

VHUFHA Hashu Heritage Consultancy CC

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PHASE 1

ARCHAEOLOGICAL SCOPING STUDY

AN ARCHAEOLOGICAL INVESTIGATION FOR THE
PROPOSED UPGRADING OF 11.8KM (GRAVEL TO
TAR) OF ROAD D2740 RUST DE WINTER- MOLOTO
IN THE NKANGALA REGION OF THE
MPUMALANGA DISTRICT PROVINCE.



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Executive Summary

Site name and location: The proposed 11.8km of road D2740 Rust De Winter-Moloto in the Nkangala Region of the Mpumalanga Province. The site is located at about 400km from Nelspruit and about 200km from Witbank.

Local Authority: JS Moroka Local Municipality

Developer: Department of Public Works, Roads and Transport

Date of field work: 06 July 2011

Date of report: August 2011

Findings: The phase 1 Archaeological scoping study as required in terms of section 38 of the National Heritage Resource Act (Act 25 of 1999) was done for the proposed road D2740 within JS Moroka Local Municipality.

The aims with the phase1 Archaeological Impact Assessment (AIA) program were the following:

- To establish whether any of the type and ranges of heritage resources as outlined in section 3 of the National Heritage Resource Act (Act 25 of 1999) do occur in or near the proposed area, and if so, to establish the significance of these heritage resources.
- To establish whether such heritage resources will be affected by the proposed activities, and if so, to determine possible mitigation measures that can be applied to these heritage resources.

The phase 1 heritage impact assessment for the proposed road revealed no heritage resources within the study area.

No further studies/Mitigations are recommended as within the proposed area and its surrounding there is no archaeological or place of historical significance that will be impacted by the proposed road. However, should any chance archaeological or

any other physical cultural resources be discovered subsurface, heritage authorities should be informed. From an archaeological and cultural heritage resources perspective, there are no objections to the proposed road project and we recommend to the South African Heritage Resources Agency (SAHRA) authorities to approve the project as planned.

Acknowledgements:

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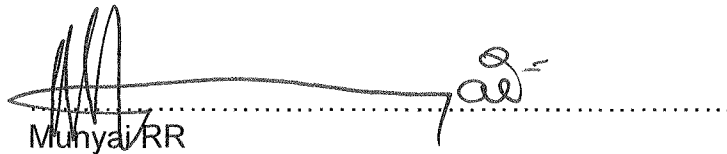
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1. INTRODUCTION

Mpumalanga Department of Public Works, Roads and Transport commissioned studies for the proposed upgrading (gravel to tar) of road D2740 from road D2901 to the existing road in Ga-Matimpule Village in Nkangala District of Mpumalanga Province. Mkwale Environmental Consultants were appointed to handle the environmental aspects of the proposed project. They appointed Vhufa Hashu Heritage Consultants to conduct an Archaeological and Cultural Heritage Impact Assessment study as part of the Environmental Impact Assessment (EIA) for the proposed project.

As part of the development process, an application for an Environmental Assessment Authorization must be completed. This report is one of a series of appendices prepared for the impact assessment that is to be submitted to the Department of Economic Development, Environment and Tourism (dedet) _environmental assessment office, in support of the application as amended by the National Environmental Management (NEMA) Act no 107 of 1998 regulation in terms of chapter 5 section (32)(2)(d) and section (34) (b), The Mineral and Petroleum Resource Development (MPRDA) Act 28 of 2002 and Development Facilitation (DFA) Act 67 of 1995 regulation GNR1 of 7 January 2000 section 31 . The information presented in this report provides the background and the basis for the Heritage Resources component of the Project impact assessment. The heritage resources impact assessment focused on archaeological sites.

The Project proposal constitutes an activity, which may potentially be harmful to heritage resources that may occur in the demarcated area. The National Heritage Resources Act (NHRA - Act No. 25 of 1999) protects all structures and features older than 60 years (section 34), archaeological sites and material (section 35) and graves and burial grounds (section 36). In order to comply with the legislation, the Applicant requires information on the heritage resources, and their significance that occur in the demarcated area. This will enable the Applicant to take pro-active measures to limit the adverse effects that the development could have on such heritage resources.

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:

- destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite

Burial grounds and graves

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

- (i) 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
- (ii) bring onto or use at a burial ground or grave 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:

- (i) Construction, alteration, demolition, removal or change of use of a place or a structure at a place;
- (ii) Any change to the natural or existing condition or topography of land, and
- (iii) 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.

3. AIM OF STUDY

The aim of this Archaeological Impact Assessment (AIA) Study was to determine the presence or absence of heritage resources such as archaeological, historical sites, features, graves, places of religious and cultural significance, and to submit appropriate mitigation recommendations with regard to the identified cultural resources management measures that may be affected by the proposed development.

3.1 Project Developers and Consultants

Developers are encouraged to consider archaeological values in their project planning and design from the outset. This will minimize scheduling and budget difficulties at later stages. As Consultants in the archaeological assessment process, we are responsible for: *(see table 1)*

- ❖ Determining the presence of archaeological sites that may be adversely impacted by the proposed development, and evaluate their significance.
- ❖ Identification of potential adverse impacts to archaeological sites protected under the National Heritage Resources Act No: 25 of 1999.
- ❖ Assessing of the heritage significance of identified archaeological sites to assist in the development of appropriate mitigation strategies.
- ❖ Make recommendations for avoidance or mitigation of protected or otherwise significant archaeological sites.
- ❖ Reporting the results of these studies to the Heritage Authorities.

Table 1

4. TERMS OF REFERENCE

The Terms of Reference for the study were to:

- (I) Assess the significance of the known cultural resources within the borders of proposed development area, in terms of their historical, social, religious, aesthetic and scientific value.
- (II) Develop mitigation or control measures for impact minimization and cultural resources preservation
- (III) Develop procedures to be implemented if previously unidentified cultural resources are uncovered during the construction.

5. TERMINOLOGY

The following aspects have direct bearing on the survey and the resulting report:

- Archaeological sites are places where people lived and left evidence of their presence in the form of artifacts, food remains and other traces such as rock paintings or engravings, burials, fireplaces and structures.

- Cultural Resources are all non-physical human-made occurrences, as well as natural occurrences that are associated with human activity. These include all sites, structures and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development.
- Cultural Significance is the aesthetic, historical, scientific and social value for past, present and future generations.
- Conservation means all the processes of looking after a place so as to retain its cultural significance.
- Historic means significant in history.
- Historical means belonging to the past.
- *In Situ* material means archaeological remains that have not been disturbed.
- Place means site, area, building or other work, group of buildings or other works, together with pertinent contents, surroundings and historical and archaeological deposits.
- Preservation means protecting and maintaining the fabric of a place in its existing state and retarding deterioration or change, and may include stabilization where necessary.

6. METHODOLOGY

Physical Survey

The extent of the proposed area and corridors were determined as well as the extent of the areas to be affected by secondary activities (access route) during the development. Physical survey was aided by vehicle and on foot covering the proposed area, peripheral areas which will not be affected by the proposed project. A systematic inspection of the area on along linear transects resulted in the maximum coverage of the proposed area. The survey was conducted on the 06th of July 2011.

A brief literature survey relating to the Pre-historical and historical context of the project area where the proposed road construction has been earmarked was consulted. In addition, the proposed site was studied by means of the 1:50 000 topographical maps and the 1:250 000 map on which the proposed study area appears.

Restrictions

It must be pointed out that heritage resources can be found in the unexpected places, it must also be borne in mind that survey may not detect all the heritage resources in a given project area. While some remains may simply be missed during surveys (observation) others may occur below the surface of the earth and may be exposed once development (such as the construction of the facilities) commences.

Documentation

All sites/find spots located during the foot surveys were briefly documented. The documentation included digital photographs and descriptions as to the nature and condition of the site and recovered materials. The sites/find spots were plotted using a Global Positioning System (GPS) (Garmin E-Trek Legend) and numbered accordingly.

7. ASSESMENT CRITERIA

This section describes the evaluation criteria used for determining the significance of archaeological and heritage sites. The significance of archaeological and heritage sites were based on the following criteria:

- ✓ The unique nature of a site
- ✓ The amount/depth of the archaeological deposit and the range of features (stone walls, activity areas etc.)
- ✓ The wider historic, archaeological and geographic context of the site.
- ✓ The preservation condition and integrity of the site
- ✓ The potential to answer present research questions.

7.1 Site Significance

The site significance classification standards as prescribed and endorsed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region, were used as guidelines in determining the site significance for the purpose of this report.

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance (NS)	Grade 1	-	Conservation; National Site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; Provincial Site nomination
Local Significance (LS)	Grade 3A	High Significance	Conservation; Mitigation not advised
Local Significance (LS)	Grade 3B	High Significance	Mitigation (Part of site should be retained)
Generally Protected A (GP.A)	Grade 4A	High / Medium Significance	Mitigation before destruction
Generally Protected B (GP.B)	Grade 4B	Medium Significance	Recording before destruction
Generally Protected C (GP.C)	Grade 4C	Low Significance	Destruction

7.2 Grading and rating systems of heritage resources

6.2 Impact Rating

VERY HIGH

These impacts would be considered by society as constituting a major and usually permanent change to the (natural and/or cultural) environment, and usually result in severe or very severe effects, or beneficial or very beneficial effects.

Example: The loss of a species would be viewed by informed society as being of VERY HIGH significance.

Example: The establishment of a large amount of infrastructure in a rural area, which previously had very few services, would be regarded by the affected parties as resulting in benefits with VERY HIGH significance.

HIGH

These impacts will usually result in long term effects on the social and /or natural environment. Impacts rated as HIGH will need to be considered by society as constituting an important and usually long term change to the (natural and/or social) environment. Society would probably view these impacts in a serious light.

Example: The loss of a diverse vegetation type, which is fairly common elsewhere, would have a significance rating of HIGH over the long term, as the area could be rehabilitated.

Example: The change to soil conditions will impact the natural system, and the impact on affected parties (e.g. farmers) would be HIGH.

MODERATE

These impacts will usually result in medium- to long-term effects on the social and/or natural environment. Impacts rated as MODERATE will need to be considered by the public or the specialist as constituting a fairly unimportant and usually short term change to the (natural and/or social) environment. These impacts are real, but not substantial.

Example: The loss of a sparse, open vegetation type of low diversity may be regarded as MODERATELY significant.

Example: The provision of a clinic in a rural area would result in a benefit of MODERATE significance.

LOW

These impacts will usually result in medium to short term effects on the social and/or natural environment. Impacts rated as LOW will need to be considered by society as constituting a fairly important and usually medium term change to the (natural and/or social) environment. These impacts are not substantial and are likely to have little real effect.

Example: The temporary changes in the water table of a wetland habitat, as these systems are adapted to fluctuating water levels.

Example: The increased earning potential of people employed as a result of a development would only result in benefits of LOW significance to people living some distance away.

NO SIGNIFICANCE

There are no primary or secondary effects at all that are important to scientists or the public.

Example: A change to the geology of a certain formation may be regarded as severe from a geological perspective, but is of NO SIGNIFICANCE in the overall context.

7.3 Certainty

DEFINITE: More than 90% sure of a particular fact. Substantial supportive data exist to verify the assessment.

PROBABLE: Over 70% sure of a particular fact, or of the likelihood of an impact occurring.

POSSIBLE: Only over 40% sure of a particular fact, or of the likelihood of an impact occurring.

UNSURE: Less than 40% sure of a particular fact, or of the likelihood of an impact occurring.

7.4 Duration

SHORT TERM : 0 – 5 years

MEDIUM: 6 – 20 years

LONG TERM: more than 20 years

DEMOLISHED: site will be demolished or is already demolished

7.5 Mitigation

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be classified as follows:

- ✓ A – No further action necessary
- ✓ B – Mapping of the site and controlled sampling required
- ✓ C – Preserve site, or extensive data collection and mapping required; and
- ✓ D – Preserve site



Figure 1: View of the starting point of road D2740

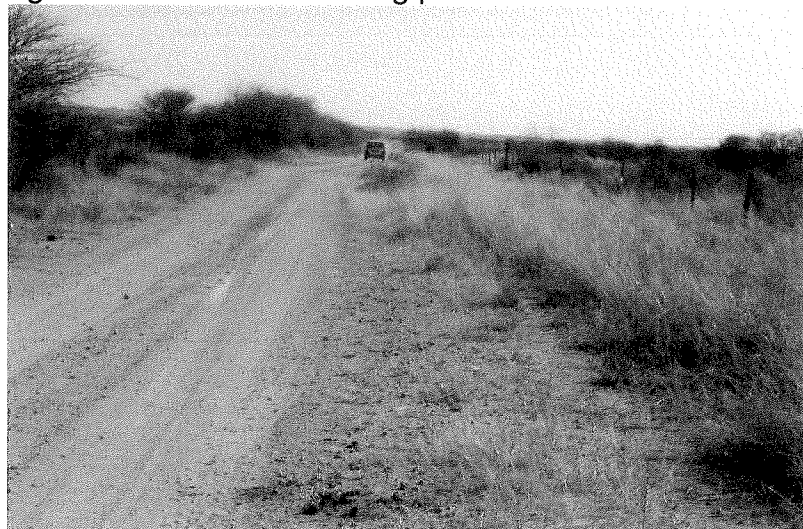


Figure 2: View of the existing road earmarked for upgrade.



Figure 3: View of the road marking along the road.



Figure 4: View of the area where the road is divided into two sections.

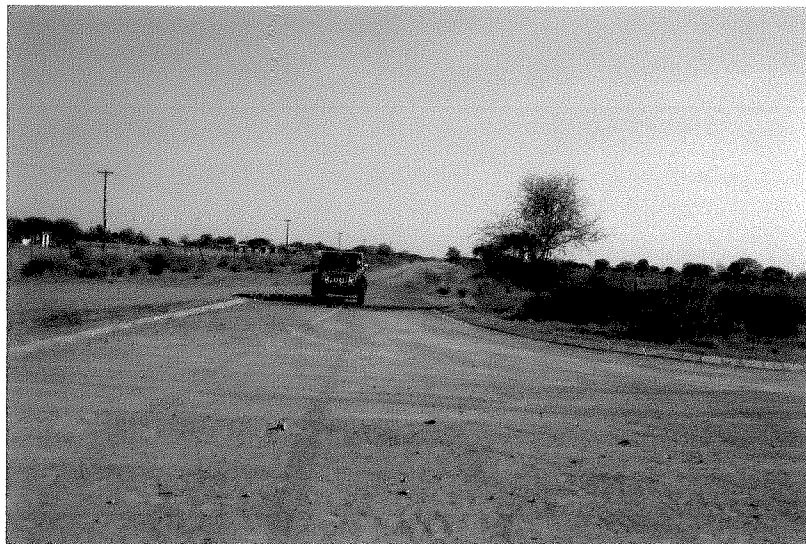


Figure 5: View of area where the road will end.

Archaeological and Cultural Sites

No archaeological sites or materials were identified in association with the proposed road. The proposed road runs through disturbed area, along the existing gravel road. The nature and extent of the ground surface disturbance in some sections made it unlikely for archaeological site to have survived *in situ*.

Historic Monuments

Historical and Recent sites - these sites are associated with white settlers, colonial wars, industrialization, African population settlements, contemporary ritual sites and settler farming communities are the most common and visible. The more common functions of places of cultural historical significance include:

- Domestic
- Recreation & culture
- Commerce & trade
- Agriculture & subsistence
- Social
- Health care
- Religion
- Designed landscape
- Funeral (cemeteries, graves and burial grounds)
- Civil and Structural Engineering
- Education
- Defence /Military

There is no listed monument in the area affected by the proposed road. No historical sites of significance were identified on route of the road. However, it should be noted that the general area has a long history of human occupation, making the entire landscape a cultural landscape.

Burial grounds and graves

In terms of the Section 36 (3) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) no person may, without a permit issued by the relevant 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 or 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.

Therefore, in addition to the formal protection of culturally significance graves, all graves which are older than 60 years and which are not already located in a cemetery (such as ancestral graves in rural areas), are protected. Communities, which have an interest in the graves, must be consulted before any disturbance can take place. The graves of victims of conflict and those associated with the liberation struggle will have to be included, cared for, protected and memorials erected in their honor where practical. Regarding graves and burial grounds, the NHRA distinguishes between the following:

- Ancestral graves
- Royal graves and graves of traditional leaders
- Graves of victims of conflict
- Graves of individuals designated by the Minister by notice in the Gazette
- Historical graves and cemeteries
- Other human remains, which are not covered in terms of the Human Tissue Act, 1983 (Act No.65 of 1983).

Significance valuation Burial Ground, Historic Cemeteries and Graves

The significance of burial grounds and gravesites is closely tied to their age and historical, cultural and social context. Nonetheless, every burial should be considered as of high significance. Should any grave previously unknown be identified during construction, every effort should be made not disturb them.

Grave yards

No isolated grave or grave yard was identified along the proposed road.

Previously unidentified burial sites/graves –

Although the possibilities of this occurring are very limited along the proposed road and bridge, during the proposed development, should burial sites outside the NHRA be accidentally found, they must be reported to the nearest police station to ascertain whether or not a crime has been committed. If there is no evidence for a

crime having been committed, and if the person cannot be identified so that their relatives can be contacted, the remains may be kept in an institution where certain conditions are fulfilled. These conditions are laid down in the Human Tissue Act (Act No. 65 of 1983). In contexts where the local traditional authorities give their consent to the unknown remains to be re-buried in their area, such re-interment may be conducted under the same regulations as would apply for known human remains.

9. Statement of overall impacts

From a cultural heritage point of view, any development that alters the ground surface status quo will potentially destroy any archaeological resources in its direct path, and the impact will be permanent in nature, extent and duration. Archaeological resources are fixed in space. Any activities that threaten to alter the status quo, therefore an immediate and direct threat to the heritage resources. However, since there was no archaeological or cultural heritage site that was identified on sites, the overall impact of the proposed project is considered to be low.

Generally speaking, the proposed upgrading (gravel to bituminous seal) of the road will have minimal impact upon cultural heritage resources, given the fact that the survey did not encounter any such sites with any significance threshold.

10. Overall recommendations

- No further predevelopment study or mitigation is necessary for the archaeological and cultural heritage resources with regards to the proposed construction of the road. However, there is always a probability of discovering archaeological sites during sub-surface earth moving activities. This study recommends that a heritage monitoring plan (as part of the EMP) be put in place during construction period to ensure that no chance finds are encountered.
- Furthermore, the construction team should be informed about the value of the cultural heritage resources in general so as to ensure that they do not destroy

the chance archaeological sites they may encounter during working on the proposed sites.

11. Concluding remarks

From a heritage perspective, in the absence of any known heritage resources and taking into consideration the socio-economic and other values of the proposed Construction of the road, there are no barriers to the proposed development. The cultural landscape affected by the project does not have significance threshold to call for total protection of the landscape. Nonetheless, detailed monitoring procedures should be scheduled into the project in order to adequately respond to chance finds that may be found accidentally during the proposed development. The proposed project may proceed as planned subject to a heritage monitoring programme. With the constraints herein discussed and appropriate monitoring measures adopted, there are no objections to the proposed development project and we recommend to the heritage authorities to approve the project accordingly.

12. REFERENCE

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