

PHASE 1 HERITAGE RESOURCES SCOPING REPORT

PROPOSED ESTABLISHMENT OF A BORROW PIT (4), TO SURFACE NEW N11 ON THE FARM TWEEFONTEIN 238 KR PORTION 2, MOKOPANE, LIMPOPO

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EXECUTIVE SUMMARY

5 Borrow pits have been earmarked for possible utilization for extraction of material for surfacing the new N11 route. This report assesses Borrow pit 4, on the farm Tweefontein 238 KR Portion 2 near Mokopane, Limpopo Province.

No heritage remains were recorded at the site.

No further recommendations or mitigation is required.

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1. INTRODUCTION AND TERMS OF REFERENCE

Application purpose: To establish a new borrow pit for surfacing the N11 re-alignment

Area: Mogalakwena District

Size: 5 ha

General GPS: S24° 03' 28.6" E28° 58' 20.7"

Map reference number: 2428 BB

This report will enable the Applicant to take pro-active measures to limit the adverse effects that the development could have on heritage resources.

In terms of the National Heritage Resources Act (1999) the following is of relevance:

Historical remains

Section 34(1) No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

Archaeological remains

Section 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

Burial grounds and graves

Section 36 (3)(a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority-

(c) 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

(b) 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 detection or recovery of metals.

Culture resource management

Section 38(1) Subject to the provisions of subsection (7), (8) and (9), any person who intends to undertake a development* ...

must at the very earliest stages of initiating such development notify the responsible heritage resources authority and furnish it with details regarding the location, nature, and extent of the proposed development.

***‘development’** means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including-

- (a) construction, alteration, demolition, removal or change of use of a place or a structure at a place;
- (b) carry out any works on or over or under a place*;
- (e) any change to the natural or existing condition or topography of land, and
- (f) any removal or destruction of trees, or removal of vegetation or topsoil;

***‘place’** means a site, area or region, a building or other structure* ...”

***‘structure’** means any building, works, device or other facility made by people and which is fixed to the ground, ...”

2. METHOD

2.1 Sources of information and methodology

The source of information was primarily the field reconnaissance and referenced literary sources.

A pedestrian survey of the entire area was undertaken by Mr FE Roodt on 5 March 2017, during the middle of the day, during which standard methods of observation were applied. The area was carefully covered and traversed and special attention given to any areas displaying soil and or vegetative changes. As most archaeological material occur in single or multiple stratified layers beneath the soil surface, special attention was given to disturbances, both man-made such as roads and clearings, as well as those made by natural agents such as burrowing animals and erosion. Locations of heritage remains were recorded by means of a GPS (Garmin Etrex 10). Heritage material and the general conditions on the terrain were photographed with a Nikon Coolpix L25 Digital camera.

2.2 Limitations

The scoping survey was thorough, but limitations were experienced due to the fact that archaeological sites are subterranean and only visible when disturbed. Vegetation was moderate to dense.

2.3 Categories of significance

The significance of archaeological sites is ranked into the following categories.

- No significance: sites that do not require mitigation.
- Low significance: sites, which *may* require mitigation.
- Medium significance: sites, which require mitigation.
- High significance: sites, which must not be disturbed at all.

The significance of an archaeological site is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the National Heritage Resources Act, 1999, while other historical and cultural significant sites, places and features, are generally determined by community preferences.

A crucial aspect in determining the significance and protection status of a heritage resource is often whether or not the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. Many aspects must be taken into consideration when determining significance, such as rarity, national significance, scientific importance, cultural and religious significance, and not least, community preferences. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and mitigated in order to gain data / information which would otherwise be lost. Such sites must be adequately recorded and sampled before being destroyed. These are generally sites graded as of low or medium significance.

2.4 Terminology

Early Stone Age: Predominantly the Acheulean hand axe industry complex dating to + 1Myr yrs – 250 000 yrs. before present.

Middle Stone Age: Various lithic industries in SA dating from ± 250 000 yr. - 30 000 yrs. before present.

Late Stone Age: The period from ± 30 000-yr. to contact period with either Iron Age farmers or European colonists.

Early Iron Age: Most of the first millennium AD

Middle Iron Age: 10th to 13th centuries AD

Late Iron Age: 14th century to colonial period. *The entire Iron Age represents the spread of Bantu speaking peoples.*

Historical: Mainly cultural remains of western influence and settlement from AD1652 onwards – mostly structures older than 60 years in terms of Section 34 of the NHRA, though more recent remains can be termed historically significant should the remains hold social significance for the local community.

Phase 1 assessment: Scoping surveys to establish the presence of and to evaluate heritage resources in a given area

Phase 2 assessments: In depth culture resources management studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling is required.

Sensitive: Often refers to graves and burial sites although not necessarily a heritage place, as well as ideologically significant sites such as ritual / religious places. *Sensitive* may also refer to an entire landscape / area known for its significant heritage remains.

3. DESCRIPTION OF THE PROPOSED DEVELOPMENT AND TERRAIN

Vegetation: Makhado Sweet Bushveld (SVcb 20) (Mucina et al. 2006)

Terrain: The area is situated adjacent to a main road. The area has been used for soil extraction in the past, and engineers had already excavated test pits for soil suitability at time of survey.

Proposed development: Establishment of a new borrow pit (5) for the N11 upgrading



Fig 1. View of borrow pit 4 area



Fig 2. View of borrow pit 4 area



Fig 3: View of borrow pit 4 area

4. RESULTS OF THE SCOPING SURVEY AND DISCUSSION

4.1 SOCIAL and/or RELIGIOUS INTANGIBLE HERITAGE

No areas designated for socio-religious activities were recorded on the site

Significance: None

4.2 HISTORICAL PERIOD

No remains from the historical period were recorded.

Significance: None

4.3 GRAVES

No formal or informal graves could be identified.

Significance: None

4.4 IRON AGE REMAINS

According to the most recent archaeological cultural distribution sequences by Huffman (2007), this area falls within the distribution area of various cultural groupings originating out of both the Urewe Tradition (eastern stream of migration) and the Kalundu Tradition (western stream of migration). The facies that may be present are:

Urewe Tradition: Kwale branch-
Moloko branch-

Mzonjani facies AD 450 – 750 (Early Iron Age)
Icon facies AD 1300 - 1500 (Late Iron Age)
Marateng facies AD 1650-1840 (Late IA)

Kalundu Tradition: Happy Rest sub-branch - *Doornkop facies* AD 750 - 1000 (Early Iron Age)
Eiland facies AD 1000 – 1300 (Middle Iron Age)
Klingbeil facies AD 1000 - 1200 (Middle Iron Age)
Letaba facies AD 1600 - 1840 (Late Iron Age)
Marateng facies AD 1650-1840 (Late IA)

The Iron Age is also well documented in the wider area, with sites dating especially to the Letaba *facies* period.

No remains from the Iron Age were recorded.

Significance: None

4.5 STONE AGE REMAINS

No Stone Age remains were recorded. No drainage lines or rocky areas were evident on the area to be surveyed.

Significance: None

4.6 PALAEONTOLOGICAL SENSITIVITY

The area lies within the grey zone on SAHRIS map. No further action is required. The red area falls to the south east of the development.

As part of a project for a Bulk Water supply line (SAHRIS website) that covers a wider area than this survey, Dr L. Rossouw, found that there would be a negligible possibility of unearthing paleoarchaeological heritage material (Rossouw: 2017).

5. BACKGROUND ON THE AREA

According to SAHRA website, the nearest surveys to the proposed development are Case number 10484. A Bulk Water Supply line, by Jaco Van Der Walt. No heritage remains were recorded near the bridge area during their survey (Van Der Walt: 2017).

The Makapans World Heritage Site lies to the North East of the proposed development area, approximately 35km away. The terrain is completely different and the Heritage site does not extend toward the development area.

6. DISCUSSION AND RECOMMENDATIONS

From a heritage resources management point of view, we have no objection with regard to the development, provided adequate consultation with the local residents takes place and that a management plan is in place to ensure their safety.

The discovery of previously undetected subterranean heritage remains on the terrain must be reported to the Limpopo Heritage Authority or the archaeologist, and may require further mitigation measures.

7. BIBLIOGRAPHY

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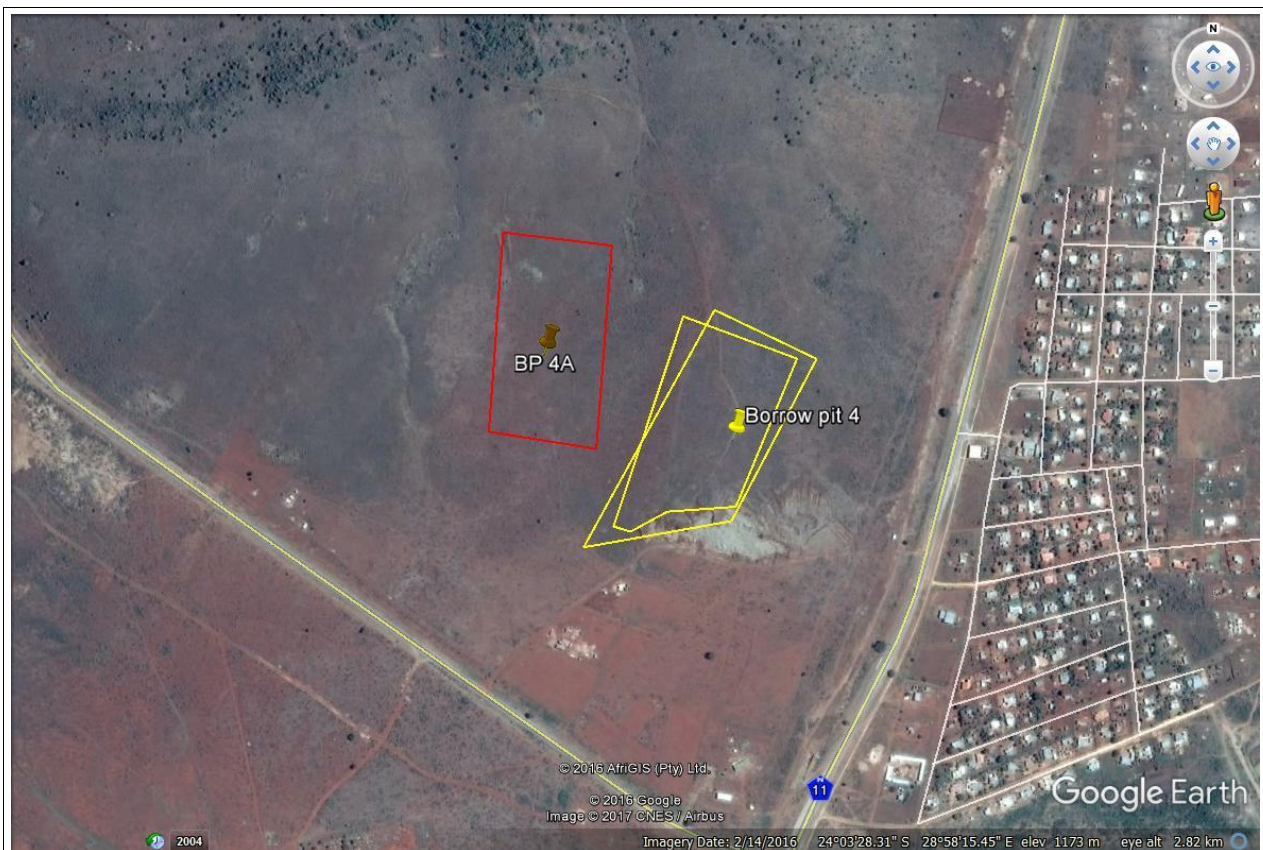
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Map 1:Google map close up



Map 2. In relation to Mokopane

Criteria		Description		
EXTENT	National (4) The whole of South Africa	Regional (3) Provincial and parts of neighbouring provinces	Local (2) Within a radius of 2 km of the construction site	Site (1) Within the construction site
DURATION	Permanent (4) Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	Long-term (3) The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter. The only class of impact which will be non-transitory	Medium-term (2) The impact will last for the period of the construction phase, where after it will be entirely negated	Short-term (1) The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase
INTENSITY	Very High (4) Natural, cultural and social functions and processes are altered to extent that they permanently cease	High (3) Natural, cultural and social functions and processes are altered to extent that they temporarily cease	Moderate (2) Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	Low (1) Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected
PROBABILITY OF OCCURRENCE	Definite (4) Impact will certainly occur	Highly Probable (3) Most likely that the impact will occur	Possible (2) The impact may occur	Improbable (1) Likelihood of the impact materialising is very low

Impact is of Low probability, contained within the site. As no heritage materials were recorded, all criteria listed above are LOW

Class		Description
+	Any value	Any positive / beneficial 'impact', i.e. where no harm will occur due to the activity being undertaken.
–	Low impact (4 -6 points)	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
	Medium impact (7 -9 points)	Mitigation is possible with additional design and construction inputs.
	High impact (10 -12 points)	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.
	Very high impact (12 - 14 points)	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a "very high impact" is likely to be a fatal flaw.
Status		Denotes the perceived effect of the impact on the affected area.
Positive (+)		Beneficial impact.
Negative (-)		Deleterious or adverse impact.
Neutral (/)		Impact is neither beneficial nor adverse.
It is important to note that the status of an impact is assigned based on the <i>status quo</i> – i.e. should the project not proceed. Therefore, not all negative impacts are equally significant.		

In terms of Heritage resources- the development has a neutral impact as no heritage materials were recorded.