of these dams are currently not exceeding 600kℓ and once upgraded each dam will have a new capacity of approximately 2 000kℓ. An archaeological walkthrough of all three (3) of the proposed dam areas and associated water pipelines will therefore need to be conducted after vegetation clearing has been done and the alignment of the pipelines has been confirmed (Map 9).

The eleven (11) unwanted dams will be decommissioned by removal of dam walls and the earth to be spread over the area of the dams. Since these activities will take place within an already disturbed environment no further assessment is required.

#### Airfields (runway) strips:

General GPS reading: Kamadolo airfield - 33.7.874S 26.39.087E

General GPS reading: Double Drift airfield - 32.59.476S 26.50.519E

The airfield (runway) strips near the Kamadolo gate and the Double Drift Office that have been proposed for refurbishment are situated on relatively flat areas covered by grass and other vegetation. The Kamadolo airfield strip will be extended by 100 metres in an area that appears to have been disturbed by other activities in the past. The airfield (runway) strip at Double drift will not be extended but an existing road needs to be realigned because it is currently crossing the runway. The majority of the area identified for the re-alignment of the road has also been disturbed in the past but a short section will go through an undisturbed area covered by grass and dense vegetation (Maps 4 and 7, figure 4).

The archaeological visibility was relatively good, but no sites/materials were observed at either of the proposed sites. In general it would appear unlikely that any archaeological remains of significance will be found *in situ* or exposed during the development. There are no known graves or buildings older than 60 years located on any of the areas identified for the proposed refurbishment, runway extension or road alignment.

#### Accommodation units:

General GPS reading: Security manager's house - 32.59.418S 26.50.232E

General GPS reading: Cluster 1 (Botha's Post) - 32.59.418S 26.50.232E

General GPS reading: Cluster 2 (Kamadolo) - 33.7.712S 26.38.829E

General GPS reading: Cluster 3 (Double Drift) - 33.2.965S 26.55.745E

The proposed security manager's house (Map 7, figure 5) and 12 modular field ranger accommodation units in three (3) clusters of four (4) units each is situated at 4 different locations within the reserve (Maps 4-6, figures 6-8)

The proposed security manager's house is located next to existing accommodation units close to the Double Drift Office in a relatively flat area covered by dense grass and other vegetation, while the same applies to the cluster in the Botha's Post area. Both areas appear to be disturbed in the past by agricultural or other activities. The cluster in the Kamadolo area is proposed in a previously disturbed area on the same footprint where some of the previous units have been demolished. The remaining cluster in the Double Drift area is also situated in an area covered by grass and vegetation but it is in close proximity to an old dilapidated farm house and other structures that appears to be older than 60 years. Several other old farm houses are also located within the general vicinity of this cluster as well as an overgrown cemetery with approximately seven (7) graves of the Du Preez family (GPS reading: 33.3.059S 26.55.890E ) located 260 metres southeast of the cluster. Buildings, structures and graves older than 60 years are protected by the National Heritage Resources Act, No. 25 of 1999 and cannot be damaged or disturbed without a permit from the Eastern Cape Heritage Resources Authority (ECPHRA). The activities will not have a direct impact on the mentioned heritage resources but care should be taken to avoid any damage to these structures during the development.

The archaeological visibility was poor, and no archaeological sites/materials were observed at any of the proposed sites. In general it would appear unlikely that any archaeological remains of significance will be found *in situ* or exposed during the development.

#### Workshop and fuel storage:

General GPS reading: Workshop - 33.8.027S 26.39.037E

General GPS reading: Fuel storage facility - 33.8.025S 26.39.045E

The proposed development of a fuel storage facility and vehicle workshop is situated close to the Kamadolo gate and next to the Sam Knott Office on a relatively flat area covered by patches of grass and other vegetation (Map 4, Figure 9). The archaeological visibility was good, and no archaeological sites/materials were observed. In general it would appear unlikely that any archaeological remains of significance will be found *in situ* or exposed during the development.

## **ASSESSMENT OF THE IMPACTS**

### Direct impacts

**Table 1. The potential physical disturbance and destruction of surface and buried pre-colonial archaeology sites/remains during all developments (rating based on the surface visibility of archaeological remains).**

<p><b>Nature of the Impact</b></p>	<p><b>Possible loss of non-renewable heritage resources:</b> The main impact on archaeological sites/remains (if any) will be the physical disturbance of the material and its context. The clearing of the vegetation may expose, disturb and displace archaeological sites/material. However, from the investigation it would appear that the proposed areas earmarked for development are of low</p>
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	archaeological sensitivity. However, important materials may be covered by soil and vegetation.
<b>Extent</b>	<b>Site specific</b> - The impact will be limited to the proposed development areas.
<b>Duration</b>	<b>Permanent</b> - Disturbance to archaeological material will be permanent.
<b>Intensity</b>	<b>Medium</b>
<b>Probability</b>	<b>Probable</b> - the archaeological material within the proposed development footprint will be disturbed, displaced or destroyed.
<b>Reversibility</b>	<b>Irreversible</b> - Once the archaeological material has been removed or destroyed this impact cannot be reversed.
<b>Degree of Confidence</b>	<b>Medium / High</b>
<b>Status and Significance of Impact (no mitigation)</b>	<b>Low Negative (-)</b>
<b>Mitigation</b>	<ul style="list-style-type: none"> <li>• An archaeological walkthrough should be conducted by an archaeologist / heritage specialist after vegetation clearing of the proposed three (3) dams identified for upgrading, as well as the proposed new roads that will be constructed.</li> <li>• All construction activities must be monitored or alternatively a person must be specially trained, for example the ECO, to conduct the monitoring. This must include the clearing of vegetation, leveling, excavations for pipelines and other underground/ buried infra-structure and all above ground construction activities such as roads and buildings.</li> <li>• Construction managers/foremen should also 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.</li> </ul> <p>If any human remains (or any other concentrations of archaeological heritage material) are exposed during construction, all work must cease in the immediate area of the finds and must be reported immediately to the archaeologist at the Albany Museum in Makhanda (Tel.: 046 6222 312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel.: 043 7450 888). Sufficient time should be allowed to investigate and to remove/collect such material. Recommendations will follow from the investigation and may include:</p> <ul style="list-style-type: none"> <li>• Consultation with the local communities regarding the conditions for the possible removal, storage and reburial (in the case of human remains) of heritage material.</li> </ul>

	<ul style="list-style-type: none"> <li>• If the local communities agree to the removal of human remains and heritage, an archaeologist must apply for permits from the Eastern Cape Province Heritage Resources Authority to collect and/or excavate sites/materials from archaeological sites impacted by the development.</li> <li>• Consultation with the Albany Museum (repository for archaeological material in the Eastern Cape) regarding permit(s) to remove the heritage material, the storing, curating and costs involved.</li> <li>• A Phase 2 Mitigation process to systematically excavate and to remove the archaeological deposits before construction of the development continues.</li> </ul> <p><u>Note:</u> All costs must be financed by the applicants. This may include:</p> <p>All monitoring and mitigation expenses regarding the excavations/collecting of material, travel, accommodation and subsistence, analysis of the material, radiocarbon date(s) of the site(s) and a once-off curation/storage fee payable to the Department of Archaeology at the Albany Museum.</p>
<b>Significance and Status (with mitigation)</b>	<b>Neutral (0)</b>
<b>Residual Impact</b>	The cumulative impacts on above and below ground heritage will increase when further developments are planned for adjoining areas. Future developments are unknown at this point of time

### **ENVIRONMENTAL MANAGEMENT PROGRAMME FOR THE PRE-COLONIAL ARCHAEOLOGY.**

<p><b>Objective:</b> To conserve the pre-colonial archaeological sites/remains for the proposed infrastructure development and upgrades within the Great Fish River Nature Reserve (GFRNR), Makana Local Municipality, Raymond Mhlaba Local Municipality and Ngushwa Local Municipality, Eastern Cape Province.</p>	
<b>Project component/s</b>	The proposed development will involve the infrastructure development and vegetation clearing along the perimeter fence, upgrading of existing roads as well as the construction of new roads, the upgrading and closure of dams, the construction of accommodation facilities for staff, the upgrading of airfields and the construction of a workshop and a fuel storage facility.
<b>Potential impact</b>	The physical disturbance and/or destruction of pre-colonial archaeology sites/remains.

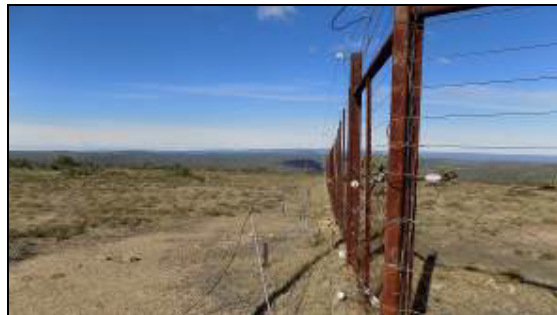
<b>Activity/risk source</b>	Clearing of vegetation and construction/upgrades infrastructure.		
<b>Mitigation: Target/Objective</b>	The ECO must be trained to monitor the clearing of the vegetation which constrained the visibility of heritage resources during the initial archaeological investigation. If concentrations of archaeological materials/sites and/or human remains are exposed then all work must stop for an archaeologist to investigate.		
<b>Mitigation: Action/control</b>	<b>Responsibility</b>	<b>Timeframe</b>	
An archaeological walkthrough should be conducted by an archaeologist / heritage specialist after vegetation clearing of the proposed three (3) dams identified for upgrading, as well as the proposed new roads that will be constructed.	Consultant, applicant and the archaeologist/heritage practitioner	After vegetation clearing	
The ECO must monitor the clearing of the vegetation and the remaining activities.	Consultant, applicant, ECO	During the clearing of the vegetation and construction activities	
Manager/foreman or ECO should be informed before the start of the activities about the possible types of sites and material they may encounter and the procedures to follow when they find sites.	Consultant, applicant manager/ECO and the archaeologist/heritage practitioner.	Before the development starts.	
If any human remains (or any other concentrations of heritage material) are exposed during construction, all work must cease in the immediate area and it must be reported immediately to the archaeologist at the Albany Museum (Tel.: 046 6222 312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel.: 043 7450 888), so that a systematic and professional investigation can be undertaken. Sufficient time must be allowed to investigate and to collect such material.	Consultant, applicant and the archaeologist/heritage practitioner.	Duration of the project	
Apply for permits from the Eastern Cape Province Heritage Resources Authority to collect and/or excavate sites/materials from archaeological sites identified to be impacted by the development.	Archaeologist/heritage practitioner.	Before the development continues and for the duration of the project	
<b>Performance indicator</b>	All heritage sites/materials must be managed within the legislative guidelines. The success of the monitoring will be determined by the degree of damage/disturbance that can be avoided to heritage sites.		

<b>Monitoring</b>	All development activities must be monitored by the archaeologist/heritage specialist or alternatively a person must be trained/inducted, for example the ECO. A report and if required a list of recommendations, should be compiled and submitted to the Eastern Cape Provincial Heritage Resources Authority after the monitoring phase(s) for comment (if necessary). A record must be kept of all accidental disturbances of heritage sites/material. All heritage sites/materials observed during any construction activity must be reported and recorded.
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**Figure 1. General views of the southern perimeter fence (top and middle row), as well as the eastern perimeter fence (bottom row) earmarked for the clearing of vegetation and the development of a 3 metre wide road (jeep track) running along the perimeter fence where currently no road exists.**





**Figure 2. General views of the northern perimeter fence (top and middle row), as well as the western perimeter fence (bottom row) earmarked for the clearing of vegetation and the development of a 3 metre wide road (jeep track) running along the perimeter fence where currently no road exists. The red arrows indicate the Knott Memorial Church near the northern perimeter fence (top photograph) and a small cemetery approximately 70 metres to the east of the church (middle right).**





**Figure 3. General views of the existing internal gravel roads proposed for upgrading (top and middle row) as well as culvert / gabion structures in need of repair or replacement along the perimeter fence.**





**Figure 4. General views of the airfield (runway) strip proposed for refurbishment and the re-alignment of a road near the Double Drift Office (top and middle row), as well as the airfield (runway) strip proposed for refurbishment and extension by 100 metres near the Kamadolo gate (bottom row).**





**Figure 5. General views of the proposed area for the construction of the security manager's house near the Double Drift Office and next to existing staff housing.**





**Figure 6. General views of the proposed area for the cluster of four (4) modular field ranger accommodation units in the Double Drift area. A dilapidated old farmhouse and several other structures that are possibly older than 60 years in close proximity to the proposed development area (bottom right).**





**Figure 7. General views of the proposed area for the cluster of four (4) modular field ranger accommodation units in the Botha's Post area next to existing staff housing.**



**Figure 8. General views of the proposed area for the cluster of four (4) modular field ranger accommodation units near the Kamadolo gate that will be developed on the same footprint where some of the previous units were demolished.**





**Figure 9. General views of the proposed area for the workshop and fuel storage facility next to the Sam Knott Office near the Kamadolo gate of the GFRNR.**





**Figure 10. General views of some of the historical sites located within the GFRNR. Fort Double Drift (top), Du Preez cemetery located near the proposed field ranger accommodation units in the Double Drift area (middle left), Knott cemetery near the proposed field ranger accommodation units in the Botha's Post area (middle right), graves of William George Cory (1858), Jacoba Coetser (1869) and others (general GPS reading: 32.58.996S 26.54.841E) located near Fort Wiltshire (bottom left) and the ruins of the Keiskamma Barracks near a section of the eastern perimeter fence (bottom right).**



## DISCUSSION AND MITIGATION.

The areas investigated are mostly covered with short grass and dense vegetation in places. In general, the archaeological visibility was poor but the visibility was relatively good in areas disturbed by agricultural and other activities. No archaeological sites or stone artefacts were found in the areas earmarked for the proposed infrastructure development and upgrades. The proposed activities will take place near the Great Fish River, the Kat River and the Keiskamma River in an area where one would expect to find freshwater mussel middens. It is recommended that if such features or any other concentrations of archaeological material are exposed, it must be reported to the archaeologist at the Albany Museum in Makhanda (Grahamstown) or to the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) so that a systematic and professional investigation can be undertaken. These are important archaeological sites and special care must be taken that these sites are not destroyed during development. The main impact on possible archaeological sites/remains will be the physical disturbance of the material and its context. However, from the investigation, it would appear that the proposed areas earmarked for the development are of **low archaeological sensitivity** and the visual impact on the surrounding cultural landscape will also be low.

Due to the cultural significance of the wider area within the GFRNR it is important that special care must be taken where upgrading and maintenance is done near any of the heritage sites along the perimeter fence and elsewhere within the reserve such as historical buildings or graves. Should there be any doubt about the impact of the use of heavy machinery or equipment on any of these sites a historian / heritage practitioner must be appointed to assess the site/s and to make recommendations for mitigation (if required). This is also applicable if any British military or other historical artefacts or structures are exposed as a result of the activities.

In general, the majority of the heritage resources within the reserve are not well maintained and as a result the recommendation in the Protected Area Management Plan 2019-2029 for the GFRNR namely that their Heritage Management Plan must be revised, is supported.

It is further recommended that;

1. Although it would seem unlikely that any significant archaeological remains will be exposed during the development, there is always a possibility that human remains and/or other archaeological remains such as freshwater shell middens and historical material may be uncovered during the development. Should such material be exposed during construction, all work must cease in the immediate area (depending on the type of find) and it must be reported to the archaeologist at the Albany Museum in Makhanda (Grahamstown) (Tel.: 046 6222 312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel.: 043 7450 888), so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to investigate and to remove/collect such material. Recommendations will follow from the investigation (See appendix B for a list of possible archaeological sites that maybe found in the area).
2. All clearing activities and other developments must be monitored. Managers/foremen should be informed before clearing/construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites. Alternatively it is suggested that a person must be trained (ECO) as a site monitor to report to the foreman when heritage sites/materials are found.

3. A walkthrough must be conducted by an archaeologist / heritage specialist of the dams proposed for upgrading as well as for any new roads that will be developed after these areas have been cleared of vegetation.

## **GENERAL REMARKS AND CONDITION**

**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 Resources 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 34, 35(4), 36(3) and 38(1) (8) of the National Heritage Resources Act, No. 25 of 1999 apply:

### ***Structures***

*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 relevant provincial heritage resources authority*

### ***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 5000m<sup>2</sup> 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 000m<sup>2</sup> 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 B: 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 m<sup>2</sup> 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.

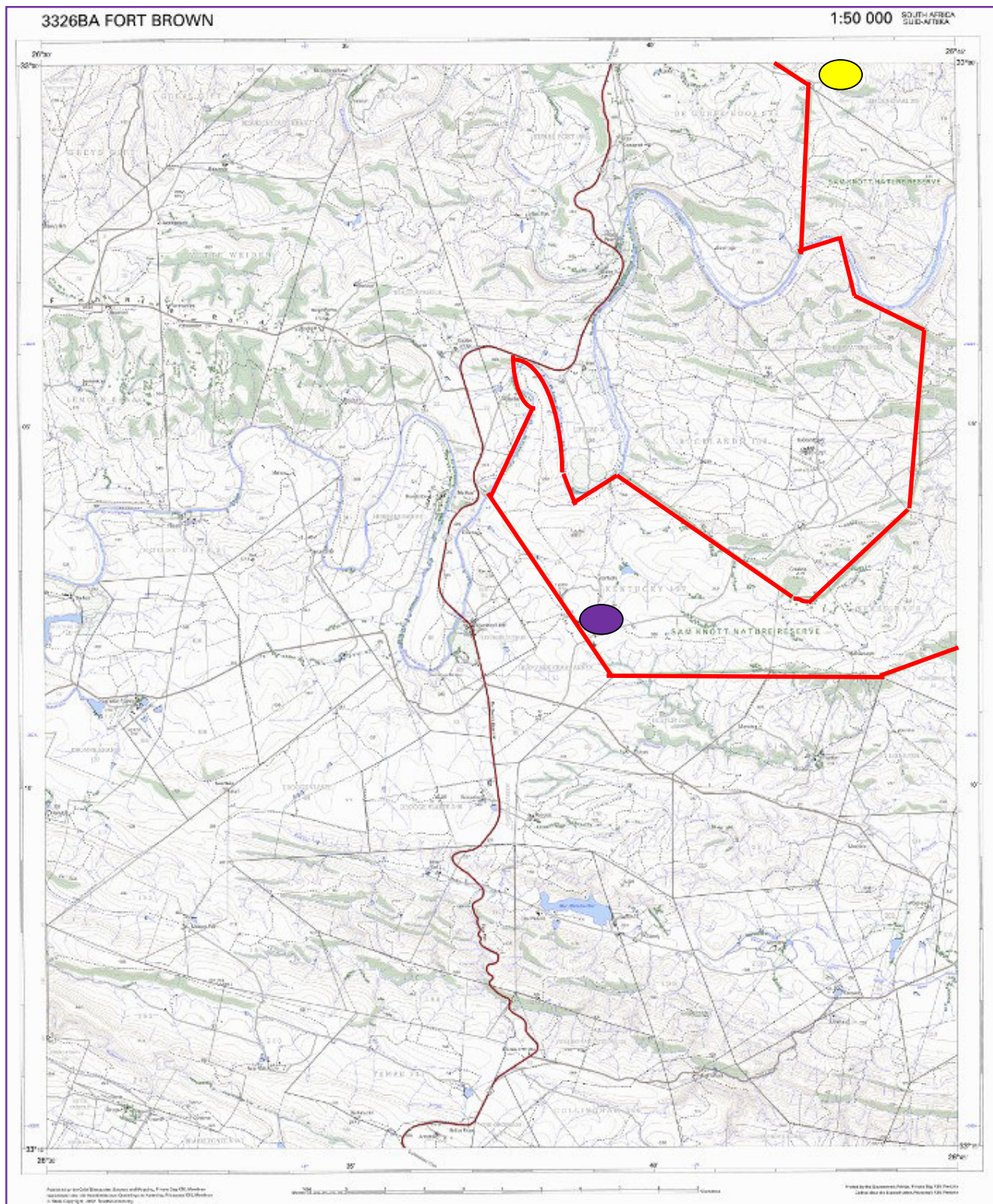
### **Fossil bone**

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.

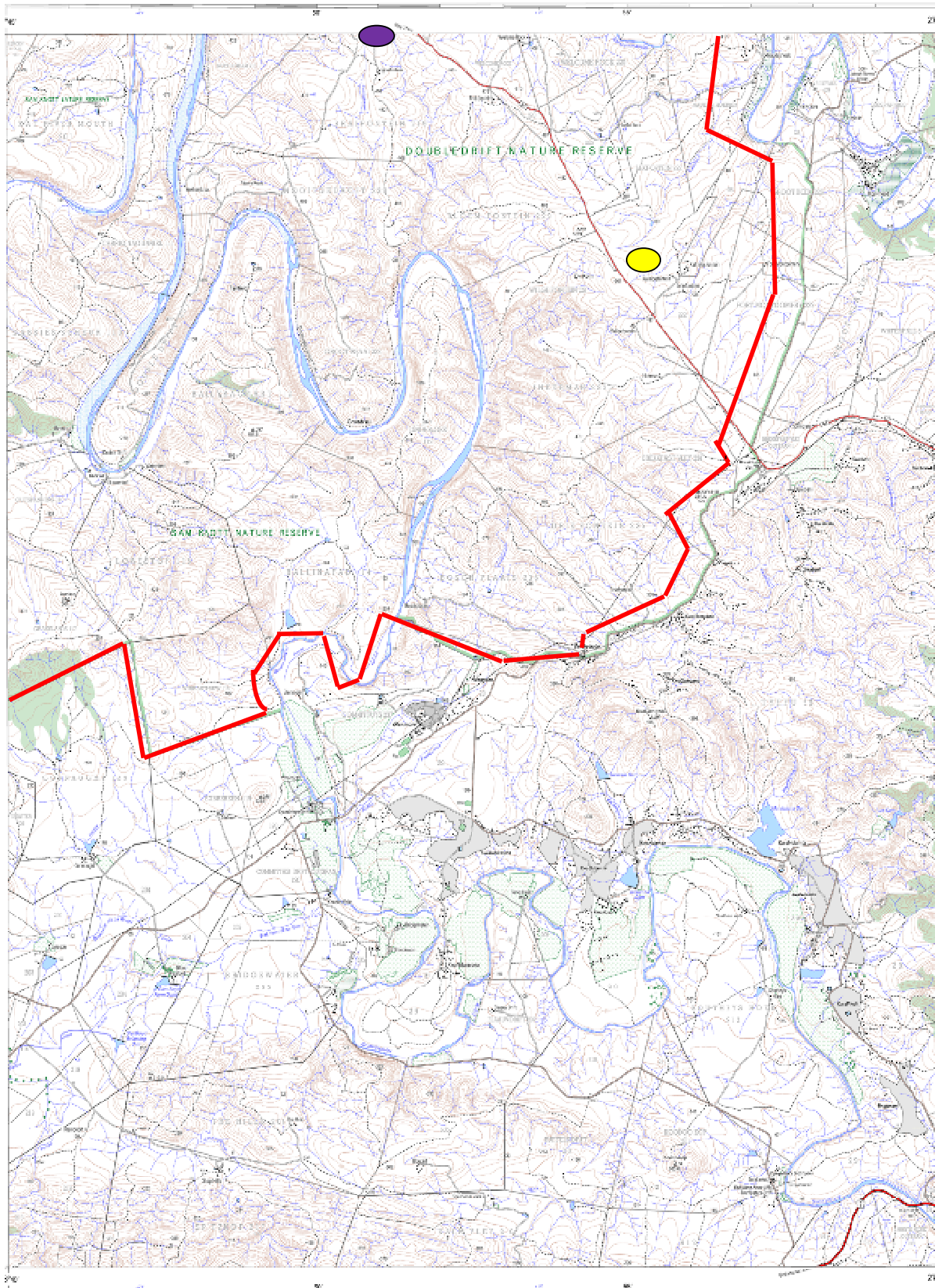




**Map 1. 1:50 000 Map indicating the general location of the proposed activities near the Kamodolo gate. The airfield (runway) strip refurbishment and extension, accommodation units, workshop and fuel storage facility (purple circle). The general location of the proposed accommodation units in the Botha's Post area is indicated by the yellow circle. The GFRNR perimeter fence is indicated by the red lines.**

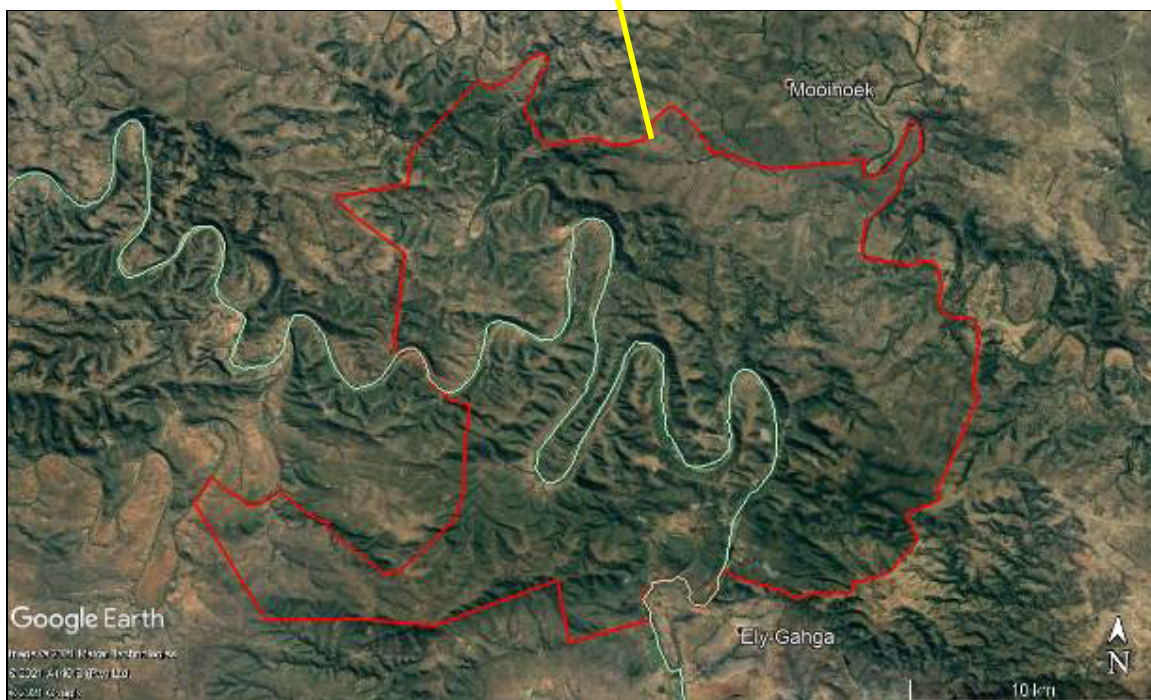
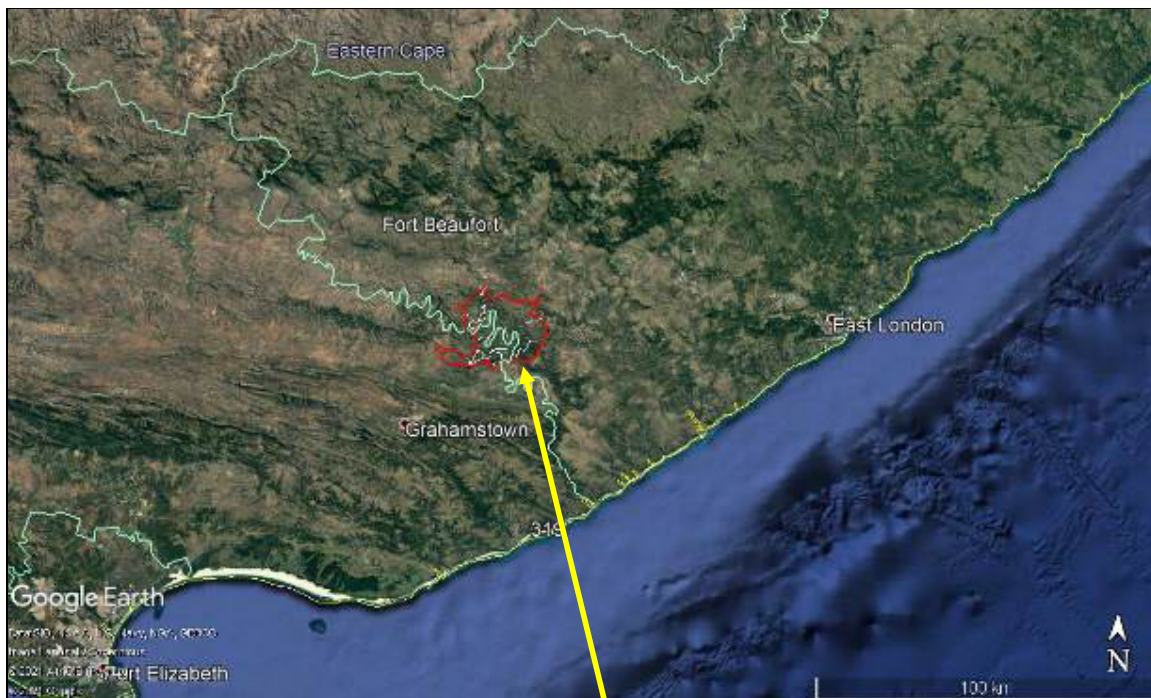


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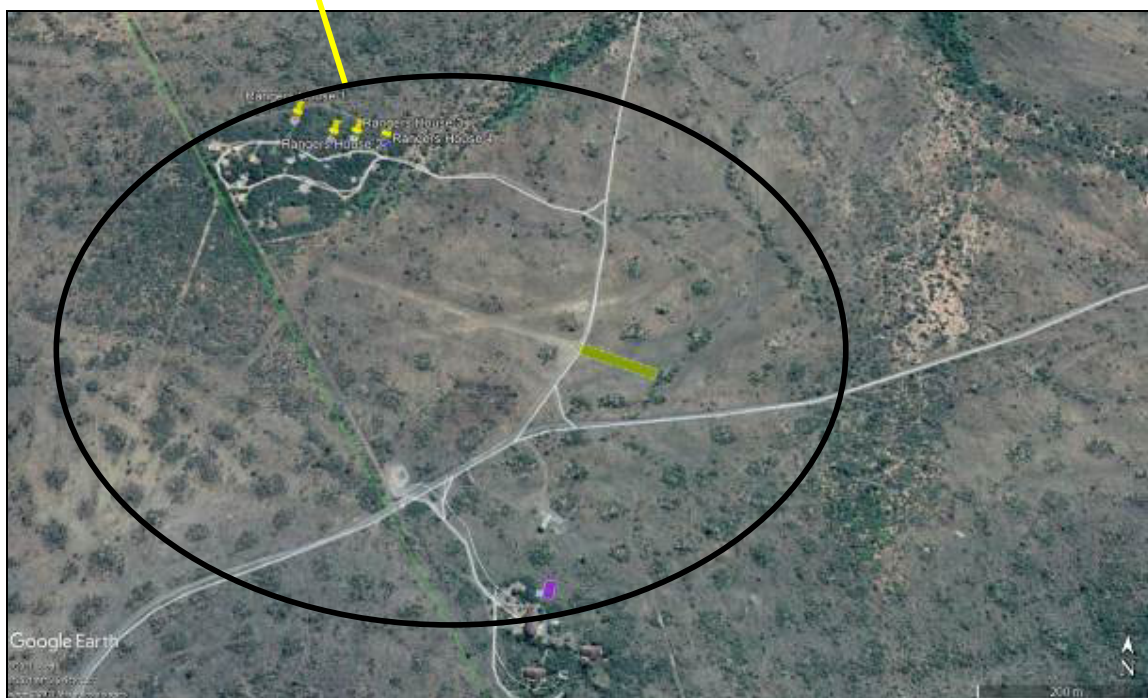
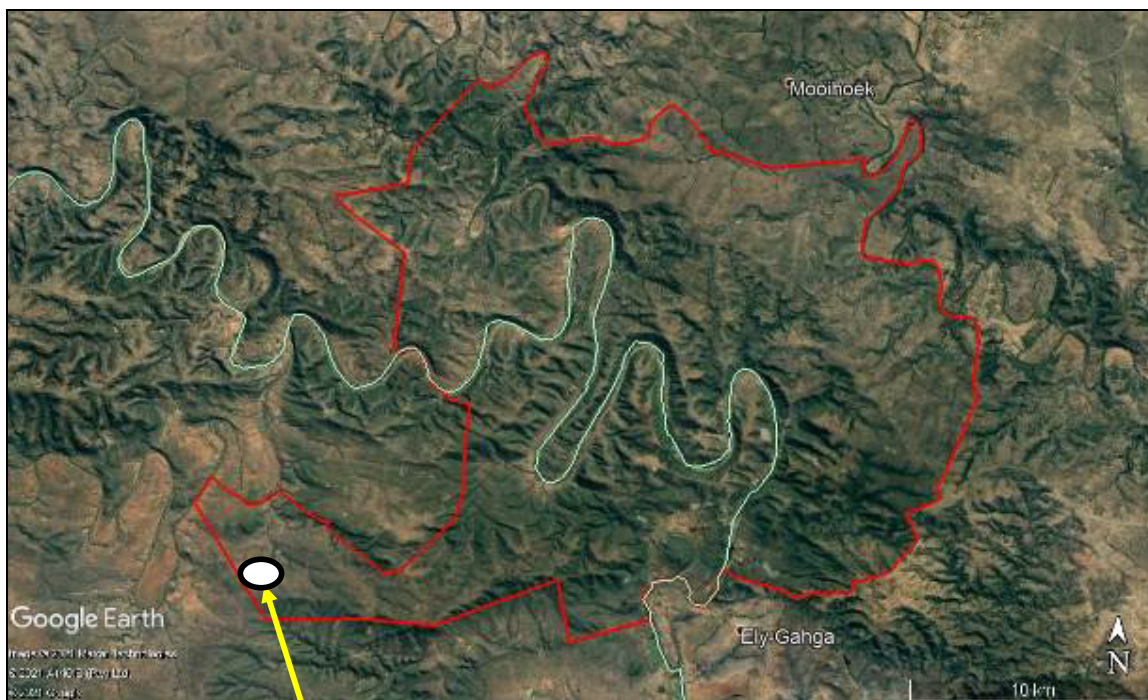
**Map 2. 1:50 000 Map indicating the general locations of the accommodation units (yellow circle), the security manager's house and the airfield (runway) strip in the Double Drift area (purple circle).**





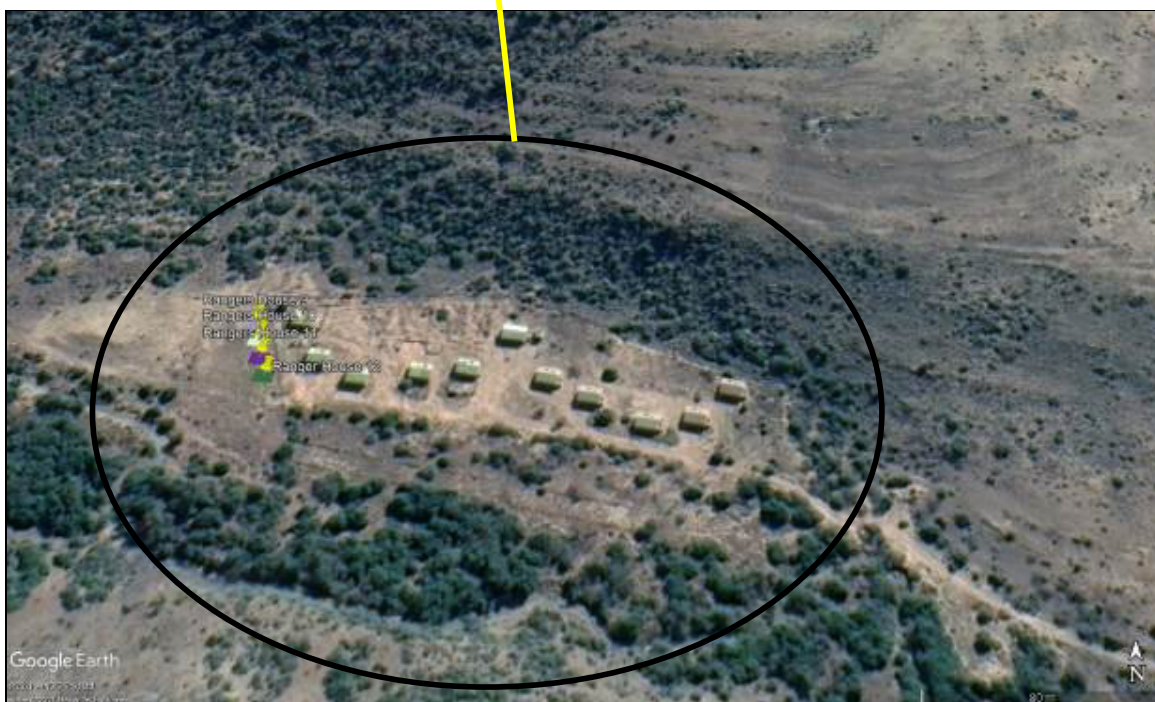
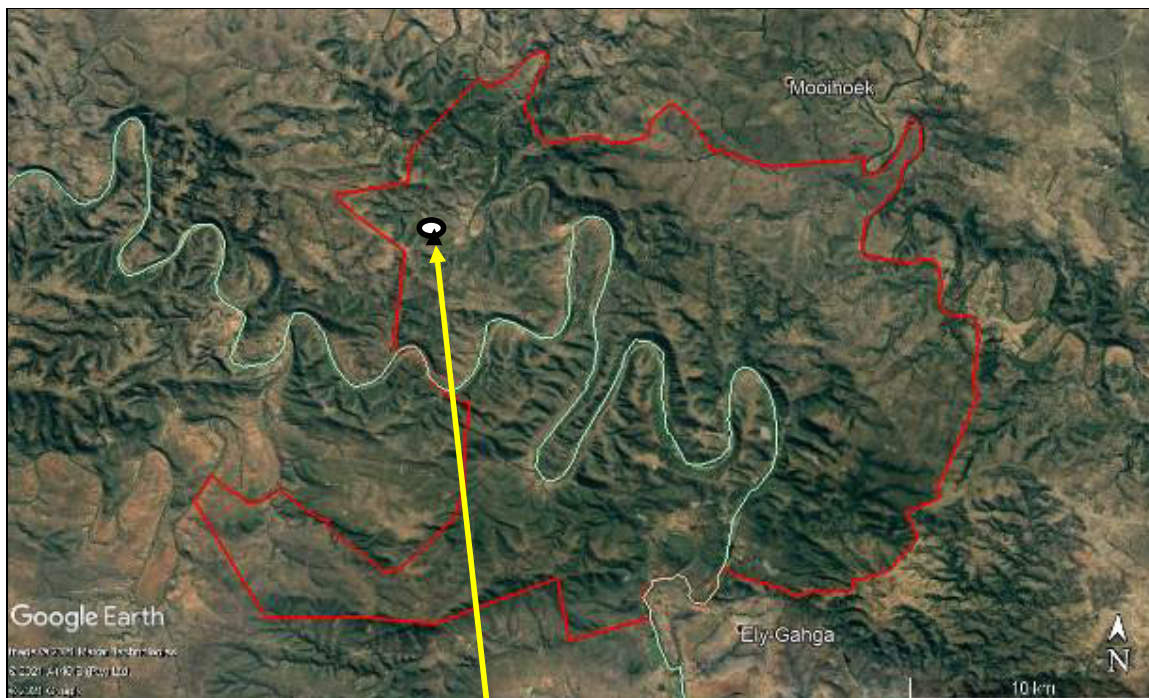
**Map 3. Aerial image indicating the location of the GFRNR (yellow arrow). The boundary (perimeter fence) of the GFRNR is indicated in red. The Great Fish River is indicated in blue.**





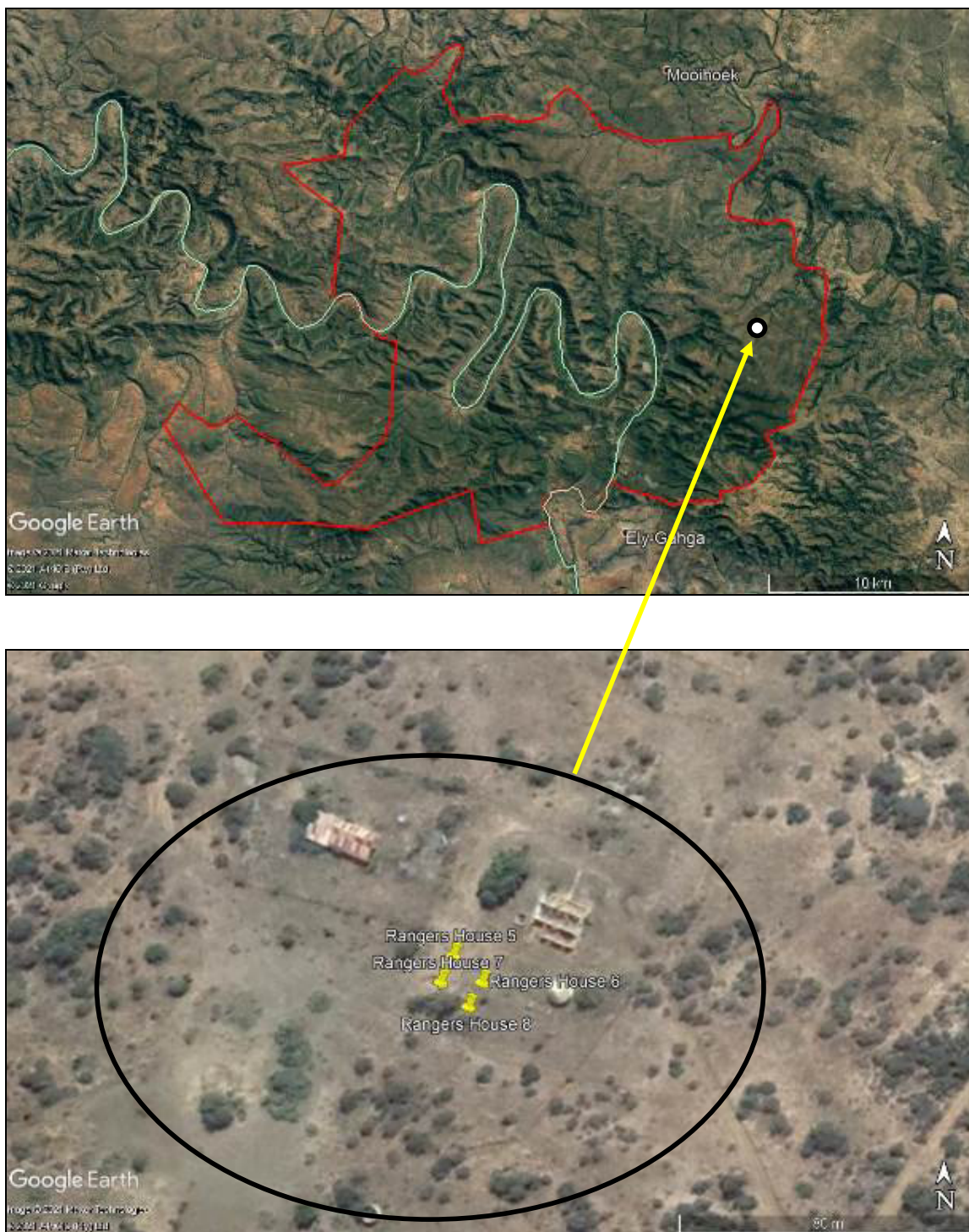
**Map 4. Aerial image indicating the boundary of the GFNR in red and the general location of some of the proposed activities indicated by the white circle. The locations of the proposed four (4) accommodation units near the Kamadolo gate are indicated by the yellow placemarks, the proposed extension of the airfield (runway) strip is indicated in green, the proposed workshop in purple and the fuel storage facility next to it, indicated by the blue square.**





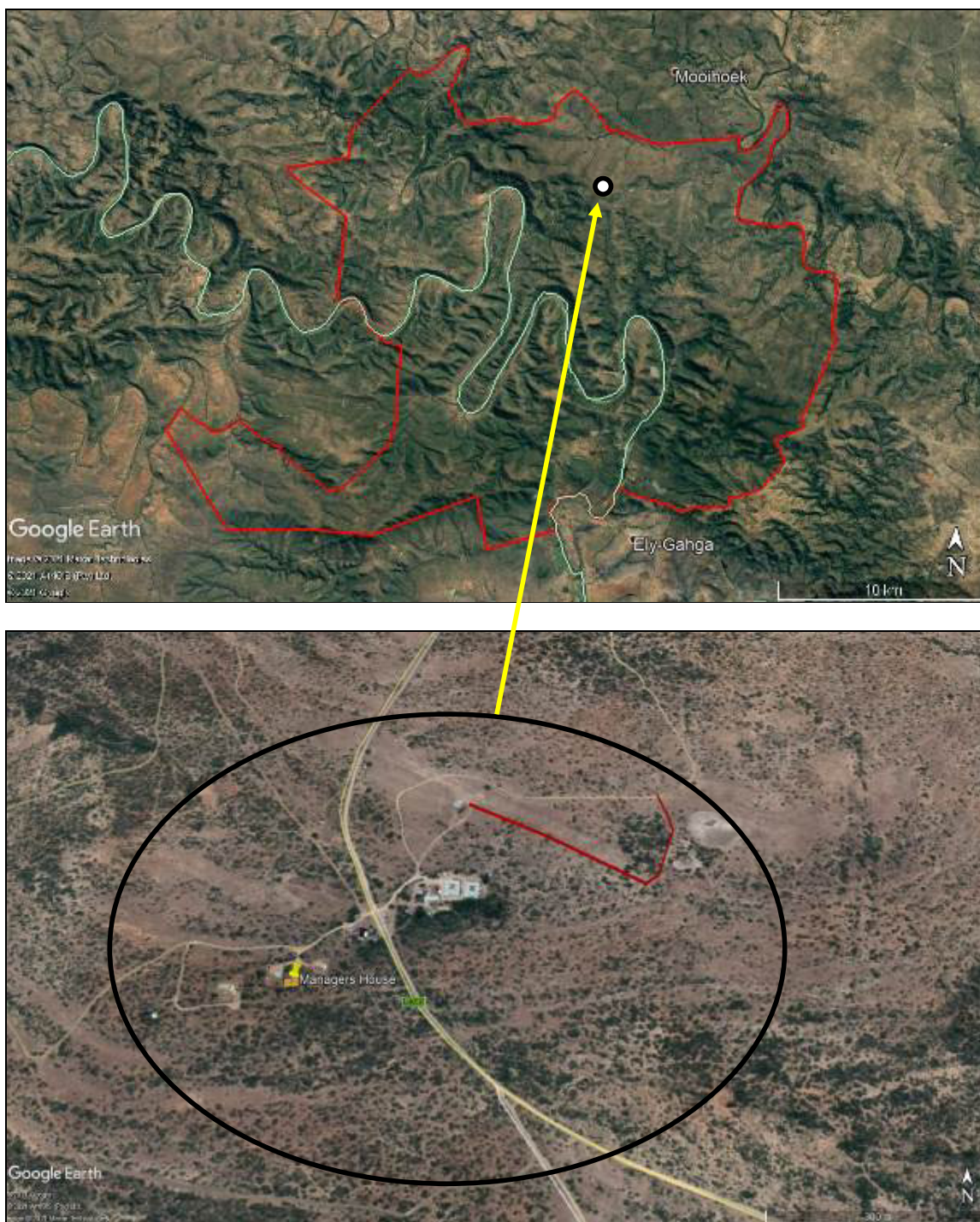
**Map 5. Aerial images of the locations of the proposed four (4) accommodation units in the Botha's Post area indicated by the yellow placemarks.**





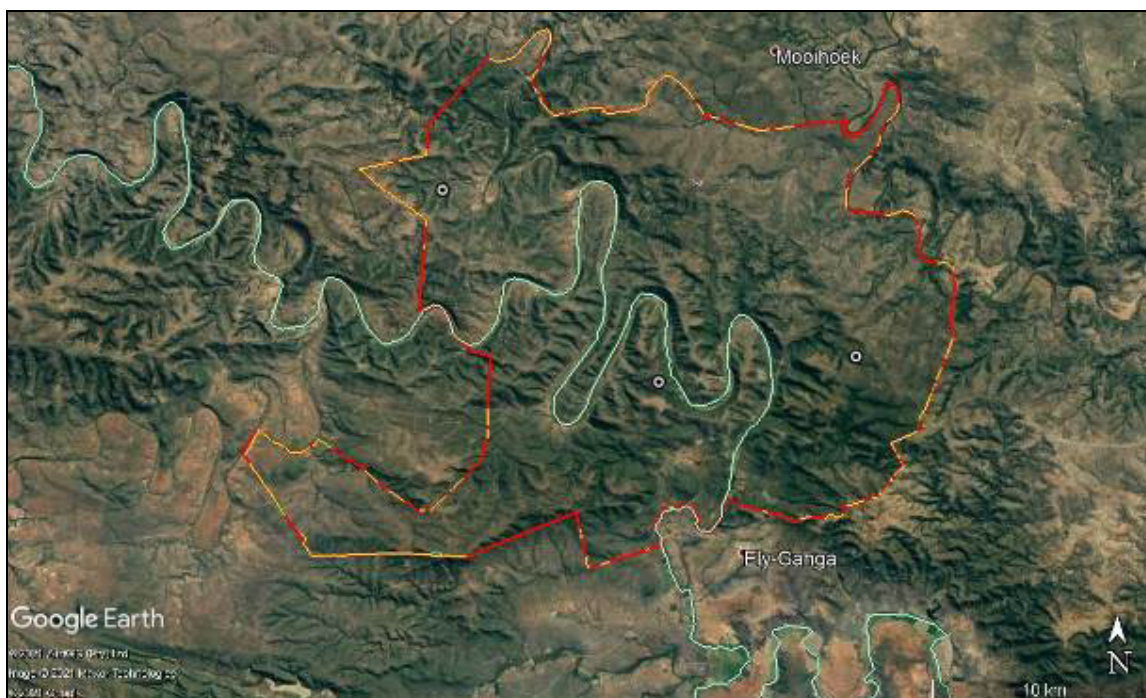
**Map 6. Aerial images of the locations of the proposed four (4) accommodation units in the Double Drift area indicated by the yellow placemarks.**



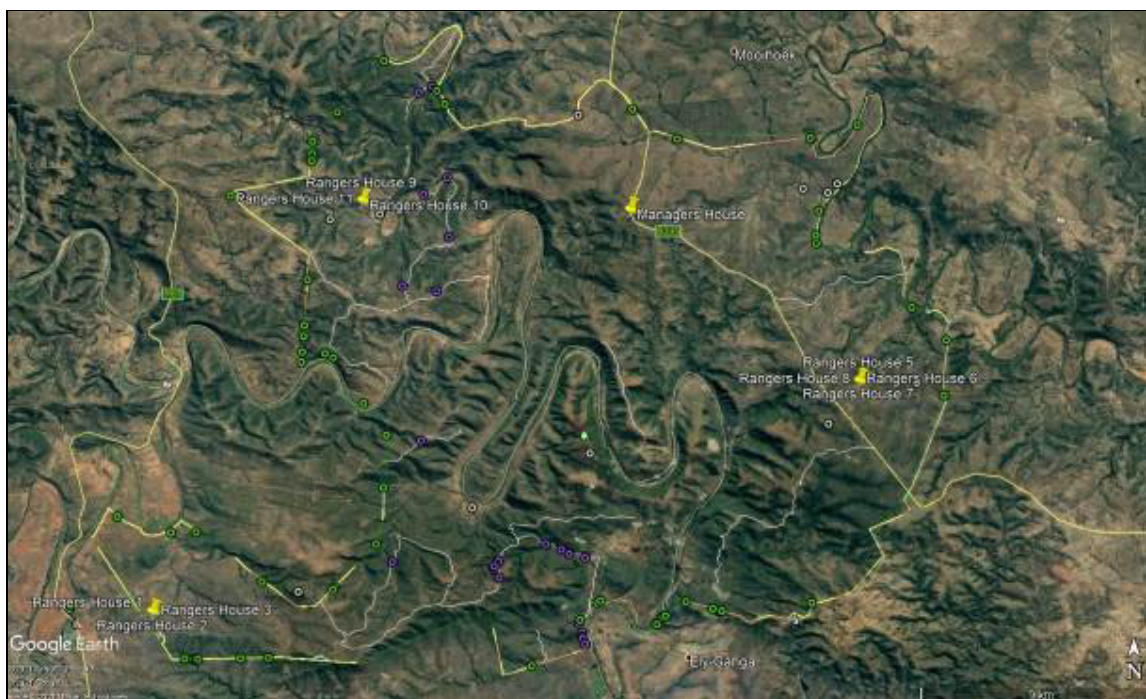


**Map 7. Aerial images of the location of the proposed security manager’s house indicated by the yellow placemark and the proposed realignment of the road at the airfield (runway) strip in the Double Drift area indicated by the red lines.**





**Map 8. Aerial image indicating the areas proposed for vegetation clearing along the perimeter fence and the establishment of a jeep track. The yellow lines indicate where clearing will be required 1 metre in with, and the red lines clearing up to 2 metres in width (map courtesy of JG Afrika (Pty) Ltd).**

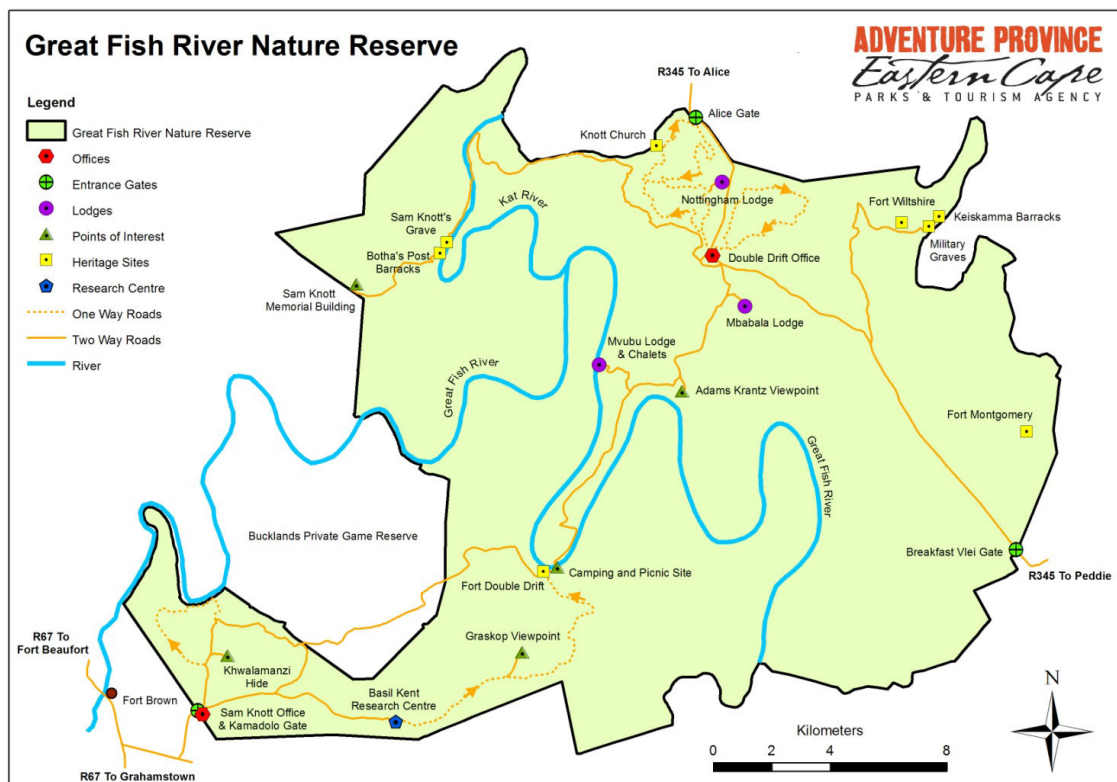


**Map 9. Aerial image indicating the areas proposed for internal road upgrades. The existing roads are indicated by the white lines and the location of the proposed new gabions/culverts along these roads by the purple dots. The proposed new gabions along the jeep track are indicated by the green dots. The three (3) dams proposed for upgrading are indicated by the white circles (map courtesy of JG Afrika (Pty) Ltd).**





**Map 10. Aerial image of the location of some of the known heritage sites in the Great Fish River Nature Reserve indicated by the white dots. The proposed internal roads for upgrade are indicated by the white lines.**



**Map 11. Map indicating the location of some of the known heritage sites and other points of interest in the Great Fish River Nature Reserve (Map courtesy of the Eastern Cape Parks & Tourism Agency).**



## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

### DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

File Reference Number:	(For official use only)
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

#### PROJECT TITLE

PROPOSED INFRASTRUCTURE DEVELOPMENT AND UPGRADES IN THE GREAT FISH RIVER NATURE RESERVE, WITHIN THE MAKANA LOCAL MUNICIPALITY, RAYMOND MAHLABA LOCAL MUNICIPALITY AND NGQUSHWA LOCAL MUNICIPALITY, EASTERN CAPE PROVINCE

#### Kindly note the following:

1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at <https://www.environment.gov.za/documents/forms>.
3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

#### Departmental Details

##### Postal address:

Department of Environmental Affairs  
Attention: Chief Director: Integrated Environmental Authorisations  
Private Bag X447  
Pretoria  
0001

##### Physical address:

Department of Environmental Affairs  
Attention: Chief Director: Integrated Environmental Authorisations  
Environment House  
473 Steve Biko Road  
Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at:  
Email: [EIAAdmin@environment.gov.za](mailto:EIAAdmin@environment.gov.za)



## 1. SPECIALIST INFORMATION

Specialist Company Name:	Eastern Cape Heritage Consultants cc		
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	4	Percentage Procurement recognition
Specialist name:	Kobus Reichert		
Specialist Qualifications:	B.Proc, BA (Hons) Archaeology		
Professional affiliation/registration:	Society of Africanist Archaeologists		
Physical address:	6 Graceland Villas, Waratah Street, Wavecrest, Jeffreys Bay		
Postal address:	P.O Box 689, Jeffreys Bay		
Postal code:	6330	Cell:	072 800 6322
Telephone:	n/a	Fax:	n/a
E-mail:	kobusreichert@yahoo.com		

## 2. DECLARATION BY THE SPECIALIST

I, Kobus Reichert, declare that –

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

  
Signature of the Specialist

Eastern Cape Heritage Consultants cc

Name of Company:

9 May 2023

Date

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, Kobus Reichert, swear under oath / ~~affirm~~ that all the information submitted or to be submitted for the purposes of this application is true and correct.

[Signature]  
Signature of the Specialist

Eastern Cape Heritage Consultants cc  
Name of Company

9 May 2023  
Date

[Signature] 7248090-4  
CS1 Kameel  
Signature of the Commissioner of Oaths

2023-05-09  
Date

Ekertifiseer dat bostaande verklaring deur my afgelees is. Ek verklaar dat hierdie verklaring die inhoud van hierdie verklaring is. Hierdie verklaring is in my teenwoordigheid aangebring.

certify that the above stated by me and that the deponent is edged that he/she knows and understands the contents of this statement. This statement was sworn to/affirmed before me and deponent's signature/mark/thumbprint was placed there in my presence.

at Jeffreys Bay of 2023-05-09 om 15 h 28

(HANDTEKENING) KOMMISSARIS VAN EDE  
(SIGNATURE) COMMISSIONER OF OATHS  
Iran Kameel

VOLLE VOORNAME EN VAN IN DRUKSKRIF  
FULL FIRST NAMES AND SURNAME IN BLOCK LETTERS

CG Watterade Street, Jeffreys Bay  
BESIGHEIDSADRES (STRAATADRES)  
BUSINESS ADDRESS (STREET ADDRESS)

Constable  
RANG/RANK

SA POLISIEDIENST  
SA POLICE SERVICES



**Abbreviated Curriculum Vitae 2021**

**NAME** : Kobus Reichert

**DATE OF BIRTH** : 16 September 1967

**ID NUMBER** : 6709165176082

**NATIONALITY** : South African

**AGE** : 54

**BUSINESS ADDRESS** : Eastern Cape Heritage Consultants cc  
Reg. no: 2006/088345/23  
6 Graceland Villas  
Waratah street, Wavecrest  
Jeffreys Bay  
6330

**POSTAL ADDRESS** : P.O Box 689  
Jeffreys Bay  
6330

**TELEPHONE NO.** : 042 - 2960 399

**CELLPHONE NO.** : 072 800 6322

**E-MAIL** : [kobusreichert@yahoo.com](mailto:kobusreichert@yahoo.com)

**HOME LANGUAGE** : Afrikaans

**OTHER LANGUAGES** : English

**DRIVING LICENCE** : CODE EB

**EDUCATIONAL QUALIFICATIONS**

**SCHOOL** : Hoër Volksskool - Potchefstroom

**STANDARD PASSED** : Matric with full exemption - 1985

**TERTIARY QUALIFICATIONS**

**UNIVERSITY** : Potchefstroom University (1991)

**DEGREE** : B. Proc

**UNIVERSITY** : UNISA (2015)

**DEGREE** : BA Honours (Archaeology)

**PREVIOUS POSITIONS**

**NAME OF EMPLOYER** : Department of Correctional Services

**POSITION** : Provincial Head: Legal Services (Eastern Cape)

Resigned from the Department in 1998

**NAME OF EMPLOYER** : Eastern Cape Heritage Consultants cc (Owner)

**POSITION** : Heritage Consultant

Obtained BA (Honours) degree in Archaeology in 2015.

**CURRENT POSITION**

**OCCUPATION** : Archaeologist (2015 to present)  
Owner: Eastern Cape Heritage Consultants cc  
- Reg no. 2006/088345/23)

**EXPERIENCE:** Eastern Cape Heritage Consultants cc was established in 2006. Dr. Johan Binneman provided specialist archaeological services to the company and I assisted him with fieldwork and the conducting of Phase 1 Archaeological Impact Assessments (AIA's) from 2006 -2014. After I obtained my Honours degree in Archaeology in 2015 I became the co-author of more than 150 Phase 1 AIA and other archaeological reports until present. Dr. Binneman has got 40 years' research experience of the archaeology of the eastern and southern Cape. This includes the fields of Earlier, Middle and Later Stone Age, Iron Age, Rock Art and Historical Archaeology. I have been in the privileged position to have him as a mentor over a period of 16 years and the experience gained during this period equipped me with the necessary skills and knowledge to conduct Phase1 Archaeological Impact Assesments and other archaeological work.

**SELECTED PREVIOUS PROJECTS**

- : Heritage Impact Assessment for the Baviaanskloof Mega Reserve: 2006
- : Phase 1 AIA: Kouga Development Agency Project, Jeffreys Bay, Kouga Municipality: 2007
- : Phase 1 AIA: Sarah Baartman Project, Hankey: 2008
- : Heritage Impact Assessment for the Coega Industrial Development Zone: 2010
- : Phase 1 AIA: Oyster Bay Wind Energy Facility: 2011
- : Phase 1 AIA: Deep River Wind Energy Facility, Kouga Municipality: 2011
- : Phase 1 AIA: Jeffreys Bay Wind Farm , Kouga Municipality: 2012
- : Phase 1 AIA: Cookhouse South Wind Farm, Blue Crane Route Municipality: 2013
- : Archaeological Walkthrough: Msenge Emoyeni Wind Energy Facility, Bedford: 2014
- : Archaeological Walkthrough: 132 KV power line from the Melkhout to Diep Rivier substations, Kouga Municipality: 2015
- : Phase 1 AIA: 132 KV power line for the Golden Valley Wind Farm near Cookhouse, Blue Crane Route Municipality: 2016
- : Archaeological desktop study: Impofu Wind Energy Facility, Kouga Municipality: 2017
- : Archaeological Walkthrough: Expansion of agricultural activities on the Farm Langebos, Sundays River Valley Municipality: 2018
- : Archaeological inspection: Access roads and test pits for the aquaculture and gas to power project in Zone 10 of the Coega Development Corporation (CDC), Nelson Mandela Bay Municipality: 2019
- : Archaeological monitoring: vegetation clearing and construction activities for the APLI project in Zone 1 of the CDC, Nelson Mandela Bay Municipality: 2020
- : Phase 1 AIA: Infrastructure development and upgrades within the Great Fish River Nature Reserve, Makana, Raymond Mhlaba and Ngqushwa Municipalities: 2021

**AWARDS:**

The Eastern Cape Premier’s Award for Heritage Conservation (2007)

The Eastern Cape MEC for Sport, Recreation, Arts & Culture’s Award for Museum and Heritage (2016)

**MEMBERSHIP OF PROFESSIONAL BODIES:**

Society of Africanist Archaeologists (SAfA) - 2012 to present.

**INTERNATIONAL CONFERENCES ATTENDED:**

**2008** Association of South African Professional Archaeologists (ASAPA), 25 - 29 March, Cape Town.

**2012** Society of Africanist Archaeologists (SAfA), 25 - 29 June, University of Toronto, Canada (co-author of a paper presented by Dr. Binneman)

**CONSULTANT PROJECTS - Clients include:**

Wilderness Foundation

Coega Development Corporation

Eskom

CSIR

Eastern Cape Parks & Tourism Agency (ECPTA)

WBHO

Wind Energy Developers in the Eastern Cape

**REFERENCES:**

Dr. Johan Binneman : 072 2411 528

Dr. Shirley Pierce-Cowling : 082 461 6482  
(Ecologist)

Len van Schalkwyk : 082 655 9077  
(eThembeni Cultural Heritage)

Eleanor Mc Gregor : 079 612 8453  
(Baviaanskloof Mega-reserve)