

Phase 1 Archaeological Impact Assessment of 8 Gravel
Quarries along the R34 between Memel and Vrede, Free
State Province.

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Executive Summary

- All the quarries that were investigated are located within igneous bedrock (dolerite) and represent no palaeontological impact.
- Seven out of eight quarries indicate no potential archaeological impact and are of low archaeological significance.
- An informally laid-out cluster of approximately ten grave mounds is located on top of a loose-standing, but intact gravel mound at Quarry M6.
- The pocket of gravel is an intact doleritic remnant and is covered of what would appear to be informally distributed, dolerite-capped grave mounds with no indication of headstones or other forms of identification.
- The exposed gravel mound is unstable and will erode very quickly, even after all activities are terminated at the site.
- A Phase 2 Archaeological mitigation is recommended for Quarry M6.
- With reference to the legal implications concerning graves, as stipulated in Section 36(3, 4 & 5) of the National Heritage Resources Act 25 of 1999, it is proposed that a proper permit is required from SAHRA in order to record and remove the cluster of graves from the quarry to be interned at the municipal graveyard in Memel.

Introduction

Several gravel quarries, located along the R34 between Memel and Vrede, are being developed and utilized for the purpose of road construction and maintenance in the area (Figure 1). An archaeological impact assessment is required as a prerequisite for new development in terms of the National Environmental Management Act and is also called for in terms of the National Heritage Resources Act 25 of 1999. The task concerns the identification of possible archaeological sites or occurrences in within the identified zones, an assessment of their significance, possible impact by the proposed development and recommendations for mitigation where relevant.

Description of the Affected Area

Details of area surveyed

Locality data

1 : 250 000 Topographic 2728 Frankfort.

Eight gravel quarries are situated in close proximity to the R34 in the vicinity of Memel (Table 1, Figure 2&3). All the quarries are accessible by farm roads and tracks.

Table 1. Locality coordinates of quarries.

Quarry	Coordinates	Alt
M1	S27 37.329 E29 21.588	1766 m
M2	S27 36.829 E29 22.397	1770 m
M3	S27 39.711 E29 25.056	1819 m
M4	S27 39.922 E29 28.565	1785 m
M6	S27 41.252 E29 32.754	1725 m
M7	S27 41.558 E29 35.368	1740 m
M8	S27 40.727 E29 36.938	1853 m

Geology

The underlying geology between Memel and Vrede is primarily made up of sandstones and mudstones of the Adelaide Subgroup (Beaufort Group of Karoo rocks), that are perforated by extensive dolerite intrusions of Jurassic age, in the form of dikes and sills.

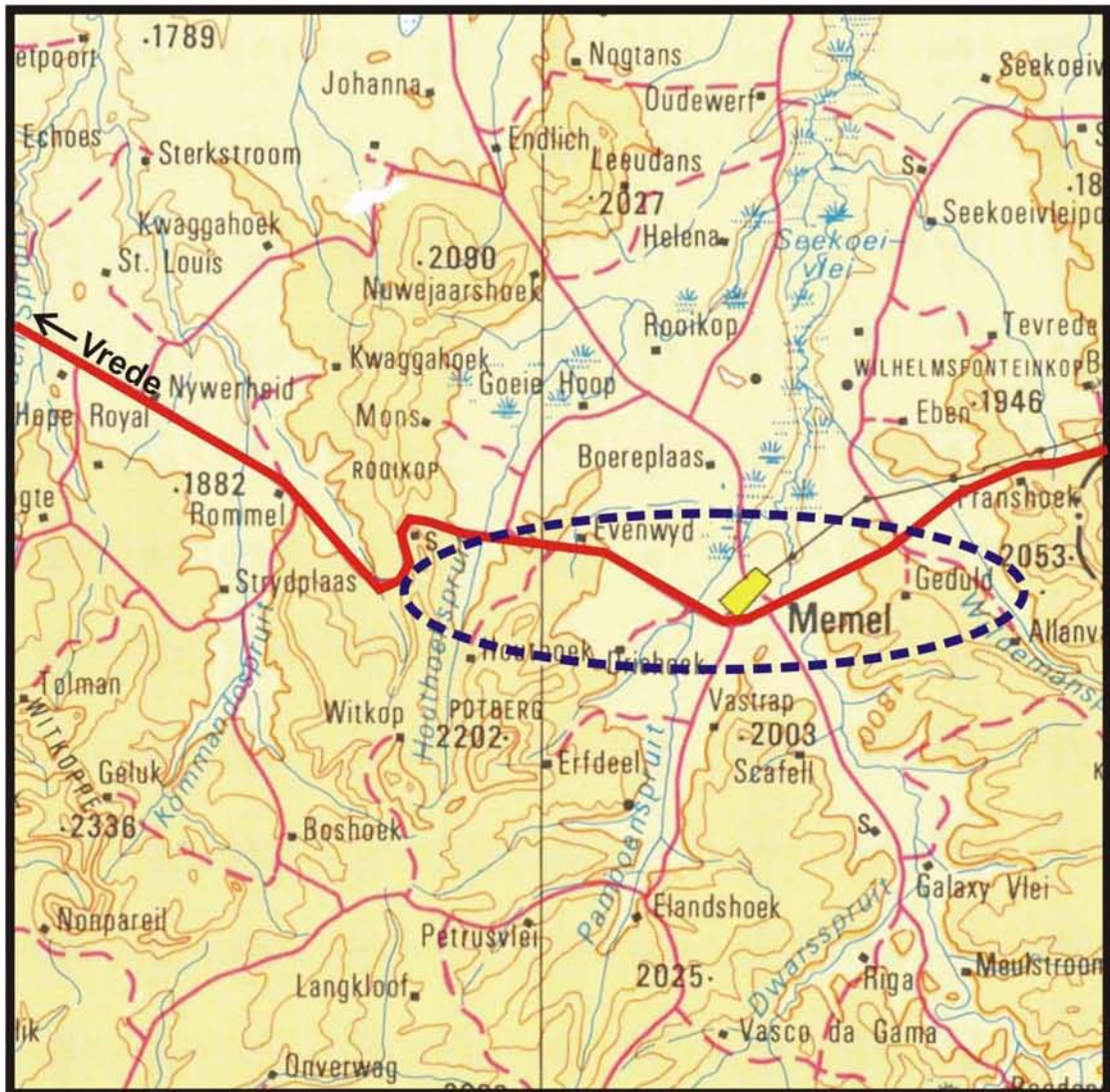


Figure 1. 1:500 000 topographic map. Dotted line indicates extend of the distribution of quarries along the R34.

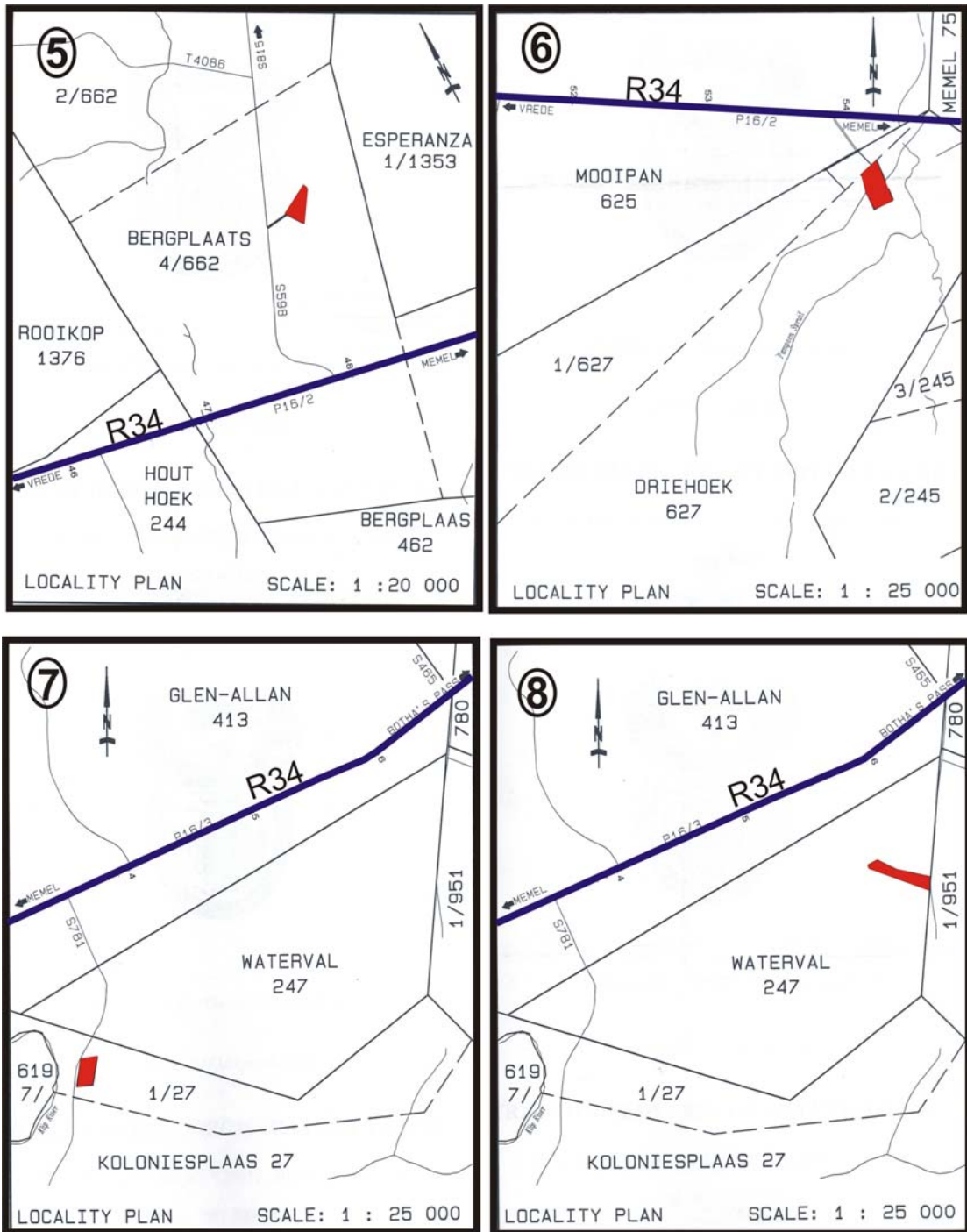


Figure 3. Location of Gravel Quarries 5 - 8.

Methodology

All structures and sites that were observed were recorded using a Garmin Etrex Vista GPS hand model (set to the WGS 84 map datum) and a Sony W17 digital camera.

Results of Survey

All the quarries are located within igneous bedrock (dolerite) and represent no palaeontological impact. Seven out of eight quarries indicate no potential archaeological impact and are of low archaeological significance.

An informal cluster of approximately ten grave mounds is located on a loose-standing, but intact gravel mound at Quarry M6 and is in immediate danger of destruction (Figure 4 & 5). The pocket of gravel is an intact doleritic remnant and is covered of what would appear to be informally distributed, dolerite-capped grave mounds with no indication of headstones or other forms of identification. The site is heavily overgrown, suggesting that the total number of graves could even be more than ten. All the graves are tentatively attributed to those of farm labourers (Mr A. Lombard, owner of the farm on which the quarry is situated, pers. com.).

Statement of Significance

Quarries 1 – 5 and 8 is of low palaeontological or archaeological significance. Several graves located on a loose-standing, but intact gravel mound at Quarry M6 are in immediate danger of destruction. Mitigative procedures are urgently required in this regard.

Table 2. Reference to Section 36(3, 4 & 5) of the National Heritage Resources Act 25 of 1999.

<p>(3) (a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—</p> <p>(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;</p> <p>(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.</p> <p>(4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.</p> <p>(5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority—</p> <p>(a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and (b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.</p>

Recommendation

A Phase 2 Archaeological mitigation is recommended for Quarry M6. The exposed gravel mound is unstable and will erode very quickly, even after all activities are terminated at the site. With reference to the legal implications concerning graves as stipulated in Section 36(3, 4 & 5) of the National Heritage Resources Act 25 of 1999 (Table 2), it is proposed that a proper permit is required from SAHRA in order to record and remove the cluster of graves from the quarry to be interned at the municipal graveyard in Memel.

References

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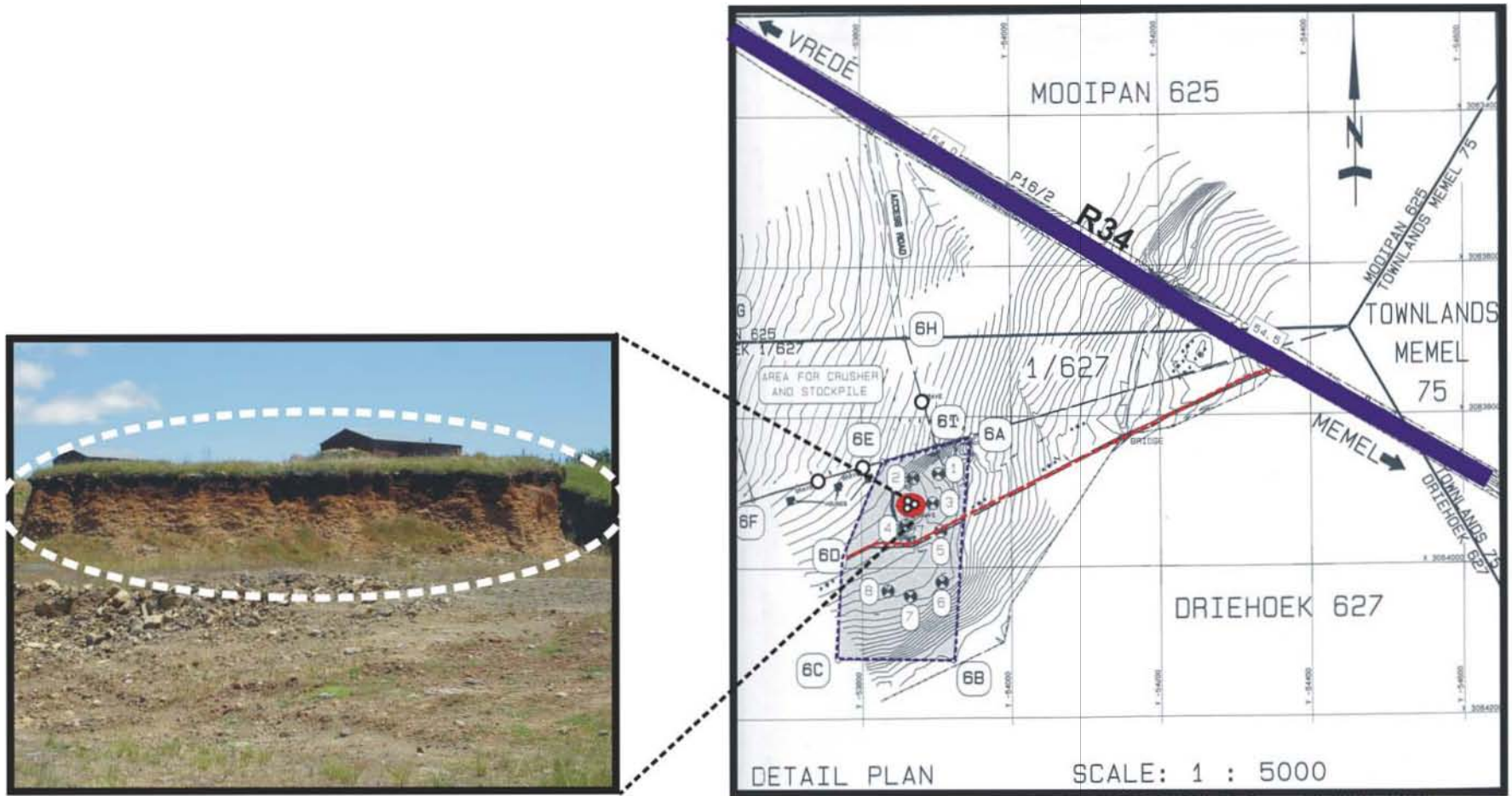


Figure 4. Gravel quarry M6. A loose-standing pocket of intact gravels, located in the middle of the quarry, contain about ten graves (left).



Figure 5. Quarry M6. Exposed dolerite mound with a cluster of graves located within the upper soils on top. Heavily overgrown.