

**A LETTER OF RECOMMENDATION (WITH CONDITIONS) FOR THE EXEMPTION OF A FULL PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT FOR THE PROPOSED DEVELOPMENT OF A PRECAST CONCRETE MANUFACTURING FACILITY ON THE REMAINDER OF PORTION 3 OF THE FARM 854 NEAR JEFFREYS BAY , KOUGA LOCAL MUNICIPALITY, EASTERN CAPE PROVINCE**



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## PROJECT INFORMATION

Eastern Cape Heritage Consultants cc has been appointed by Habitat Link Consulting (Pty) Ltd to conduct a Phase 1 Archaeological Impact Assessment (AIA) for the proposed development of a precast concrete manufacturing facility near Jeffreys Bay, Kouga Local Municipality, Eastern Cape Province.

The proposed activity entails the construction of a precast concrete manufacturing facility for the manufacturing of 80 concrete wind towers that consist of 1 425 keystones or precast elements of approximately 20 m x 6 m each. The precast keystones will be used to support wind turbine towers which will be supplied to the nearby wind farms. Concrete will be produced from an on-site batch plant.

The precast concrete towers are used instead of steel towers to support the wind turbines on wind farms. The concrete segments are typically manufactured in custom-built precast concrete factories situated as close as possible to the wind farm locations.

The infrastructure on site will consist of the following:

- Cover Tent: Covered area where main production activities will be performed This area will include reinforcement templates, moulds and gantry cranes occupying an area of 160 x 66 m<sup>2</sup> with a height of 6.5 m.
- Storage Yard: Area destined to store finished keystones. The loading of keystones onto transport trucks with gantry cranes will be the last operation. Final dimensions of the area depend on the amount of storage required, a maximum area 28.000 m<sup>2</sup> will be considered.
- Batching Plant: Area where keystones will be produced. It includes tanks for liquid components, a mixer, conveyor belts, and silos. The main batching plant will include four silos and the backup batching plant two silos with a maximum height of 21 m per silo
- Laboratory: The laboratory will be located next to the batching plant and will be used to perform trials and quality tests to self-compacted concrete. It will include a humidity room with controlled parameters to cure the concrete. The building size will be 200 m<sup>2</sup> and the testing area 400 m<sup>2</sup>.
- Water Treatment System: The system will consist of several connected tanks for the decantation process of the particles as well as the oil from the cleaning of batching plant and mixer trucks with a size of 400 m<sup>2</sup>.
- Aggregates Shed: The shed will be used to store aggregates for concrete. It will be located next to the batching plant with a size of 1.000 m<sup>2</sup>.
- Water Tanks (Reservoirs): The factory will have an area for tanks to keep water for the factory and the batching plant with a size of 5 x 15 m<sup>3</sup>.
- Warehouse: A room (1 500 m<sup>2</sup>) that will be used to store tools and equipment.
- Auxiliary Installations: Additional facilities that will include offices, a rest room and toilets.

The footprint of the facility is approximately 9.5 ha and two (2) layout alternatives are being proposed for the development.

### Applicant

Nordex Energy South Africa (Pty) Ltd

## Consultant

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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 project and the associated activities, to describe and evaluate:

- the importance of possible archaeological sites, features and materials,
- the potential impact of the development on these resources and,
- to propose recommendations to minimize possible damage to these resources.

## Site and Location

The proposed development area is located within the 1:50 000 topographic reference map: 3324DD Hankey (Map 1). The farm is located approximately 14 kilometres northwest (NW) of Jeffreys Bay (Map 2). Access from the R102 towards the nearest boundary of the property is gained along a 2.3 km gravel road section. The gravel road is in fair condition and is being used by construction vehicles to and from the Vlakteplaas Quarry located to the south of the proposed development area. The proposed development will take place on a relative flat area covered with short grass, shrubs and trees in places (Figure 1). The majority of the proposed development area has been disturbed in the past by agricultural and other farming activities. There are no known graves or build structures older than 60 years on the farm. A general GPS reading was taken at: 33.56.890S, 24.56.359E (Layout Alternative 1) and 33.56.634S, 24.56.105E (Layout Alternative 2).

## Relevant Archaeological Impact Assessments

- Binneman, J. 2007a. A phase 1 archaeological heritage impact assessment for the proposed Kouga development of portions of the farms Kabeljauws River No. 322 and Papiessfontein No. 319 in Jeffreys Bay, Kouga Municipality, District of Humansdorp, Eastern Cape. Prepared for CEN Integrated Environmental Management Unit. Walmer. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. 2007b. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for the proposed open pit mining operation on the Farm Vlakteplaas No. 854 near Jeffreys Bay in the Kouga Local Municipality of the Eastern Cape Province. Prepared for CEN Integrated Environmental Management Unit. Walmer. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. 2008. A phase 1 archaeological heritage impact assessment for the proposed “St. Francis Coastal Reserve” on portions of the Remainder of the Farm New Papiessfontein No. 320, Kouga Municipality, District of Humansdorp, Eastern Cape. Prepared for Envirovision Consulting. Pretoria. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. 2010. A phase 1 archaeological heritage impact assessment for the proposed rezoning, subdivision and development of Portion 174 and the Remainder of the Farm Mouritzkraal No. 501 at the Gamtoos River Mouth, Kouga Municipality, Eastern Cape Province. Prepared for Gertenbach Ecological Consultation. Jeffreys Bay.

- Binneman, J. 2015. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for the proposed sand mining on the Remainder of the Farm Nocton No. 441, Division of Uitenhage, Eastern Cape. Prepared for Alkru Sand cc. Jeffreys Bay. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. 2016. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for the proposed development of a chicken broiler facility on a portion of Portion 3 of Farm 854 in the Kouga Local Municipality of the Eastern Cape Province. Prepared for MIM Environmental Consulting. Jeffreys Bay. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. and Reichert, K. 2018a. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed sand mining on Portion 1 of the Farm Die Woud No. 500, District of Uitenhage, Kouga Municipality, Eastern Cape Province. Prepared for Stellenryck Environmental Solutions. Lorraine. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. and Reichert, K. 2018b. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed sand quarry on the Farm Nocton No. 441 in the Division of Uitenhage of the Eastern Cape Province. Prepared for Stellenryck Environmental Solutions. Lorraine. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. and Reichert, K. 2019. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed establishment of a camping site on the Farm Nocton No. 441 in the Division of Uitenhage of the Eastern Cape Province. Prepared for Stellenryck Environmental Solutions. Lorraine. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. and Reichert, K. 2020. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed mining of gravel on a portion of Portion 1 of the Farm Kabeljauws River No. 339 in the District of Humansdorp of the Eastern Cape Province. Prepared for Stellenryck Environmental Solutions. Lorraine. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. and Reichert, K. 2021. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed application for a prospecting right for stone aggregate and gravel on Portion 2 of Farm 854 in the Humansdorp District of the Kouga Local Municipality of the Eastern Cape Province. Prepared for Stellenryck Environmental Solutions. Lorraine. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Reichert, K. 2022. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for a proposed sand quarry on Portion 1 of the Farm Die Woud No. 500, District of Uitenhage, Kouga Municipality, Eastern Cape Province. Prepared for Stellenryck Environmental Solutions. Lorraine. Eastern Cape Heritage Consultants cc. Jeffreys Bay.

## **ARCHAEOLOGICAL INVESTIGATION**

### **Methodology and results**

Google aerial images as well as previous heritage reports related to the study area were studied prior to the investigation. The investigation was conducted on foot by an archaeologist. GPS readings were taken with a Garmin and all important features were digitally recorded. The archaeological visibility was poor due to the dense grass and other vegetation. Natural surface disturbances and areas exposed by farming activities as well as several gravel roads and footpaths on the farm were investigated but no archaeological sites/materials were observed within the study area. In general, the area for the proposed development appears to be of low archaeological sensitivity and it is unlikely that any archaeological remains of any significance will be found *in situ* or exposed during the development.



**Figure 1. General views of the proposed development area on the Remainder of Portion 3 of the Farm 854 near Jeffreys Bay, Kouga Local Municipality, Eastern Cape Province.**

## DISCUSSION AND CONDITIONS

No archaeological sites/materials were observed during the investigation of the proposed study area. Although it is unlikely that archaeological remains will be found *in situ*, there is always a possibility that human remains and/or other archaeological/historical material may be uncovered during the development. The proposed development area is located approximately 5 kilometres northeast from the coast where several archaeological sites/material were observed in the past. Two KhoiSan burials were also exposed in the dunes in 1997 and 2005 respectively (Binneman 2008). The well known Kabeljous Rock Shelters (KRS1 & 2) are located next to the Kabeljous River (Binneman 2007) approximately 3 kilometres southeast of the study area. The proposed development will have no impact on any of these sites. Several other archaeological investigations were conducted on and in close proximity to Farm 854 (Binneman 2007b; 2016) as well as in the wider region (Binneman 2007; 2008; 2010; Binneman & Reichert 2018a; 2020; 2021). The previous assessments in or in close proximity to the study area (Map 2) did not identify any cultural resources and support the results of this assessment. The proposed Layout Alternatives 1 & 2 are therefore both suitable for the proposed development.

The main impact on possible archaeological sites/remains will be the physical disturbance of the material and its context. Should such material be exposed then work must cease in the immediate area and it must be reported to the archaeologist at the Albany Museum in Makhanda (Grahamstown) (Tel: 046 622 2312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel: 043 745 0888), so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to remove/collect such material (See Appendix B for a list of possible archaeological sites that maybe found in the area). The applicant must finance the costs should additional investigations be required.

### Reference

Binneman, J. 2007. Archaeological research along the south-eastern Cape Coast part 2, caves and shelters: Kabeljous River Shelter 1 and associated tool industries. *South African Field Archaeology* 15 & 16: 57-74.

## LETTER OF RECOMMENDATION

It is recommended that the proposed development of a precast concrete manufacturing facility on the Remainder of Portion 3 of Farm 854 near Jeffreys Bay, Kouga Local Municipality, Eastern Cape Province, is exempted from a full Phase 1 Archaeological Heritage Impact Assessment. The proposed development area appears to be of **low archaeological sensitivity**, and it is therefore unlikely that any significant archaeological remains will be found on the property. The proposed development may therefore proceed as planned, subject to the above conditions.

Note: This letter of recommendation only exempts the proposed development from a full Phase 1 Archaeological Heritage Impact Assessment, but not for other heritage impact assessments. It must also be clear that this letter will be assessed by the relevant heritage resources authority. The final decision rests with the heritage resources authority, which should give a permit or a formal letter of permission for the destruction of any cultural sites.

Section 35 of the National Heritage Resources Act, No. 25 of 1999 (see Appendix A) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources, that is, all places or objects of aesthetics, architectural, historic, scientific, social, spiritual linguistic or technological value or significance are protected. Thus, any assessment should make provision for the protection of all these heritage components, including archaeology, shipwrecks,

battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

## **GENERAL REMARKS AND CONDITIONS**

It must be emphasized that this letter of recommendation for the exemption of a full Phase 1 archaeological heritage impact assessment 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 unlikely event of such finds being uncovered, (during any phase of the development activities), it must be reported to the archaeologist at the Albany Museum in Makhanda (Grahamstown) (Tel: 046 622 2312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel.: 043 745 0888) immediately. The developer must finance the costs should additional studies be required as outlined above. The consultant is responsible to forward this report to the relevant Heritage Authority for assessment, unless alternative arrangements have been made with the 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 COASTAL AREAS: guidelines and procedures for developers**

### **Shell middens**

Shell middens can be defined as an accumulation of marine shell deposited by human agents rather than the result of marine activity. The shells are concentrated in a specific locality above the high-water mark and frequently contain stone tools, pottery, bone and occasionally also 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.

### **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, the remains are buried in a flexed position on their sides but are also found buried in a sitting position with a flat stone capping and developers are requested to be on the alert for this.

### **Fossil bone**

Fossil bones or any other concentrations of bones, whether fossilized or not, should be reported.

### **Stone artefacts**

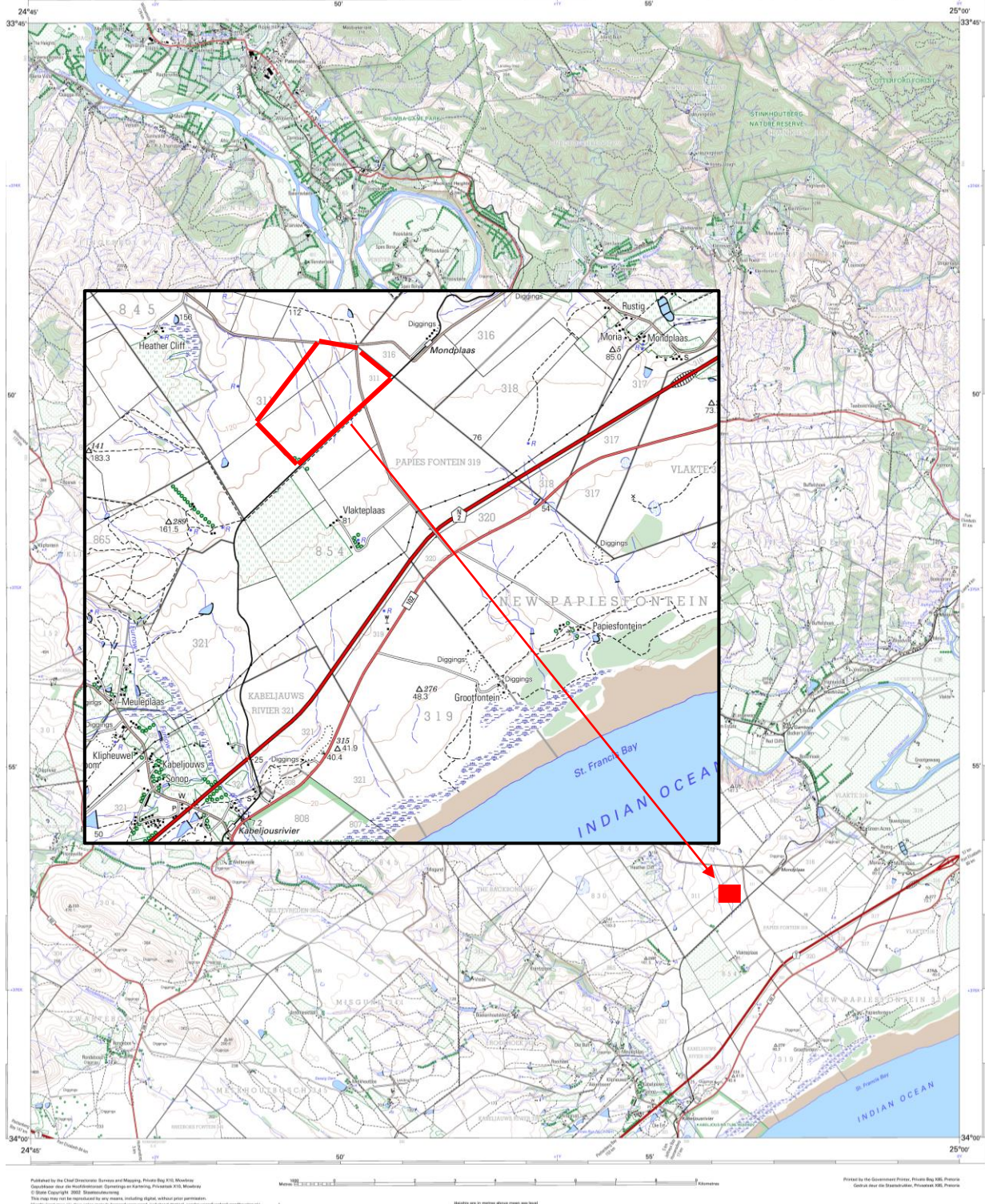
These are difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately, and archaeologists notified.

### **Stone features and platforms**

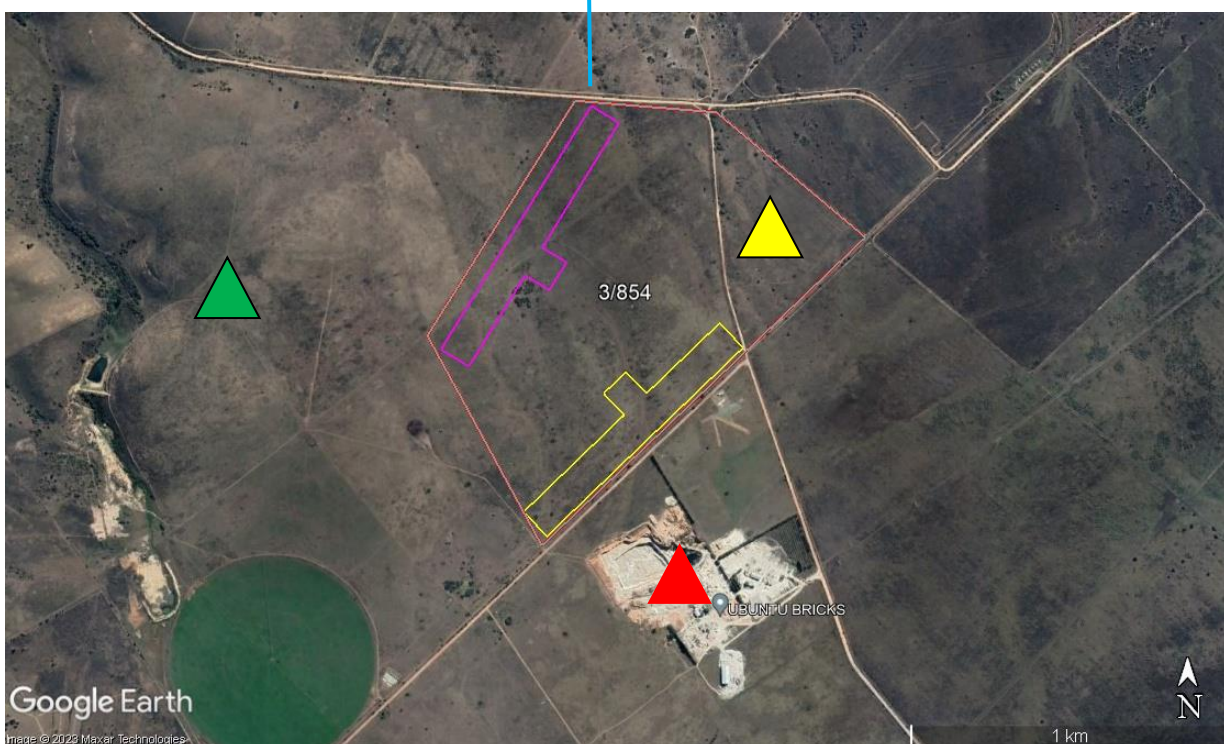
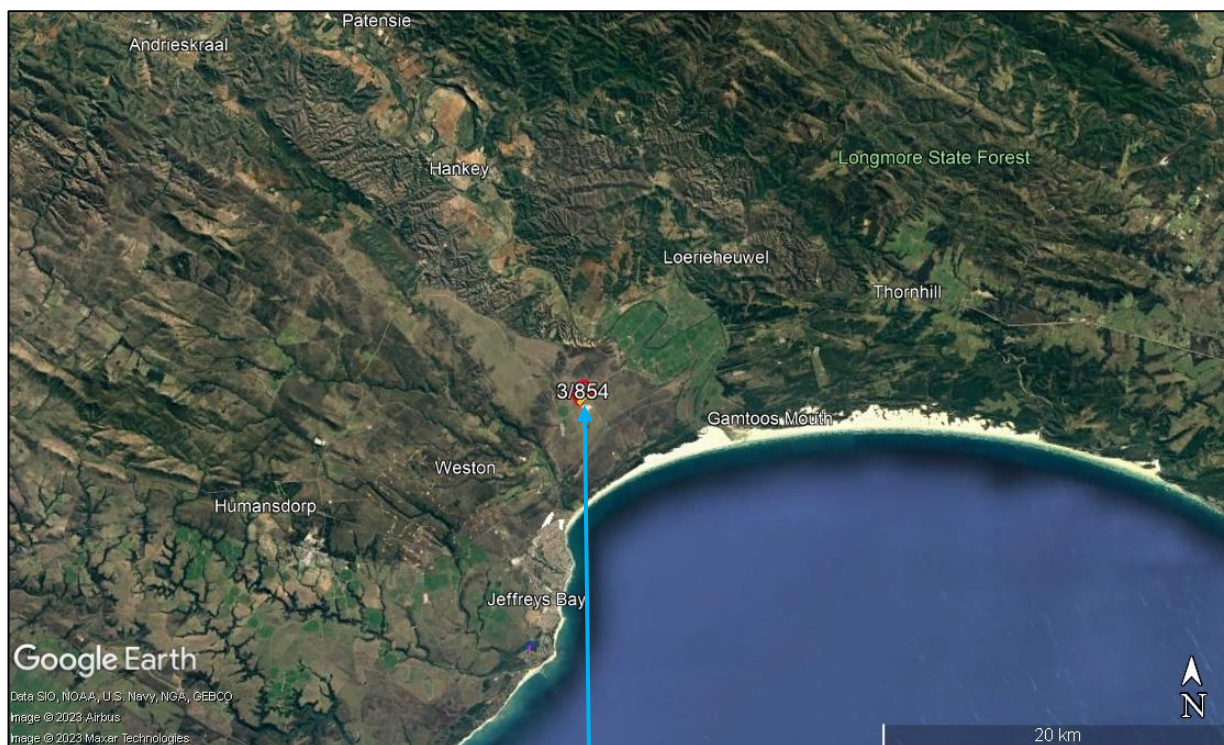
These occur in different forms and sizes, but easily identifiable. The most common are an accumulation of roughly circular fire cracked stones tightly spaced and filled in with charcoal and marine shell. They are usually 1-2 metres in diameter and may represent cooking platforms for shellfish. Others may resemble circular single row cobble stone markers. These occur in different sizes and may be the remains of windbreaks or cooking shelters.

### **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 Topographic maps indicating the approximate location of the proposed development (outlined in red) on the Remainder of Portion 3 of the Farm 854 near Jeffreys Bay, Kouga Local Municipality, Eastern Cape Province (indicated with the red arrow and the red square).**



**Map 2. Aerial views of the general location of the proposed area for the development on the Remainder of Portion 3 of the Farm 854 (indicated with the blue arrow). The farm boundaries are outlined in red. The proposed Layout Alternative 1 for the proposed precast concrete manufacturing facility is outlined in yellow and the proposed Layout Alternative 2 is outlined in purple. The triangles indicates areas where archaeological investigations were conducted in the past (Binneman 2007 - red triangle; Binneman & Reichert 2016 - yellow triangle; Binneman & Reichert 2021 - green triangle)**



**Figure 2. Aerial view of a typical layout for a concrete manufacturing facility (image courtesy of Habitat Link Consulting).**