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**FINAL HERITAGE IMPACT ASSESSMENT REPORT:
PROPOSED WESTERN BYPASS ROAD (PHOKENG
BYPASS ROAD) OF 10 KM BETWEEN THE
RUSTENBURG N 4 INTERCHANGE AND THE R 565
JUNCTIONS, NORTH-WEST PROVINCE**



SUBMITTED FOR AUTHORISATION PURPOSES TO

**SAHRA PALAEOLOGY, ARCHAEOLOGY AND METEORITES UNIT
SAHRA NORTH-WEST PROVINCIAL OFFICE**

DATE: 12 September 2008

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SUBMITTED TO:

1. SAHRA Palaeontology, Archaeology and Meteorites Unit, Cape Town
2. SAHRA North-West Office, Mmabatho
3. Rock Environmental Consulting, Pretoria

DATE: 12 September 2008

EXECUTIVE SUMMARY

This report fulfils the requirements for a full Heritage Impact Assessment (HIA) as provided for in Section 38 of the National Heritage Resources Act (NHRA) (Act 25 of 1999). This report also fulfils the requirements of a Specialist Study in accordance with the EIA Regulations and procedures.

The investigation was carried out by an independent generalist heritage practitioner, Dr RC de Jong (Cultmatrix cc) and Dr JA van Schalkwyk (accredited archaeologist). His AIA report is attached separately.

The development is linear form of development comprising a bypass road connecting the N 4 (Bakwena Platinum Freeway) at a point west of Rustenburg with a point on the R 565 road between Rustenburg and Sun City, located north of Phokeng. This bypass will run along a range of hills, including Tshufi and Moremogolo, to the west of Phokeng and will serve to accelerate the Rustenburg-Sun City traffic that now runs through Phokeng and lessen the impact on this town.

The development site basically consists of smallholdings in the south (near the N 4 and the old Rustenburg-Swartruggens road), dense savannah vegetation with scattered clumps of eucalyptus trees, erosion areas and low rocky hills. The corridor of the proposed bypass road is located between the range of hills in the west and north and the town of Phokeng in the east and south. The bypass runs across the farms Rietvly 271 JQ, Goedgedacht 267 JQ, Morgenzon 261 JQ, Beerfontein 263 JQ and the historic Paul Kruger farm Boekenhoutfontein 260 JQ.

The aim of the full HIA investigation was to analyse and recommend heritage management mitigation measures and monitoring programmes.

The objectives were to analyse heritage issues, to research the chronology of the site and its role in the broader context, to undertake a comprehensive assessment of heritage significance, to analyse the nature and scale of the proposed development, to establish the compatibility of the proposed development with heritage and other statutory frameworks and to assess alternatives in order to promote heritage conservation issues.

The following table summarises heritage resources that are at (low) risk through adverse impacts in the most recent proposal for the corridor (measured about 100 m) of the proposed bypass road and recommends mitigation and other management measures:

ROAD SECTION	ENVIRONMENTAL CONTEXT	HERITAGE RESOURCES	MANAGEMENT MEASURES
KM 0 – KM 1	Roads, smallholdings, vacant land	None	Monitor for chance finds (hidden artefacts, foundations, graves etc), photo record before demolition
KM 1 – KM 2	Roads, tracks, fields, smallholdings, vacant land	None	Monitor for chance finds (hidden artefacts, foundations, graves etc)
Km 2 – KM 3	Bushveld	None	Monitor for chance finds (hidden artefacts, foundations, graves etc)
KM 3 – Km 4	Bushveld, tracks	None	Monitor for chance finds (hidden artefacts, foundations, graves etc)

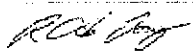
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ROAD SECTION	ENVIRONMENTAL CONTEXT	HERITAGE RESOURCES	MANAGEMENT MEASURES
KM 4 – KM 5	Bushveld, tracks, eucalyptus trees, gravel road	Gravel road is known as Path of the Regiments (site PB 1) – intangible heritage site	Preserve road and retain access to Tshufi Hill as the main site of intangible significance
KM 5 – KM 6	Bushveld, tracks	None	Monitor for chance finds (hidden artefacts, foundations, graves etc)
KM 6 – KM 7	Bushveld, rocky hills, outskirts of Phokeng	None	Monitor for chance finds (hidden artefacts, foundations, graves etc)
KM 7 – KM 8	Severe erosion areas, tracks, open grassland	None	Monitor for chance finds (hidden artefacts, foundations, graves etc)
KM 8 – KM 9	Rocky areas, saddle between Moremogolo and low hill, open grassland, tracks	Stone enclosure (PB 3), pigsty (PB 2), historic stone enclosures (PB 4 and PB 4A)	Monitor for chance finds (hidden artefacts, foundations, graves etc). Photograph and map identified sites (done)
KM 9 – Km 10	Rocky areas, open grassland, tracks, fields	Ruin (PB 5), old dam (PB 6), ruin of homestead (PB 7)	Monitor for chance finds (hidden artefacts, foundations, graves etc). Photograph and map identified sites (done)

The route between KM 8 and KM 10 was changed from an earlier proposal that ran in a straight line next to existing roads and houses and in open land between the Diocese of Rustenburg and Phokeng. The final proposal for the section between KM 8 and KM 10 runs between Moremogolo Hill and a low foothill and joins the R 565 at a point north of the Diocese land

Based on the above findings, it is recommended that SAHRA authorises the final route with the understanding that:

1. Should any human remains be disturbed, exposed or uncovered during excavations for the proposed project, these should immediately be reported to an archaeologist. Burial remains should not be disturbed or removed until inspected by the archaeologist.
2. Site clearing and preparation activities must be monitored for the occurrence of any other archaeological material (Stone Age tools, Iron Age artefacts, historic waste disposal sites etc) and similar chance finds and an archaeologist should be asked to inspect the area when this has reached an advanced stage in order to verify the presence or absence of any such material.
3. Identified sites that will be destroyed have already been mapped and photographed and that due to their low significance and poor condition no further action is required.
4. The above recommendations must be included in the Construction Environment Management Plan for the proposed project.
5. The bypass road will cross a road known as the Path of the Regiments, which is a heritage resource of high local intangible significance and provides access to the ridge next to Tshufi Hill (where there is a cairn). This access should be preserved. This road also provides access to a water reservoir and a proposed Cultural Centre and School of Excellence (separate project).



R C DE JONG
Principal Member: Cultmatrix cc

PART 1: DEVELOPMENT OVERVIEW

The structure of this report is based on:

- SOUTH AFRICAN HERITAGE RESOURCES AGENCY, Heritage Impact Assessment: Notification of intent to develop (form)
- DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING, PROVINCIAL GOVERNMENT OF THE WESTERN CAPE, 2005, Guideline for involving heritage specialists in EIA processes (document)
- DEPARTMENT OF ENVIRONMENT AFFAIRS AND TOURISM, Integrated Environmental Management Guidelines
- SOUTH AFRICAN HERITAGE RESOURCES AGENCY, 2006, *Minimum standards: Archaeological and palaeontological components of impact assessment reports* (unpublished).
- WORLD BANK, *Environmental Assessment Sourcebook Update No 8, September 1994: Cultural Heritage in Environmental Assessment*.
- Best-practice HIA reports submitted by Cultmatrix and other heritage consultants

1.1 Background

1.1.1 General

This HIA report is part of the Environmental Impact Assessment (EIA) for a linear form of development comprising a bypass road connecting the N 4 (Bakwena Platinum Freeway) at a point west of Rustenburg with a point on the R 565 road between Rustenburg and Sun City, located north of Phokeng. This bypass will run along a range of hills, including Tshufi and Moremogolo, to the west of Phokeng and will serve to accelerate the Rustenburg-Sun City traffic that now runs through Phokeng and lessen the impact on this town.

The development site basically consists of smallholdings in the south (near the N 4 and the old Rustenburg-Swartruggens road), dense savannah vegetation with scattered clumps of eucalyptus trees, erosion areas and low rocky hills. The corridor of the proposed bypass road is located between the range of hills in the west and north and the town of Phokeng in the east and south. The bypass runs across the farms Rietvly 271 JQ, Goedgedacht 267 JQ, Morgenzon 261 JQ, Beerfontein 263 JQ and the historic Paul Kruger farm Boekenhoutfontein 260 JQ.

The Phokeng has a long history of human use and occupation, initiated by Early Stone Age communities and preceded by geological changes that left behind a legacy of palaeontological sites. It is a combination of a vernacular and designed cultural landscape that includes a range of heritage resources as defined in the *National Heritage Resources Act (Act 25 of 1999)*:

- Places, buildings and structures and equipment of cultural significance;
- Places to which oral traditions are attached or that are associated with intangible heritage (ceremonies, memories, festivals, economic use etc);
- Historical settlements and townscapes;
- Landscapes and natural features of cultural significance;
- Graves and burial grounds;
- Archaeological sites;
- Sites related to the history of farm and industrial labour.

Rock Environmental Consulting (independent EIA consultants appointed by the developers) appointed Cultmatrix cc as an independent heritage consultant to conduct a heritage impact assessment of places, buildings, objects and structures of cultural significance found within the boundaries of the area that is to be impacted upon directly and indirectly by the layout of the proposed bypass road.

1.1.2 Terms of reference

This investigation is a heritage impact assessment concerning the proposed development in accordance with the requirements of Section 38 of the National Heritage Resources Act (Act 25 of 1999).

The general aim of the full HIA investigation was to analyse and recommend heritage management mitigation measures and monitoring programmes.

The general objectives were to analyse heritage issues, to research the chronology of the site and its role in the broader context, to undertake a comprehensive assessment of heritage significance, to analyse the nature and scale of the proposed development, to establish the compatibility of the proposed development with heritage and other statutory frameworks and to assess alternatives in order to promote heritage conservation issues.

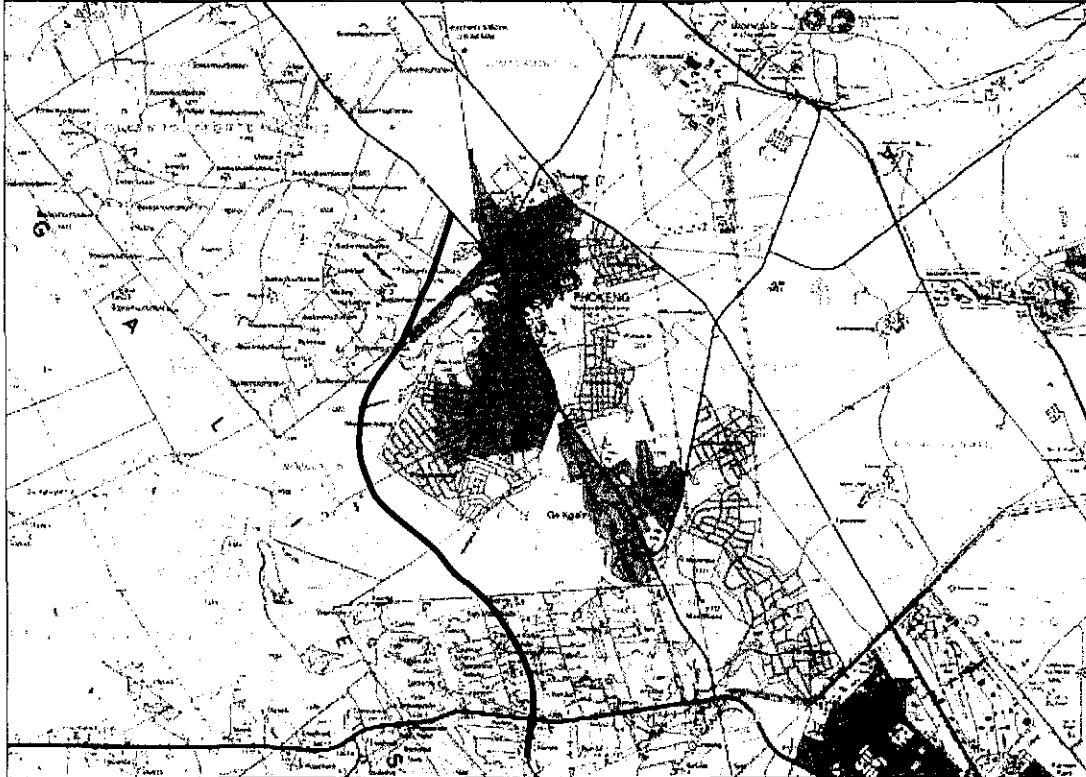


FIGURE 1: Map 2527 CA Rustenburg West indicating final location of the proposed bypass road (solid line) and the original proposal for KM 8-KM 10 (dotted line). North is at the top.

1.2 Study approach

1.2.1 Definitions and assumptions

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

- *Cultural (heritage) resources* are all non-physical and physical human-made occurrences, as well as natural occurrences that are associated with human activity. These include all sites, structures and artefacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development.
- The *significance* of the sites and artefacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.
- The *value* is related to concepts such as *worth*, *merit*, *attraction* or *appeal*, concepts that are associated with the (current) usefulness and condition of a place or an object. Hence, in the development area, there are instances where elements of the place have a high level of significance but a lower level of value.

- It must be kept in mind that significance and value are not mutually exclusive, and that the evaluation of any feature is based on a combination or balance between the two.
- **Isolated occurrences:** findings of artefacts or other remains located apart from archaeological sites. Although these are noted and samples are collected, it is not used in impact assessment and therefore do not feature in the report.
- **Traditional cultural use:** resources which are culturally important to people.
- All archaeological remains, artificial features and structures older than 100 years and historic structures older than 60 years are protected by the relevant legislation, in this case the National Heritage Resources Act (NHRA) (Act No. 25 of 1999). No archaeological artefact, assemblage or settlement (site) and no historical building or structure older than 60 years may be altered, moved or destroyed without the necessary authorisation from the South African Heritage Resources Agency (SAHRA) or a provincial heritage resources authority. Full cognisance is taken of this Act in making recommendations in this report.
- The guidelines as provided by the NHRA (Act No. 25 of 1999) in Section 3, with special reference to subsection 3, and the Australian ICOMOS Charter (also known as the Burra Charter) are used when determining the cultural significance or other special value of archaeological or historical sites.
- It should be kept in mind that archaeological deposits usually occur below ground level. Should artefacts or skeletal material be revealed at the site during construction, such activities should be halted, and it would be required that the heritage consultants would be required to be notified in order for an investigation and evaluation of the find(s) to take place (*cf.* NHRA (Act No. 25 of 1999), Section 36 (6)).
- The development site is located within a known archaeologically sensitive area. The assessment therefore assumed that damage to heritage resources potentially will occur in the proposed development.

1.2.2 Limiting/Restricting factors

The investigation has been influenced by the following factors related to the overall HIA:

- Availability and reliability of baseline information about the affected area;
- Unpredictability of buried archaeological/palaeontological remains (absence of evidence does not mean evidence of absence);
- Very dense vegetation in places (including a lot of thorny shrubs) that made access and visibility difficult;
- Physical access to smallholdings;
- Difficulty in establishing any intangible heritage issues.

1.2.3 Field work

The approach used in the study entailed a foot survey of the proposed site. The assessment took place in April, June and September 2008.

1.2.4 Desktop study

The Heritage Database (Pretoria) and various publications about the Magaliesberg and Phokeng were consulted. Published history sources based on oral history were also consulted.

1.2.5 Oral history

Brother Joseph of the Roman Catholic Diocese of Rustenburg, who has an intimate knowledge about Bafokeng history and knows the royal family, provided oral history information about Tshufi Hill and the cultural landscape.

1.3 Legal context of the HIA

1.3.1 Section 38 of the NHRA

This study constitutes a heritage impact assessment (HIA) linked to the environmental impact scoping and impact assessment required for the development. The proposed development is a listed activity in terms of Section 38 (1) of the NHRA. Section 38 (2)(a) of the National Heritage Resources Act (Act 25 of 1999) requires the submission of a heritage impact assessment report for authorisation purposes to the responsible heritage resources agency, SAHRA.

Heritage conservation and management in South Africa (excluding KwaZulu Natal on a provincial level) is governed by the *National Heritage Resources Act (Act 25 of 1999)* (NHRA) and falls under the overall jurisdiction of the *South African Heritage Resources Agency (SAHRA)* and its provincial offices and counterparts.

Section 38 of the NHRA requires a Heritage Impact Assessment (HIA), to be conducted by an independent heritage management consultant, for the following development categories:

- **Construction of a road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length**
- Construction of bridge or similar structure exceeding 50m in length
- Development or other activity that will change the character of a site -
 - Exceeding 5000 sq m
 - Involving three or more existing erven or subdivisions
 - Involving three or more erven or divisions that have been consolidated within past five years
 - Rezoning of site exceeding 10 000 sq m
 - The costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority
- Any other development category, public open space, squares, parks, recreation grounds

The proposed development is therefore a listed activity in terms of the NHRA.

In addition, the new EIA Regulations promulgated in terms of NEMA determine that any environmental reports will include cultural (heritage) issues.

The end purpose of this report (in its final form) is to alert the developer, the environmental consultant, North-West DACE and SAHRA about existing heritage resources that may be affected by the proposed development, and to recommend mitigatory measures aimed at reducing the risks of any adverse impacts on these heritage resources. Such measures could include the recording of any heritage buildings and structures older than 60 years prior to demolition, in terms of Section 34 of the NHRA and also other Sections of this act dealing with archaeological sites, buildings and graves. The implementation of these interventions constitutes separate, follow-up projects with separate permits.

In terms of the ECA, Section 38(1) of the NHRA is also applicable – thus any person undertaking any development in the categories of Section 38 (1) a-e, must at 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. In the case of an EIA, comments from the responsible heritage resources agency based on a heritage scoping report are required.

The NHRA Section 2 (xvi) states that a “heritage resource” means any place or object of cultural significance, and in Section 2 (vi) that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.

This HIA forms part of an EIA for the site.

The North-West provincial office of SAHRA responded to an EIA scoping report by requesting a full HIA that would take the built environment, archaeology and oral history into consideration. This final HIA report and the attached AIA report fulfil this requirement.

1.3.2 Section 35 of the NHRA

Section 35 (4) of the NHRA stipulates that no person may, without a permit issued by SAHRA to destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object. This section applies to the stone enclosures that have been identified.

1.3.3 Section 36 of the NHRA

Section 36 (3) of the NHRA stipulates that no person may, without a permit issued by the South African Heritage Resources Agency (SAHRA), 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. This section will only apply if burial sites are uncovered, which is unlikely.

1.3.4 Section 34 of the NHRA

Section 34 of the NHRA stipulates that no person may alter, damage, destroy, relocate etc any building or structure older than 60 years, without a permit issued by SAHRA or a provincial heritage resources authority. This section applies to the ruins and dam that have been identified.

1.4 Development criteria in terms of Section 38(1)

1.4	Development criteria in terms of Section 38(1)	Yes/No details
1.4.1	Construction of road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length	Yes
1.4.2	Construction of bridge or similar structure exceeding 50m in length	No
1.4.3	Development exceeding 5000 sq m	Yes
1.4.4	Development involving three or more existing erven or subdivisions	No
1.4.5	Development involving three or more erven or divisions that have been consolidated within past five years	No
1.4.6	Rezoning of site exceeding 10 000 sq m	No
1.4.7	Any other development category, public open space, squares, parks, recreation grounds	No

1.5 Property ownership

1.5	Property owners	
1.5.1	Farm	Rietvly 271 JQ, Goedgedacht 267 JQ, Morgenzon 261 JQ, Beerfontein 263 JQ and Boekenhoutfontein 260 JQ
1.5.2	Name and contract address	
1.5.3	Telephone number	
1.5.4	Fax number	
1.5.5	E-mail	

1.6 Developer

1.6	Developer	
1.6.1	Name and contact address	
1.6.2	Telephone number	
1.6.3	Fax	
1.6.4	E-mail	

1.7 Environmental specialist

1.7	Environmental Specialist	
1.7.1	Name and contact address	Minnette Grobler, Rock Environmental Consulting (Pty) Ltd, PO Box 40541, Moreleta Park 0044
1.7.2	Telephone number	(012) 997 4742
1.7.3	Fax	(012) 997 0415
1.7.4	E-mail	Rock.mg@lantic.net

1.8 Heritage impact assessment specialists

1.8 Specialist (1)		
1.8.1	Name and contact address	Dr RC de Jong (Principal Member: Cultmatrix cc), PO Box 12013, Queenswood 0121, Pretoria
1.8.2	Qualifications and field of expertise	PhD (Cultural History) UP (1990), Post-Graduate Museology Diploma UP (1979), generalist heritage management specialist with experience in museums and heritage since 1983
1.8.3	Relevant experience in study area	HIAs for developments in Rustenburg and surroundings, Director of Paul Kruger Country House Pty Ltd (Paul Kruger farm at Boekenhoutfontein)
1.8.4	Telephone number	(082) 577-4741
1.8.5	Fax number	(086) 612-7383
1.8.6	E-mail	cultmat@iafrica.com

1.8 Specialist (2)		
1.8.1	Name and contact address	Dr JA van Schalkwyk, PO Box 26389, Monument Park 0105
1.8.2	Qualifications and field of expertise	DLitt et Phil (UNISA), Post-Graduate Museology Diploma UP, general heritage management specialist with experience in museums and heritage, anthropologist and archaeologist
1.8.3	Relevant experience in study area	Numerous archaeological studies in the area
1.8.4	Telephone number	(012) 347-7270
1.8.5	Fax number	
1.8.6	E-mail	jvschalkwyk@mweb.co.za

1.9 Property details

1.9 Property details		
1.9.1	Name and location of development	Phokeng area north of Rustenburg
1.9.2	Erf or farm numbers	Rietvly 271 JQ, Goedgedacht 267 JQ, Morgenzon 261 JQ, Beerfontein 263 JQ and Boekenhoutfontein 260 JQ
1.9.3	Magisterial district	Rustenburg
1.9.4	Closest town	Phokeng
1.9.5	Local authority	Rustenburg
1.9.5	Current use	Vacant, grazing, residential
1.9.5	Current zoning	Agricultural
1.9.5	Predominant land use of surrounding properties	Agricultural, residential, commercial, vacant
1.9.9	Total extent of development	Not available

1.10 Development description

1.10 Development description		
1.10.1	Nature of proposed development	Bypass road
1.10.2	Possible impacts on heritage value of site and contents	Neutral (in areas where no heritage was identified) to low negative (in areas with heritage resources)
1.10.3	Structures older than 60 years affected by proposed development	Yes
1.10.4	Rezoning or change of land use	Yes
1.10.5	Construction work	Yes
1.10.6	Total floor area of proposed development	n/a
1.10.7	Extent of land coverage of development	100%
1.10.8	Earth moving and excavation	Yes
1.10.9	Number of storeys	n/a

1.10	Development description	
1.10.10	Maximum height above ground level	Not available
1.10.11	Monetary value development	Not available
1.10.12	Time frames	Very urgent

1.11 Legal requirements

1.11	Legal requirements	
1.11.1	Is planning permission required for any departures or consent use in terms of zoning schemes? Has an application been submitted to the planning authority and have any comments or approval from the planning authority been obtained?	Yes
1.11.2	Is planning authority permission required for any subdivision or consolidation? Has an application been submitted to the planning authority and has any comment or approval from the planning authority been obtained?	It will be
1.11.3	Is the proposed development subject to EIA regulations and has an application been submitted to the provincial environmental agency?	Yes
1.11.4	Has any assessment of the impact of the proposed development on any heritage resources been undertaken in terms of EIA or planning processes?	Yes: part of this report
1.11.5	At what stage in the EIA process is the application?	Scoping report
1.11.6	Title deed restrictions	Power line servitudes
1.11.6	Is affected area situated within or adjacent to conservation area, special area, scenic route or any other area that has special environmental or heritage protection?	Yes: Magaliesberg Protected Environment, Boekenhoutfontein heritage site and Saron Mission Station
1.11.6	Does the affected area have any special conservation status?	No
1.11.6	Are there any other restrictions on the property?	No
1.11.10	Does the proposed development conform to local planning policies?	Yes
1.11.11	What interested and affected parties have been consulted?	Public participation process conducted as part of EIA process
1.11.12	Is approval from any authority required?	Yes: SAHRA and North-West DACE
1.11.13	Has permission for similar development been refused by any authority in the past?	No

1.12 Acknowledgements

- Brother Joseph, Roman Catholic Diocese of Rustenburg: First site visit and source of local information
- Dr JA van Schalkwyk, Archaeologist: Database of Phokeng heritage

PART 2: HERITAGE ASPECTS OF THE AFFECTED AREA

2.1 General issues of site and context

2.1.1 Context		
	<i>(check box of all relevant categories)</i>	<i>Brief description/explanation</i>
	Urban environmental context	Smallholdings to the south, natural Magaliesberg landscape (west), Phokeng suburbs (east and north), RC Diocese (north), streams, eroded areas, natural bushveld, eucalyptus plantations, rocky hills, roads, tracks
x	Rural environmental context	
x	Natural environmental context	
Formal protection (NHRA)		
	Is the property part of a protected area (S. 28)?	No
	Is the property part of a heritage area (S. 31)?	No
Other		
x	Is the property near to or visible from any protected heritage sites?	Yes: Boekenhoutfontein
	Is the property part of a conservation area or special area in terms of the Zoning Scheme?	No
x	Does the site form part of a historical settlement or townscape?	Saron Mission Station (1870s), Phokeng (since early 20 th century), smallholdings (1940s)
x	Does the site form part of a rural cultural landscape?	Yes: Slopes and foothills of Magaliesberg and Moremogolo
x	Does the site form part of a natural landscape of cultural significance?	Yes: Slopes and foothills of Magaliesberg and Moremogolo
	Is the site within or adjacent to a scenic route?	No
x	Is the property within or adjacent to any other area which has special environmental or heritage protection?	Yes: Magaliesberg Protected Environment
x	Does the general context or any adjoining properties have cultural significance?	Yes: Saron Mission Station, Phokeng Town, Boekenhoutfontein, Tshufi Hill, Moremogolo Hill

2.1.2 Property features and characteristics		
	<i>(check box if YES)</i>	<i>Brief description</i>
x	Has the site been previously cultivated or developed?	Partially: Townships, farms, smallholdings, roads
x	Are there any significant landscape features on the property?	Yes: Foothill of Moremogolo
	Are there any sites or features of geological significance on the property?	No
x	Does the property have any rocky outcrops on it?	Yes
x	Does the property have any fresh water sources (springs, streams, rivers) on or alongside it?	Yes: Mathlware and Legadigadi streams
	Does the property have any sea frontage?	No
	Does the property form part of a coastal dune system?	No
	Are there any marine shell heaps or scatters on the property?	No
	Is the property or part thereof on land reclaimed from the sea?	No

2.1.3 Heritage resources on the property		
	<i>(check box if present on the property)</i>	<i>Name / List / Brief description</i>
Formal protections (NHRA)		
	National heritage site (S. 27)	No
	Provincial heritage site (S. 27)	No
	Provisional protection (s.29)	No
	Place listed in heritage register (S. 30)	No
General protections (NHRA)		
x	structures older than 60 years (S. 34)	Yes: Ruins, dam
x	archaeological site or material (S. 35)	Yes: Stone enclosures (historic)
	palaeontological site or material (S. 35)	No
	graves or burial grounds (S. 36)	No
	public monuments or memorials (S. 37)	No
Other		
	Any heritage resource identified in a heritage survey (state author and date of survey and survey grading/s)	None
x	Any other heritage resources (describe)	Path of the Regiments to Tshufi Hill saddle

2.1.4 Property history and associations		
	<i>(check box if YES)</i>	<i>Brief description/explanation</i>
x	Provide a brief history of the property (e.g. when granted, previous owners and uses).	See 2.3 below
x	Is the property associated with any important persons or groups?	Yes: Royal Bafokeng Nation, Pres. Paul Kruger
x	Is the property associated with any important events, activities or public memory?	Yes: Path of the Regiments, Tshufi Hill
	Does the property have any direct association with the history of slavery?	No
	Is the property associated with or used for living heritage?	No
x	Are there any oral traditions attached to the property?	Yes

2.2 General description of environmental and heritage context of affected area

The development site basically consists of smallholdings in the south (near the N 4 and the old Rustenburg-Swartruggens road), dense savannah vegetation with scattered clumps of eucalyptus trees, erosion areas and low rocky hills. The corridor of the proposed bypass road is located between the range of hills in the west and north and the town of Phokeng in the east and south. The bypass runs across the farms Rietvly 271 JQ, Goedgedacht 267 JQ, Morgenzon 261 JQ, Beerfontein 263 JQ and the historic Paul Kruger farm Boekenhoutfontein 260 JQ.

2.3 Short history of the development area

The affected area falls within a transitional environmental region in the province known as the Bankenveld, situated between the Highveld in the south and the Pyramid Hills in the north. As a result of peculiar geo-processes, in particular the formation of the Bushveld Complex, a landscape comprising a latitudinal series of hills and valleys came into existence, which fostered early human settlement and later accommodated a series of communities and cultures.

The formation of the landscape began some 2300 million years ago, when quartzite, shale, dolomite and chert rocks were deposited in a series of layers, known as the *Transvaal Sequence*. Between 2055 and 2060 million years ago, massive and prolonged volcanic activity to the north thrust molten magma between the sedimentary layers of the Transvaal Sequence. It created a variety of igneous rocks, the *Bushveld Complex*. The magma intrusions undermined and weakened the Transvaal Sequence and gradually the centre of the whole sedimentary layer subsided. In the south, the broken edges rose up and formed four parallel mountain ridges, from north to south the Pyramid Hills, the Magaliesberg, the Daspoort/Witwatersberg, and the Timeball Hill range.

Subsequent to the formation of the Magaliesberg, a continuous process of weathering, erosion and faulting resulted in the formation of neks (such as Magatosnek west of Rustenburg and poorts).

An abundance of water, lush natural vegetation, large numbers of game, mild climate and the presence of quartzite for making tools and weapons were factors that attracted Stone Age communities to the area about half a million years ago.

The first communities were hunters and gatherers who were able to make tools and weapons from stone, bone and wood. About 2,4 million years BP, early hominids known as *Australopithecus africanus* lived at Taung (a national heritage site), one of South Africa's most important palaeontological sites.

The australopithecines were gradually displaced by another early hominid, *Homo habilis*, and eventually disappeared. *Homo habilis* had evolved into the more advanced *Homo erectus* (also known as *Homo ergaster*) by 1,8 million years BP, which was responsible for the development of large stone cutters and cleavers that collectively constitute the so-called Early Stone Age (ESA). The area is so far not known for major ESA sites.

By 250 000 years BP, the large cleavers and hand axes of the ESA disappeared and were replaced by a larger variety of smaller tools and weapons of diverse shapes and sizes, made by different techniques. This change in technology marks the beginning of the Middle Stone Age (MSA). During the MSA, early humans still settled in the open along or near water sources but also took shelter in caves. The MSA marks the transition from a more archaic *Homo* (*Homo ergaster*) to anatomically modern humans, *Homo sapiens*. With this physical development the first signs of art, decoration and symbolism began to appear.

The Later Stone Age (LSA), which occurred from about 20 000 years ago, is signalled by a series of technological innovations and social transformations within these early hunter-gatherer societies. The hunting apparatus now included two important innovations, the bow and the link-shaft arrow. Link-shaft arrows were constructed with a poisoned bone tip, a link and shaft that fell away on impact, leaving the poison tip imbedded in the animal. Other innovations included bored stones, used as digging-stick weights to aid in uprooting tubers and roots; small stone tools, often less than 25 mm in length, used for cutting meat and scraping hides; polished bone tools such as needles; twine made from plant fibre or leather; tortoiseshell bowls; fishing equipment, including hooks and sinkers; bone tools with decoration; high frequencies of ostrich eggshell beads and an increase in ornaments and artwork. The Magaliesberg contains major LSA sites (Jubilee Shelter, Kruger Cave, Silkaatsnek, Xanadu and others).

The LSA is also associated with the advent of rock art. In Southern Africa rock paintings are primarily found in hilly and mountainous areas where there are shelters, whilst rock engravings occur in the open on scattered rocks and outcrops. Rock engravings are known to exist south of Rustenburg. Most of these engravings are attributed to the Khoisan communities that evolved during the later periods of the LSA.

Because white and black farmers and settlers have continuously and intensively used the development site for grazing, crop growing and habitation over a period of more than 150 years, no immediate and visible signs of Stone Age occupation in the form of surface deposits and finds of artefacts have been found on the development site. However, the two streams may hold Stone Age artefacts and there may also be scattered Stone Age artefacts on the remainder of the property, although dense vegetation made observation and identification impossible. The possible occurrence of Stone Age artefacts should therefore be monitored during site clearing activities.

The expansion of early farmers, who, among other things, cultivated crops, raised livestock, made ceramic containers (pots), mined ore and smelted metals, occurred in this area between AD 400 and

AD 1100 and brought the Early Iron Age (EIA) to South Africa. They settled in semi-permanent villages. These communities migrated from the Lowveld and coastal areas to the higher regions in the interior (such as the Bankenveld) during the latter part of the EIA. An important early settlement site with evidence of iron smelting and working is located near Broederstroom (provincial heritage site) in the Brits area. Sites were found within 100m of water, either on a riverbank or at the confluence of streams. The close proximity to streams meant that the sites were often located on alluvial fans. The nutrient rich alluvial soils would have been favoured for agriculture. The availability of floodplains and naturally wetter soils would have been important for the practice of dryland farming.

While there is some evidence that the EIA continued into the 15th century in the lowveld, on the escarpment it had ended by AD1100. The Highveld, particularly around Lydenburg, Badfontein, Sekhukhuneland, Roossenekal, and Steelpoort, became active again from the 15th century onwards due to a gradually warmer and wetter climate. From here communities spread to other parts of the Highveld. This later phase, termed the Late Iron Age (LIA), was accompanied by extensive stonewalled settlements, such as Kaditshwene (near Zeerust), Molokwane (east of Rustenburg) and the Olifantspoort Complex near Koster. Other LIA sites occur in the entire Magaliesberg and the hilly region north-west of Klerksdorp.

LIA sites in the form of stone walls and enclosures have been found in the Phokeng area but not specifically in the road corridor. The possible occurrence of Iron Age artefacts as chance finds should be monitored during site clearing activities.

By the 1700s, with growing trade wealth, economically driven centres of control began to emerge and the North-West landscape became an important thoroughfare for both local and foreign traders, although there were far less trade routes than in Limpopo and Mpumalanga. Long distance trade included copper and tin, but not iron; ivory, furs, rhino horns and salt (mined at the Tswaing Crater) were exchanged for livestock, cloth, glass beads and other European objects, like guns. Tin was mined at Rooiberg, just outside the present-day province, which became an important terminus for a trade route stretching to Musina. Copper was mined at Dwarsberg and iron in the Rustenburg-Brits area.

Sotho-Tswana and Nguni societies, the descendants of the LIA mixed farming communities, found the region already sparsely inhabited by the Late Stone Age (LSA) Khoisan groups, the so-called 'first people'. Most of them were eventually assimilated by LIA communities and only a few managed to survive, such as the Korana and Griqua.

From LIA communities tribal societies emerged conveniently grouped according to their languages. The province became home to Western Sotho communities speaking Setswana, such as the Tlhaping, Rolong, Phiring, Phokeng, Kwena, Kgatla, Hurutshe, Taung and Tsatsing tribal communities.

The Phokeng settled on the northern side of the Magaliesberg close to Rustenburg and gave names to some of the landscape features, such as Moremogolo (*Place of the Large Muti*) and *Tshufi*. Some traditions seem to indicate that they preceded the Kwena in this region and arrived before the main Hurutshe stem. Others believe that the Phokeng, like the Kwena, were an offshoot of the Hurutshe. There is some certainty that the Phokeng and the Hurutshe fought a major battle at Magatosnek and that the Phokeng were victorious.

Tshufi Hill occupies a special place in the history and memory of the Phokeng as a place of intangible significance. Known as the Path of the Regiments, a road provides access to the hill. Tshufi Hill clearly is no ordinary place. Rising above the landscape with a small summit area and steep slopes, Tshufi Hill has a rounded elevation of limited extent that makes it appear to be almost disconnected from the rest of the mountain range that it is part of. As the hill is located in a break in the Magaliesberg Mountain Range, its elevation of 1594 m exaggerates its prominence. The entrance to the mountain valley is oriented toward the town of Phokeng, with a road leading from the town to the edge of the basin.



Located in the Royal Bafokeng territory, there is little doubt that the mountain would have played a prominent part in the earlier history of the Bafokeng while it also includes intangible heritage to this day, as expressed by the writer Damaria Senne:

"Our home in Phokeng is at the edge of the village, near what used to be Legadigadi dam (it dried up and now it's just a big dry hole). Past the dam, over the bridge, you climb up the steep incline towards Tshufi Hill, which is part of the range of mountains that led to the nearby town to be called Rustenburg (meaning rest between the mountains.) As I mentioned previously...when I was growing up, the unoccupied area near my village was half wild, and at night you could hear sounds of jackals and hyena. We were never afraid of the wild animals, or thought that we were in danger from them. And to my knowledge, there never was an instance where someone was bitten by a wild animal, although people regularly hunted, collected firewood and wild fruit in the forest covering the hill. Sometimes in the evenings, to pass the time, my mother would tell us stories...My mother also loved telling us about a community that regularly showed up on Tshufi Hill from noon till one o'clock. It seemed they were just ordinary people going about their lives eating a mid-day meal, doing laundry, working and taking care of their families, and at 13h00, they'd go poof, and disappear to wherever it is they came from. Spooky, especially because we did live near the edge of the forest, and if those strange people decided to come off the hill into the village, my family would be one of the first they came across. Thankfully, these people never seemed to be aware of us, and simply went about their business, my mother said. We spent hours speculating about who they were, where they came from... However, of all the characters and creatures my mother introduced us to, Manjanja, a monster that lived in a cave on Tshufi Hill and who liked to cart off naughty kids to his cave and cook them, was the scariest of them all."

It is expected that there are further types of intangible heritage surrounding Tshufi Hill, including knowledge of medicinal plants and other indigenous knowledge systems, as well as folklore. Tangible heritage in the form of archaeological artefacts, particular sites or markers may very well exist also. However, the proposed bypass road does not affect the hill directly, only the Path of the Regiments.

In 2007 there was a proposal for a Cultural Centre and School of Excellence at the foot of Tshufi Hill but the status of this project is unclear. The proposed site will not be affected by the bypass road.

Factors such as population expansion, increasing pressure on natural resources, the emergence of power blocs, attempts to control trade and penetration by Griquas, Korana and white communities from the south-west resulted in a period of instability in Southern Africa that began in the late 18th century and effectively ended with the settlement of white farmers in the interior. This period, known as the *difaqane* or *Mfecane*, also affected the North-West Province, although at a relatively late stage compared to the rest of Southern Africa. Here, the period of instability, beginning in the mid-1820s, was triggered by the incursion of Pedi groups in 1823, which defeated the Phokeng. Matabele groups commanded by Mzilikazi followed in 1827. Mzilikazi either displaced or assimilated many residing tribal communities and eventually moved his centre of operations from the Tshwane region to Gabeni and Mosega in the Zeerust area. Attempting to negotiate with Mzilikazi, the Phokeng were massacred near Bleskop siding east of Rustenburg. Chief Noge fled the country and the other survivors were

scattered. The Phokeng only reassembled in the Rustenburg area when Mokgatle brought them together as vassals of Mzilikazi.

Continual harassment by Griqua, Korana and Zulu invaders and in the end a campaign by a Voortrekker force compelled Mzilikazi to move to the present-day Zimbabwe in the late 1830s, taking a large portion of his community with him. Many of the tribal communities who were displaced by Mzilikazi regrouped and moved back to their former capitals.

The Matabele conquest was followed by permanent occupation by white settler-farmers in the mid-1840s, and hence few traces of Iron Age occupation by earlier communities have been left behind in the road area. Voortrekker farmers established the farms that today form the area around Phokeng. These farms were subdivided many times over in more recent years and more farmsteads were established. Gradually the entire area was divided into farms. However, it was only since the 1880s that these farms were formally surveyed and mapped, and when not only their names but also the names of rivers and other features became permanent fixtures on maps. The proposed bypass road covers portions of the following farms:

- Boekenhoutfontein 260 JQ: Awarded by the state to Rudolf Bronkhorst (1859) who sold his farm to the later president Paul Kruger in the 1860s
- Beerfontein 263 JQ: Awarded by the state to B van Greune (1860) who later sold it to the Hermannsburg Mission Society, which established the Saron Mission Station
- Morgenzon 261 JQ: Awarded by the state to WF and BJ Pretorius (1860)
- Goedgedacht 267 JQ
- Rietvly 271 JQ: Awarded to AJ Joubert (1893)

Some of the farms were divided and subdivided many times over. Each subdivided portion often had a separate farmstead where the owner lived. Black tenant farmers and sharecroppers were allowed to live on the land in return for providing farm labour to the white farmers. They lived in homesteads away from the main farmstead. The stone enclosures and ruins on Boekenhoutfontein where the section KM 8 – KM 10 runs are probably associated with black tenant farmers.

During the Anglo-Boer War (1899-1902) Rustenburg was occupied by the British. A number of military engagements took place around Phokeng, notably at Magatosnek, a scene of one of General de Wet's escape marches.

By the late 19th century, whites had succeeded in asserting control over most of South Africa. Most of the land was divided between the two Boer republics of the Transvaal and the Orange Free State, and the two British colonies of the Cape and Natal. Black chiefdoms and peasant farmers retained only a fraction of their former lands, and this land, collectively known as "reserves", had been incorporated within the overall systems of government that had developed in each of the white settler territories. The land had not been divided without resistance on the part of many of the indigenous black people. Because of this resistance the whites did not succeed in taking all the land for themselves, but were obliged to recognise certain areas as reserves.

However, the reserves also fulfilled an economic function in that they made provision for the settlement and subsistence of workers' families who were not allowed to live in the cities. The subsistence of the family, while ensuring the long-term reproduction of labour, allowed wages in the cities to be kept low and wages on the mines were kept extremely low until 1930. The continued residence of the workers' families in the reserves also meant that the cost of housing them in the cities was avoided. For the state, it was cheap to have large numbers of families living in the reserves, but this policy also had serious consequences, that remained a key issue underlying the conditions that developed in the settlements in reserves.

In political terms, the reserves played two major roles. They allowed the white rulers to limit resistance through a strategy of "divide and rule", and they facilitated a strategy of "indirect rule" that was adopted in the reserves.

At Phokeng a reserve named *August Mokgatle's Location* was established. Besides reserves and farm villages, the black people around Phokeng also lived at Saron and other mission stations.

The *Native Land Act* took the different African reserve systems in each province and made them the basis of the Union's subsequent native policy. It made the reserves the only areas where blacks could lawfully acquire land. After the Land Act of 1913 had been passed, black people were no longer

allowed to buy land outside the proclaimed boundaries of the reserves. They were also not allowed to rent such land in the future. In future black people would only be allowed to live on white-owned land if they were labour tenants or full-time wage workers. Otherwise their place was in the reserves. The areas reserved for black occupation in 1913 (the so-called scheduled reserves) were basically those areas that had already been reserved as tribal land in each of the provinces before 1910. Mission lands such as Saron and freehold areas remained occupied by their black residents.

The conflict over native policy within the white ruling group was finally resolved in 1936 by a process of compromise, made possible by the establishment of a coalition government between generals Hertzog and Smuts in 1933. It was a compromise that involved whites only. Part of the deal was the creation of the Natives Representative Council, with purely advisory powers. The *Native Trust and Land Act* (later renamed the *Development Trust and Land Act*) of 1936 completed the deal. This act formally authorised that another 6,2 million hectares of land (to be called released land) should be added to the reserves that had been scheduled in 1913.

During the 1950s the government began building up the reserves as the "true homes" of the black population. This was where the bulk of the workforce would be housed, together with the surplus population.

The first step in this direction was the *Bantu Authorities Act* of 1951. This act placed the administration of certain aspects of the reserves in the hands of "Bantu" tribal, regional and territorial authorities, to whom certain advisory, executive and administrative powers were to be gradually devolved. The result was that the traditional elite of chiefs and headmen became more firmly embedded in the overall management structures of the reserves than before. Their co-operation with the government assured them of their salaries. It also gave them power over the allocation of resources such as land and money.

The Tswana "homeland" was among the first in South Africa which chose to apply the provisions of the Bantu Authorities Act of 1951. The existing tribal councils were officially recognised, community authorities were elected in areas inhabited by communities as opposed to tribes and regional councils were established for areas with two or more tribal or community authorities.

In 1961 the Tswana Territorial Authority was established as the apex of the new system of local self-government for the Tswana people. Initially, representatives were drawn from eight regional councils, later from twelve. This Territorial Authority played a major role in laying the foundation for local administration in the six territories which eventually became Bophuthatswana.

Although the Bantustan policy was initially political in its formulation, its subsequent evolution was primarily affected by economic developments in the 1960s. Between 1960 and 1970 there was an industrial boom, leading to an increase in black employment.

The government became concerned that the growing black working class should not form a permanent urban population which might challenge the white political supremacy and could pose a threat to the state in a period of economic recession and high unemployment.

The new approach to influx control centred on the Bantustans. The strategy was to remove unemployed people from the urban areas and to prevent a mass migration of workers from the Bantustans to the boom areas.

Aspects of urban control were tightened, and as a result the function of the Bantustans as enlarged relocation areas became more and more pronounced. Centred on the old August Mokgatle Location and Saron, Phokeng grew rapidly and expanded in all directions. It was managed as a self-contained town housing people forcefully removed from black spots and white urban areas and developed as a residential area for workers employed in Rustenburg and the mines.

The decade 1940-1950 also experienced the development of Rustenburg. Population growth continued in the following years. Parts of the farm Rietvly were divided into smallholdings that transformed the landscape due to buildings, access roads and infrastructure, obliterating most traces of earlier human settlement.

PART 3: FINDINGS AND RECOMMENDATIONS

Part 3 is based on the requirements for heritage scoping reports and HIAs in accordance with Section 38(3) of the NHRA.

3.1 Identification of significant heritage resources inside and close to the corridor of the proposed bypass road including the revised KM 8-10 section

ROAD SECTION	RESOURCE	COORDINATES	SIGNIFICANCE (1)	CONDITION (2)	SENSITIVITY (1 X 2)	MANAGEMENT ACTION
KM 0-1	Small= Holdings, roads, tracks	-	1	2		Photo recording before demolition Monitor for chance finds during site preparation and construction work
Km 1-2	None	-	-	-	-	Monitor for chance finds during site preparation and construction work
Km 2-3	None	-	-	-	-	Monitor for chance finds during site preparation and construction work
KM 3-4	None	-	-	-	-	Monitor for chance finds during site preparation and construction work
KM 4-5	PP1: Path of the Regiments	25°36'5.66"S 27° 7'46.84"E	3	3		Preserve road and ensure access
KM 5-6	None	-	-	-	-	Monitor for chance finds during site preparation and construction work
KM 6-7	None	-	-	-	-	Monitor for chance finds during site preparation and construction work
KM 7-8	None	-	-	-	-	Monitor for chance finds during site preparation and construction work
KM 8-9	PB 2: Pigsty	25°34'28.80"S 27° 8'20.50"E	1	1		Photo record before demolition
	PB 3: Stone enclosure (historic)	25°34'30.31"S 27° 8'19.76"E	2	1		Photo record before demolition
	PB 4: Historic enclosures close to corridor	25°34'14.77"S 27° 8'23.38"E 25°34'16.2"S 27° 8'23.24"E	2	2		Photo record before demolition
KM 9-10	PB 5: Ruin	25°34'12.20"S 27° 8'22.20"E	2	1		Photo record before demolition
	PB 6: Dam	25°34'8.40"S 27° 8'24.10"E	2	1		Photo record before demolition
	PB 7: Ruin	25°34'6.90"S 27° 8'22.47"E	2	1		Photo record before demolition

Colour coding:

- Red = High sensitive
- Blue = Medium sensitive
- Green = Low sensitive

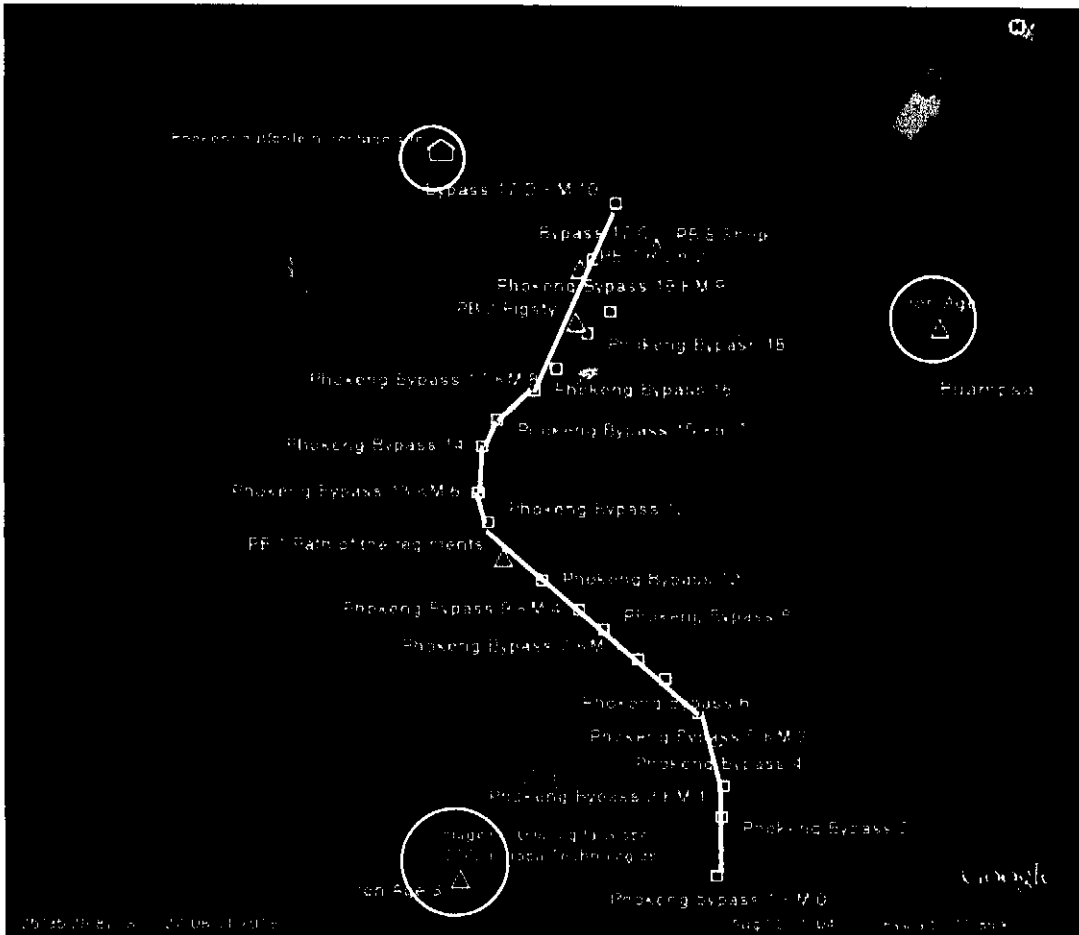


FIGURE 2: Google Earth image of bypass road (solid white line) with affected heritage resources and other heritage resources in the area (circled)



FIGURE 3: PB 7 Homestead ruin



FIGURE 4: PB 5 Small homestead ruin

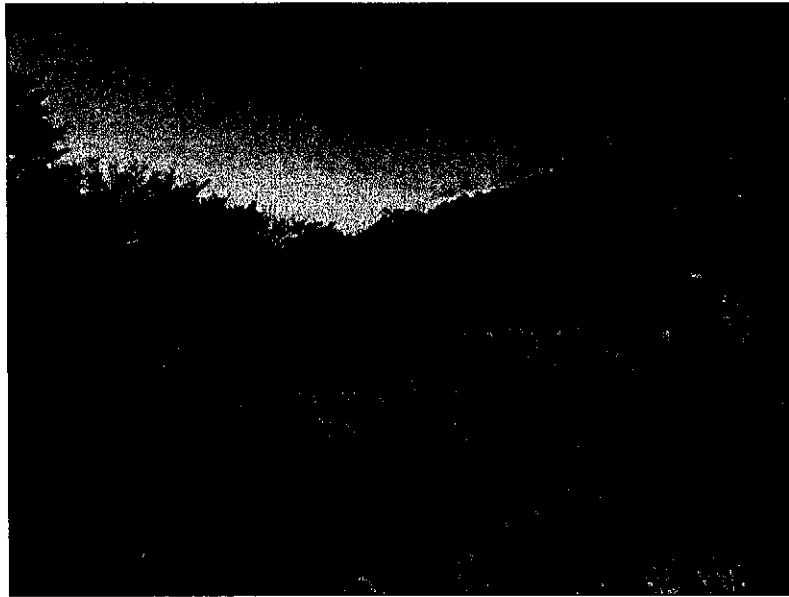


FIGURE 5: PB 6 Old dam



FIGURE 6: PB 3 Stone enclosure (historic)

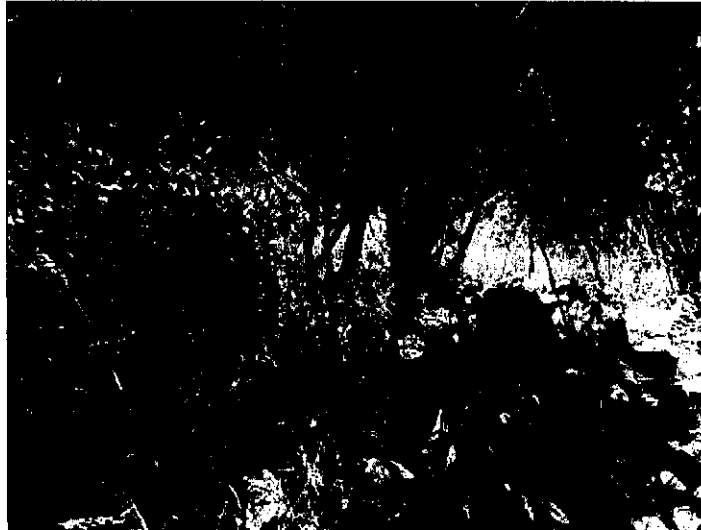


FIGURE 7: PB 4A Stone enclosure (historic). PB 4 is similar.

3.2 Heritage value (Section 3(3))

3.2.1 Description of the site

The development site basically consists of smallholdings in the south (near the N 4 and the old Rustenburg-Swartruggens road), dense savannah vegetation with scattered clumps of eucalyptus trees, erosion areas and low rocky hills. The corridor of the proposed bypass road is located between the range of hills in the west and north and the town of Phokeng in the east and south. The bypass runs across the farms Rietvly 271 JQ, Goedgedacht 267 JQ, Morgenzon 261 JQ, Beerfontein 263 JQ and the historic Paul Kruger farm Boekenhoutfontein 260 JQ.

3.2.2 Criteria of heritage value

	<i>(check box of all relevant categories)</i>	<i>Brief description/explanation</i>
	Important in the community or pattern of South Africa's history.	No
x	Associated with the life or work of a person, group or organisation of importance in history.	Phokeng and Paul Kruger: High
	Associated with the history of slavery.	No
x	Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	Phokeng community and their origins, Tshufi Hill (intangible significance): High
x	Exhibits particular aesthetic characteristics valued by a community or cultural group	Vernacular landscape: Medium
	Demonstrates a high degree of creative or technical achievement at a particular period	No
x	Has potential to yield information that will contribute to an understanding of natural or cultural heritage	Rocky areas and streams: Low
x	Typical: Demonstrates the principal characteristics of a particular class of natural or cultural places	Ruins of homesteads of tenant farmers, Iron Age enclosures: Low
	Rare: Possesses uncommon, rare or endangered aspects of natural or cultural heritage	No

3.2.3 Statement of significance

The proposed Phokeng bypass road will affect a combination of a natural landscape with high cultural significance (for its intangible heritage and visual characteristics) and vernacular landscape with low to medium significance, transformed by farming and residential activities.

3.2.4 Important character-defining features

- Path of the Regiments
- Stone enclosures
- Ruins of homesteads

3.3 Impact assessment

3.3.1 General for entire route

See Figure 8 below.

This is a preliminary impact assessment based on the alignment and route of the entire bypass road including the revised section between KM 8 and KM 10. A final impact assessment should be conducted once the final route has been established between KM 8 and KM 10.

3.3.2 Impact significance per section

ROAD SECTION	ENVIRONMENTAL CONTEXT	HERITAGE RESOURCES	IMPACT SIGNIFICANCE
KM 0 – KM 1	Roads, smallholdings, vacant land	None	Neutral
KM 1 – KM 2	Roads, tracks, fields, smallholdings, vacant land	None	Neutral
Km 2 – KM 3	Bushveld	None	Neutral
KM 3 – Km 4	Bushveld, tracks	None	Neutral
KM 4 – KM 5	Bushveld, tracks, eucalyptus trees, gravel road	Gravel road is known as Path of the Regiments (site PB 1)	Low negative
KM 5 – KM 6	Bushveld, tracks	None	Neutral

CULTMATRIX CC

ROAD SECTION	ENVIRONMENTAL CONTEXT	HERITAGE RESOURCES	IMPACT SIGNIFICANCE
KM 6 – KM 7	Bushveld, rocky hills, outskirts of Phokeng	None	Neutral
KM 7 – KM 8	Severe erosion areas, tracks, open grassland	None	Neutral to low positive (rehabilitation)
KM 8 – KM 9	Rocky areas, saddle between Moremogolo and low hill, open grassland, tracks	Stone enclosure (PB 3), pigsty (PB 2), historic enclosures (PB 4 and PB 4A)	Low negative (sensitive area)
KM 9 – Km 10	Rocky areas, open grassland, tracks, fields	Ruin (PB 5), old dam (PB 6), ruin of homestead (PB 7)	Low negative (sensitive area)

3.4 Social and economic benefits

The development can have direct benefits from a heritage conservation perspective. The social and economic benefits are associated with traffic flow, a safer road environment in Phokeng and better access to the Royal Bafokeng Stadium in connection with the 2010 World Football Cup.

3.5 Consultation with affected communities

This process has been part of the EIA as a whole.

CULTMATRIX CC

S 3(2) NHRA heritage resource	Site no	Heritage Significance	Impact extent	Impact duration	Impact intensity	Impact probability	Impact confidence	Impact status	Impact nature		Impact significance	Management actions
									Direct	Accumulative		
Buildings, structure, places and equipment of cultural significance	PB 2,5,6,7	Low	Local	Perm.	Low	Definite	High	Neg.	Demolition	Encroachment and destruction	Low neg.	Photo document before demolition (done)
Areas to which oral traditions are attached or which are associated with intangible heritage	PB 1	High	Local	Temp.	Low to medium	Probable	High	Neg.	Break in linear heritage feature	-	Low to medium neg.	Preserve
Objects to which oral traditions are attached or which are associated with intangible heritage	-	-	-	-	-	-	-	-	-	-	-	-
Areas of significance related to labour history	-	-	-	-	-	-	-	-	-	-	-	-
Historical settlements and townscapes	-	-	-	-	-	-	-	-	-	-	-	-
Landscapes and natural features of cultural significance	Entire route	Medium	Local	Perm.	Low to medium	Definite	High	Neg.	Visual intrusion	New formal and informal developments along road	Medium neg.	Visual impact assessment
Geological sites of scientific or cultural importance	-	-	-	-	-	-	-	-	-	-	-	-
Archaeological and palaeontological sites	PB 3,4, 4A	Low	Local	Perm.	Unknown	Possible	Low	Unknown	Exposure and destruction	Ongoing degradation	Medium to high neg.	Photo document before demolition (done)

CULTMATRIX CC

S 3(2) NHRA heritage resource	Site no	Heritage Significance	Impact extent	Impact duration	Impact intensity	Impact probability	Impact confidence	Impact status	Impact nature		Impact significance	Management actions
									Direct	Accumulative		
Objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens	-	-	-	-	-	-	-	-	-	-	-	-
Ethnographic art and objects	-	-	-	-	-	-	-	-	-	-	-	-
Military objects	-	-	-	-	-	-	-	-	-	-	-	-
Objects of decorative or fine art	-	-	-	-	-	-	-	-	-	-	-	-
Objects of scientific or technological interest	-	-	-	-	-	-	-	-	-	-	-	-
Books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings	-	-	-	-	-	-	-	-	-	-	-	-

FIGURE 8: General impact assessment table

3.6 Identification of risk sources

The following project actions may impact negatively on any potential palaeontological and archaeological sites and remains.

The actions are likely to occur during both the Construction and Operational Phase of the proposed project.

- Bulk earthworks and excavations may expose or uncover objects and artefacts and unmarked human burials.

3.7 Key mitigation and enhancement measures before and during construction

- Monitor site preparation works for chance finds of archaeological and other significance
- Sample archaeological sites that will be destroyed
- Document (map and photograph) other heritage resources that will be destroyed

3.8 Consideration of alternatives

The route between KM 8 and KM 10 was changed from an earlier proposal that ran in a straight line next to existing roads and houses and in open land between the Diocese of Rustenburg and Phokeng. This route may affect an old fig tree (PB 9) and an old shop (PB 8) but will bypass a large cemetery (PB 10).

The new route between KM 8 and KM 10 will run closer to Moremogolo because of problems with the junction with the main road and the original bypass road between KM 8 and KM 10. The older route between KM 8 and KM 10, which ran in a straight line, is therefore no longer an alternative.

3.9 Final recommendations

Based on the above findings, it is recommended that SAHRA authorises the final route with the understanding that:

1. Should any human remains be disturbed, exposed or uncovered during excavations for the proposed project, these should immediately be reported to an archaeologist. Burial remains should not be disturbed or removed until inspected by the archaeologist.
2. Site clearing and preparation activities must be monitored for the occurrence of any other archaeological material (Stone Age tools, Iron Age artefacts, historic waste disposal sites etc) and similar chance finds and an archaeologist should be asked to inspect the area when this has reached an advanced stage in order to verify the presence or absence of any such material.
3. Identified sites that will be destroyed have already been mapped and photographed and that due to their low significance and poor condition no further action is required.
4. The above recommendations must be included in the Construction Environment Management Plan for the proposed project.
5. The bypass road will cross a road known as the Path of the Regiments, which is a heritage resource of high local intangible significance and provides access to the ridge next to Tshufi Hill (where there is a cairn). This access should be preserved. This road also provides access to a water reservoir.

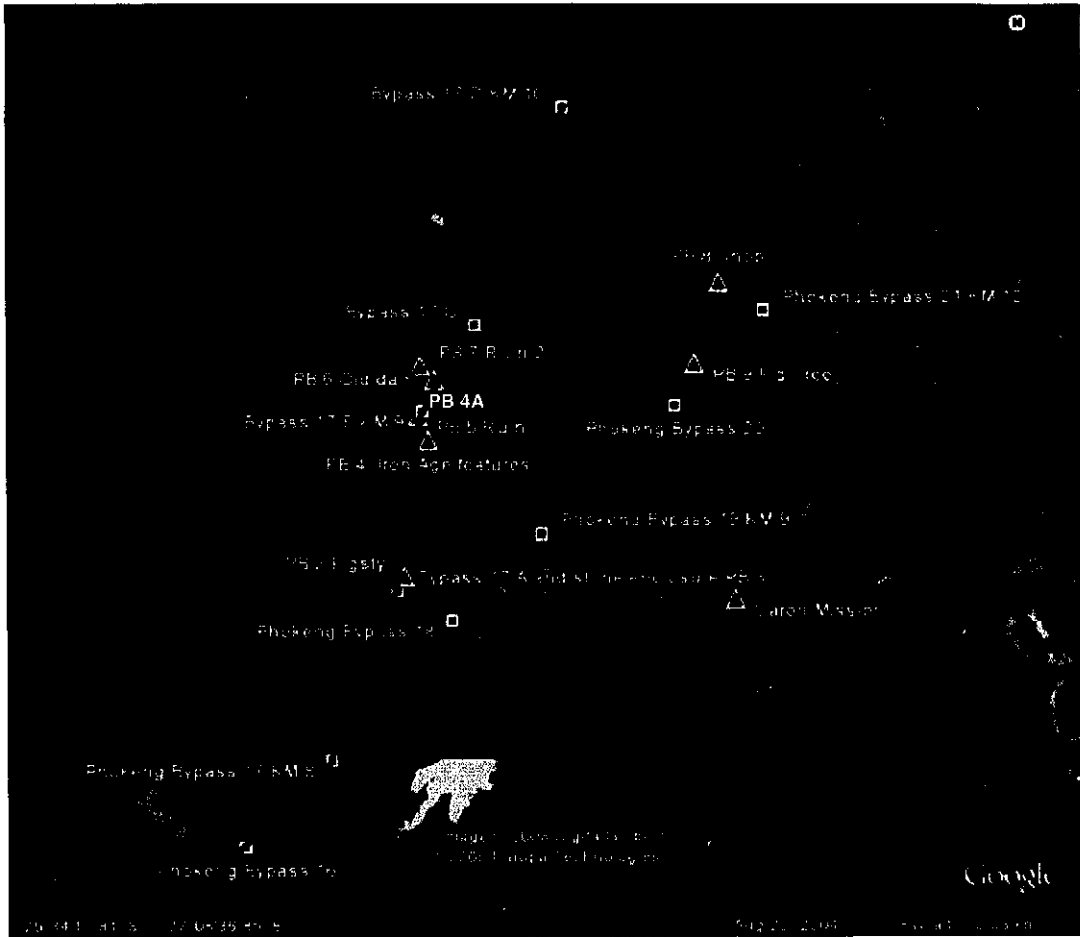


FIGURE 9: Google Earth image of the section KM 8-10 indicating the final route alignment (solid line). Note that PB 4 is not an Iron Age feature (as originally surmised) but a historic feature.

PART 4: INFORMATION SOURCES USED IN THIS REPORT

4.1 Databases

Environmental Potential Atlas, Department of Environmental Affairs and Tourism.
Heritage Sites Database, Pretoria

4.2 Literature

BERGH, JS (ed), 1999, *Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies*. Pretoria: JL van Schaik.

BREUTZ, PL. 1953, *The Tribes of Rustenburg and Pilanesberg Districts*. Department of Native Affairs, Ethnological Publications 28. Pretoria: Government Printer.

CARRUTHERS, V, 2007, *The Magaliesberg*. Pretoria: Protea Book House.

Final Report, Part B: Heritage sector survey, 2007. SA Heritage Resources Information System Project Phase 1.

ICOMOS Australia. 1999. *The Australia ICOMOS Burra Charter for the conservation of places of cultural significance*.

Living with the land. A manual for documenting cultural landscapes in the Northwest Territories. Yellowknife (Canada), 2007.

MASON, R, *Prehistory of the Transvaal*.

National Heritage Resources Act (Act 25 of 1999)

ODENDAAL, F, 2007, *Tshufi Hill Cultural Centre and School of Excellence proposal* (origin uncertain)

Standard Encyclopedia of Southern Africa.

4.3 Maps

2527 CA Rustenburg West (1955 and 1996)

Cadastral diagrams for Boekenhoutfontein, Beerfontein, Morgenzon, Goedgedacht and Rietvly (Chief Surveyor-General)

4.4 Aerial photos

Google Earth

Job 350/1955 strip 1, 2 and 3

PART 5: TERMINOLOGY USED IN THIS REPORT

Cultural significance (Burra Charter)

Aesthetic, historic, scientific, social or spiritual importance, meaning or noteworthiness for past, present or future generations

Cultural significance is embodied in the place itself (intrinsic significance), its fabric, setting, use, associations, meanings, records, related places and related objects

Heritage resources/features (NHRA)

Any place or object of cultural significance, including:

- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including—
 - (i) ancestral graves;
 - (ii) royal graves and graves of traditional leaders;
 - (iii) graves of victims of conflict;
 - (iv) graves of individuals designated by the Minister by notice in the *Gazette*;
 - (v) historical graves and cemeteries; and
 - (vi) other human remains, which are not covered in terms of the Human Tissue Act, 1983 Act No. 65 of 1983);
 - (h) sites of significance relating to the history of slavery in South Africa;
 - (i) movable objects, including—

- (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
- (ii) objects to which oral traditions are attached or which are associated with living heritage;
- (iii) ethnographic art and objects;
- (iv) military objects;
- (v) objects of decorative or fine art;
- (vi) objects of scientific or technological interest; and
- (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

Heritage significance (NHRA)

- (a) its importance in the community, or pattern of South Africa's history;
- (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- (h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- (i) sites of significance relating to the history of slavery in South Africa.

Historic period

Since the arrival of the white settlers - c. AD 1840 in this part of the country

Impact

A description of the effect of an aspect of the development on a specified component of the biophysical, social or economic environment within a defined time and space

Impact assessment

Issues that cannot be resolved during screening (Level 1) and scoping (Level 2) and thus require further investigation

Iron Age

Early Iron Age (EIA)	AD 200 - AD 1000
Late Iron Age (LIA)	AD 1000 - AD 1830

Issue

A question that asks what the impact of the proposed development will be on some element of the environment

Maintenance

Keeping something in good health or repair.

Management actions

Actions that enhance benefits associated with a proposed development or avoid, mitigate, restore, rehabilitate or compensate for the negative impacts

Preservation

Conservation activities that consolidate and maintain the existing form, material and integrity of a cultural resource.

Reconstruction

Re-erecting a structure on its original site using original components.

Rehabilitation

Re-using an original building or structure for its historic purpose or placing it in a new use that requires minimal change to the building or structure characteristics and its site and environment.

Restoration

Returning the existing fabric of a place to a known earlier state by removing additions or by reassembling existing components.

SAHRA - South African Heritage Resources Agency

Stone Age

Early Stone Age (ESA)	2 000 000 - 150 000 Before Present
Middle Stone Age (MSA)	150 000 - 30 000 BP
Late Stone Age (LSA)	30 000 - until c. AD 200

Value

Worth, conservation utility, desirability to conserve etc in terms of physical condition, level of significance (importance), economy (feasibility), possible new uses and associations/comparisons with similar features elsewhere