

**CLASS 3 ROAD BETWEEN THE K34 AND THE HAZELDEAN
NODE (HAZELDEAN BOULEVARD), PRETORIA EAST
GAUTENG
Phase I Cultural Heritage Impact Assessment**

SEF Reference No. 505648

Prepared for:

City of Tshwane

Isivuno Building
Cnr Lillian Ngoyi and Madiba Streets,
Pretoria 0001



Prepared by:

Strategic Environmental Focus (Pty) Ltd

P.O. Box 74785
Lynnwood Ridge
0040
Tel. No.: (012) 349-1307
Fax. No.: (012) 349-1229
E-mail: sef@sefsa.co.za



May 2014

COPYRIGHT WARNING

Copyright in all text and other matter, including the manner of presentation, is the exclusive property of the author. It is a criminal offence to reproduce and/or use, without written consent, any matter, technical procedure and/or technique contained in this document. Criminal and civil proceedings will be taken as a matter of strict routine against any person and/or institution infringing the copyright of the author and/or proprietors.

Declaration of Independence

I, **Mamoluoane Seliane**, in my capacity as a specialist consultant, hereby declare that I -

- Act as an independent consultant;
- Do not have any financial interest in the undertaking of the activity, other than remuneration for the work performed in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998); and following the provisions of the National Heritage Resources Act, 1999 (Act No. 25 of 1999).
- Have and will not have vested interest in the proposed activity proceeding;
- Have no, and will not engage in, conflicting interests in the undertaking of the activity;
- Undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998); and/or the National Heritage Resources Act, 1999 (Act No. 25 of 1999).
- Will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not;
- Based on information provided to me by the project proponent, and in addition to information obtained during the course of this study, have presented the results and conclusion within the associated document to the best of my professional judgement; and
- Undertake to have my work peer reviewed on a regular basis by a competent specialist in the field of study for which I am registered.

29 May 2014

Mamoluoane Seliane
Heritage Specialist
Accredited by ASAPA Reg. No. 255

Date

EXECUTIVE SUMMARY

The aim of the cultural heritage survey (Phase I Heritage Impact Assessment (HIA)), in accordance with the National Heritage Resources Act, 1999 (Act No. 25 of 1999) was to locate, identify, document and assess sites of cultural heritage and archaeological significance that may occur within the proposed route for the construction of a Class 3 road connecting the K34 and the Hazeldean Node. An assessment of the impact of the proposed road construction on such resources will be provided. Where the impact is negative, alternatives and/ or mitigation plans will be considered.

The Phase I HIA revealed no heritage resources within the Preferred Alternative (Alternative 1) and Alternative 2. It is therefore, recommended from a heritage point of view that the proposed construction of a Class 3 road between K34 and Hazeldean Node, proceed with acceptance of the conditions stated in Section 8 of this report.

ACRONYMS AND ABBREVIATIONS

CTMM	City of Tshwane Metropolitan Municipality
EIAge	Early Iron Age
ESA	Early Stone Age
GPS	Geographic Positioning System
HIA	Heritage Impact Assessment
LIA	Late Iron Age
LSA	Later Stone Age
MIA	Middle Iron Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999)
PHRAG	Provincial Heritage Resources Authority - Gauteng
SAHRA	South African Heritage Resources Agency
SEF	Strategic Environmental Focus (Pty) Ltd
S&EIR	Scoping and Environmental Impact Reporting

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	ii
ACRONYMS AND ABBREVIATIONS	iii
TABLE OF CONTENTS.....	iv
1. INTRODUCTION.....	1
2. BACKGROUND INFORMATION TO THE PROJECT.....	3
2.1 Details of the study area.....	3
2.2 Locational Data	3
3. BACKGROUND INFORMATION OF THE SURVEY.....	5
3.1 Methodology	5
3.1.1 Details of the site visit	5
3.1.2 Literature Review	6
3.2 Restrictions to the survey	6
3.2.1 Visibility.....	6
3.2.2 Disturbance.....	6
3.3 Details of the equipment used in the survey	6
4 BRIEF ARCHAEOLOGICAL HISTORY OF THE gauteng province.....	7
4.1 The Stone Age	7
4.2 The Iron Age	8
4.3 Historical Period.....	8
5 DESCRIPTION OF THE STUDY Area heritage	9
5.1 Description of the materials observed	9
5.2 Summary of the findings.....	9
6. STATEMENT OF SIGNIFICANCE	9
7. PREVIOUS WORK.....	9
8 RECOMMENDATIONS	10
8. RISK PREVENTATIVE MEASURES ASSOCIATED WITH CONSTRUCTION	10
9 CONCLUSION	10
REFERENCES.....	14

LIST OF FIGURES

Figure 1: Location of the study area	4
--	---

LIST OF PLATES

Plate 1: Existing gravel road.....	5
Plate 2: Typical vegetation on site	6

LIST OF TABLES

Table 1 Background Information.....	3
Table 2 Table detailing identified heritage resources and NHRA status.....	9

1. INTRODUCTION

Strategic Environmental Focus (Pty) Ltd (SEF) was commissioned by Abland (Pty) Ltd, on behalf of the City of Tshwane Metropolitan Municipality (CTMM) to undertake a Heritage Impact Assessment (HIA) for the proposed construction of the Class 3 Road. This HIA was carried out in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), (NEMA), and it is based on the requirements of the National Heritage Resources Act, 1999 (Act No 25 of 1999) (NHRA). This HIA is a specialist study that forms part of the Scoping and Environmental Impact Reporting (S&EIR) for the proposed project.

According to Section 3 (2) of the NHRA, the heritage resources of South Africa include:

- 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)."*

In terms of Section 3 (3) of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of:

- 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.”*

The aim of the investigation was to identify, verify and analyse heritage resources and to recommend how to manage them within the context of the proposed construction of a Class 3 Road.

The objectives of the investigation were:

- Identifying and analysing heritage places, objects, buildings, structures, graves etc.;
- Assessing broad cultural significance of identified sites, places, buildings, structures, graves and objects within the study area;
- Surveying and mapping of significance/sensitivity issues and opportunity/constraint issues;
- Reviewing of the general compatibility of the proposed road construction and associated activities with heritage policy planning frameworks;
- Undertaking a preliminary assessment of the acceptability of the proposed road construction from a heritage perspective;
- Identifying the need for alternatives, if necessary; and
- Recommending appropriate initial management measures to conserve significant heritage elements and reduce the impact on heritage resources.

2. BACKGROUND INFORMATION TO THE PROJECT

Table 1 Background Information

Consultant:	Mamoluoane Seliane
Type of development:	Construction of a Class 3 dual carriageway road
Rezoning or subdivision:	Rezoning (i.e. change in land use)
Terms of reference	Phase 1 HIA
Legislative requirements:	The HIA was carried out in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), (NEMA), and following the requirements of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA).

2.1 Details of the study area

The proposed project includes the construction of a Class 3 dual carriageway road, with a total length of 2km and a road reserve of 32m. This preferred alternative will cut through a Class 2 ridge. Alternative 2 is anticipated to also be constructed as a dual carriageway of the same dimensions. This alternative passes around the Class 2 ridge but is anticipated to cut through The Farm Inn. The proposed project will be located within the City of Tshwane (Figure 1).

The affected farm portions include the following:

- Portion 3 of the Farm Tyger Valley 334;
- Portion 4 of the Farm Tyger Valley 334;
- Portion 5 of the Farm Tyger Valley 334;
- Portion 6 of the Farm Tyger Valley 334;
- Portion 18 of the Farm Zwartkoppies 364; and
- Portion 21 of the Farm Zwartkoppies 364.

2.2 Locational Data

- Province: Gauteng;
- Municipality: City of Tshwane;
- General Coordinates: 25°47'56.44"S; 28°21'53.14"E
25°47'39.90"S; 28°22'09.20"E
25°47'18.13"S; 28°22'07.80"E
25°47'10.12"S; 28°22'16.04"E
25°47'25.57"S; 28°22'39.06"E
25°47'34.89"S; 28°22'27.63"E

Current Land-use

Both the Preferred Alternative and Alternative 2 occur within private farmlands. The southern parts of the proposed alternatives occur on an existing gravel road (Plate 1).

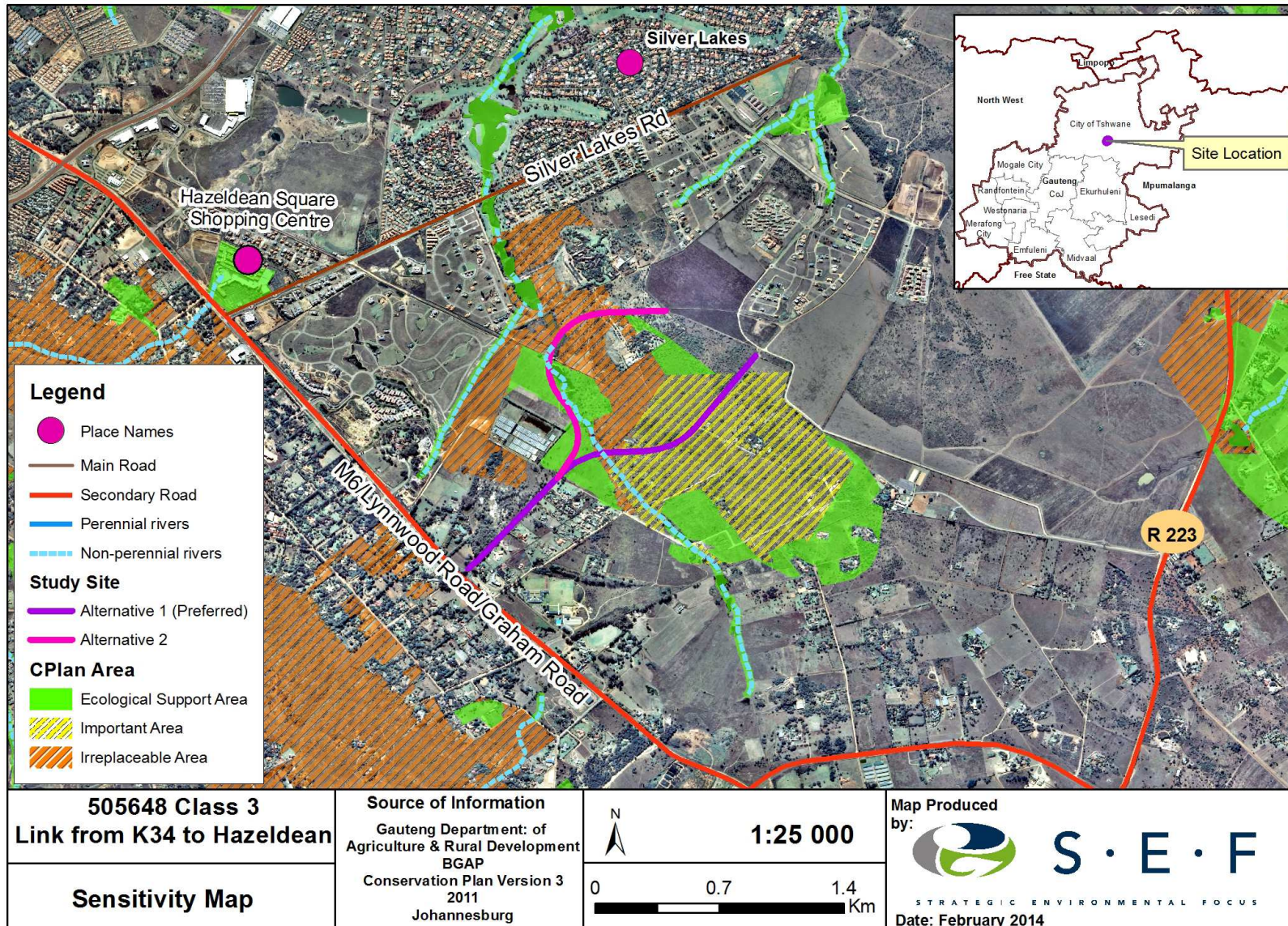


Figure 1: Location of the study area



Plate 1: Existing gravel road

3. BACKGROUND INFORMATION

3.1 Methodology

3.1.1 Details of the site visit

The site visit for the proposed construction of a Class 3 Link Road between K34 and Hazeldean Boulevard was conducted on the 15 April 2014. The survey was undertaken by means of walking and driving on site to:

- Search for, locate and identify objects and structures of heritage and/or archaeological significance in accordance with accepted archaeological practices; and
- Document all heritage/ archaeological sites, objects and structures according to minimum standards and procedures accepted by the archaeological profession.

3.1.2 Literature Review

A brief literature review pertaining to the prehistory of the Gauteng Province was undertaken.

3.2 Restrictions to the survey

3.2.1 Visibility

Visibility for the most part of the footprint was poor (Plate 2).

3.2.2 Disturbance

There is no disturbance of any potential archaeological stratigraphy noted.

3.3 Details of the equipment used in the survey

- Geographic Positioning System (GPS): Garmin eTrek Camo; and
- Digital cameras: Canon Powershot A460.

All readings were taken using the GPS. Accuracy was to a margin of error of 4 m.



Plate 2: Typical vegetation on site

4 BRIEF ARCHAEOLOGICAL HISTORY OF THE GAUTENG PROVINCE

The Gauteng archaeological history is one of the best studied in South Africa. The province's archaeological heritage spans from more than two million years ago until recently. Evidence from the archaeological sites in Gauteng indicates that the sites are representative of a long and substantial cultural history belonging to different time periods and cultural traditions. The earliest evidence for stone tool manufacture and use in Southern Africa is found within the Gauteng Province at sites in the Cradle of Humankind. The 'Cradle' and its environs have been proclaimed of World Heritage Status owing to the vast palaeontological, physical anthropological and archaeological evidence from the discovery of hominid fossils and associated cultural material that has made a considerable contribution to the body of scientific knowledge of the subject of the origin of humanity and human evolution.

4.1 The Stone Age

The Stone Age is comprised of three (3) industries namely, the Early Stone Age (ESA) dating from about 2.5 million years ago to 250 000 years ago, the Middle Stone Age (MSA) dating from 250 000 and 25 000 years ago and the Later Stone Age (LSA) which dates from about 25 000 and 2 000 years ago (Esterhuysen, 2007).

The ESA is a period during which human ancestors began the usage of stone tools. The ESA tools were simple tools, which were, among other things, used to chop and butcher meat, de-skin animals and probably to smash animal bones to obtain bone marrow (Esterhuysen, 2007). The MSA stone tools are, in general, smaller than those of the ESA. A variety of MSA tools include blades, flakes, scrapers and pointed tools that may have been hafted onto shafts or handles and used as spearheads. Stone tool technology in the LSA is observed to display rapid stylistic change compared to the slower pace of stylistic change in the MSA (Wadley, 2007). The rapidity is more evident during the last 10 000 years. No Stone Age artefacts have been discovered at both Alternative 1 and 2 of the proposed road construction

Along with the marked social transformation and technological innovation of the LSA people is the associated Rock Art panels that occur on cave walls or rock faces. Rock Art can be in the form of rock paintings or rock engravings, depending on the geology of a region. In the Magaliesberg valley of the Gauteng Province, dozens of engraved rocks can be seen today with the majority of the depictions being large game such as eland, rhinoceros, zebra and hartebeest (Pearce, 2007). However, no Rock Art has been found on the proposed study area and alternative route.

4.2 The Iron Age

A farming way of life was introduced to southern Africa about 2 000 years ago by Bantu-speaking people coming from the north. They brought with them crops such as sorghum, millet, ground beans and cow peas to be cultivated for the first time in this part of the world. Domestic animals such as cattle, sheep and goats were also part of the newly introduced farming way of life. Unlike the hunter-gatherers and herders who lived in temporary camps and led a nomadic way of life, farming necessitated sedentary life styles. Some features of the permanent settlements of these early mixed farming communities are houses, raised grain bins, underground storage pits and stock enclosures. An important feature of this time period was that they also made their own iron implements, hence the name Iron Age. The Iron Age has been divided into three periods, namely the Early Iron Age (EIA Period) (AD 200 – 900), the Middle Iron Age (MIA) (AD 900 – 1300) and the Late Iron Age (LIA) (AD 1300 – 1820) (Huffman, 2007). The investigation did not reveal any Iron Age features or artefacts in the study area.

4.3 Historical Period

Oral history reveals that Musi, a 17th Century ruler, had a settlement known as KwaMnyamana in the vicinity of the present day Pretoria. During Musi's reign the group appears to have subdivided into five smaller groups known as the Ndzundza, Kekana, Mhwaduba, Sibasa and Manala sections. The Manala section subsequently settled in the area to the east of present-day Pretoria, from Mamelodi in the west to the Rayton/Cullinan intersection with the Witbank highway (N4) in the east. This whole area was divided into three geo-political regions which, according to the available oral historical documents, were consequently occupied. These three regions were Ezotshaneni (c. 1677 – c. 1717), Embilaneni (c. 1717 – c. 1747) and KoNonduna (c. 1747 – c. 1825). Each of these regions was divided into a variety of settlement areas. The Parent Farm Zwartkoppies, would have formed part of the KoNonduna region.

During 1825 the Manala were attacked by the Ndebele (or Matabele) of Mzilikazi and were almost annihilated. The small groups of Manala survivors established themselves in small clusters or settlements, and many of them were socio-economically forced to find work on the white farms established during the late 1830s and early 1840s.

5 DESCRIPTION OF THE STUDY AREA HERITAGE

5.1 Description of the materials observed

The investigation revealed no heritage resources on the footprint of the proposed construction of a Class 3 Link Road between K34 and Hazeldean Boulevard.

Table 2: Table detailing identified heritage resources and NHRA status

Identified heritage resources	
<i>Category, according to NHRA</i>	<i>Identification/Description</i>
Formal protections (NHRA)	
National heritage site (Section 27)	None
Provincial heritage site (Section 27)	None
Provisional protection (Section 29)	None
Place listed in heritage register (Section 30)	None
General protections (NHRA)	
Structures older than 60 years (Section 34)	None
Archaeological site or material (Section 35)	None
Palaeontological site or material (Section 35)	None
Graves or burial grounds (Section 36)	None
Public monuments or memorials (Section 37)	None
Other	
Any other heritage resources (describe)	None

5.2 Summary of the findings

No heritage resources were identified on site and thus no further permitting processes are required.

6. STATEMENT OF SIGNIFICANCE

This section does not apply as no heritage resources were identified on site.

7. PREVIOUS WORK

The purpose of this section is to provide an overview of the heritage status/potential of the region within which the construction of Class 3 Link Road between K34 and Hazeldean Boulevard exists. This way, the significance of identified heritage resources can be evaluated at a regional level and not site level which provides a narrow view about the occurrence and importance of regional signatures for example. The review

involves the investigation of the South African Heritage Resources Information System (SAHRIS), which hosts documented information and developmental reports and authority comments thereof for various projects in the country. Several Phase I HIA reports for projects previously undertaken in the vicinity of the proposed road construction were investigated and the studies revealed Late Iron Age Stone Walled sites (Birkholts, 2008, Kusel, 2008, Huffman 2005, Van Schalkwyk, 2001) and graves (Huffman 2005, Van Schalkwyk, 2001). However, the current investigation revealed no archaeological resources.

8 RECOMMENDATIONS

It is recommended that the proposed construction of a Class 3 Link Road between K34 and Hazeldean Boulevard proceed from a heritage point of view as no heritage resources were identified along both Alternatives 1 and 2, with acceptance of the following conditions:

Construction activities should be limited to 20 m on either side of the proposed road. If the size of the footprint is increased at a later stage, a heritage specialist should be consulted in order to assess how the increase in the size of the will affect heritage resources.

8. RISK PREVENTATIVE MEASURES ASSOCIATED WITH CONSTRUCTION

Archaeological material, by its very nature, occurs below ground. The developer should therefore keep in mind that archaeological sites might be exposed during the construction phase. If anything is noticed, work in that area should be stopped and the occurrence should immediately be reported to the Provincial Heritage Resources Authority Gauteng (PHRAG) at 011 355 2630 or a museum, preferably one at which an archaeologist is available. The find should then be investigated and evaluated by the archaeologist, who will provide recommendations on when construction activities in the area where the discovery was made can resume.

9 CONCLUSION

The Heritage Impact Assessment survey and desktop investigation for the proposed construction of a Class 3 Link Road between K34 and Hazeldean Boulevard revealed no cultural heritage resources on both Alternatives 1 and 2. Therefore from a heritage point of view, the proposed development and associated activities can proceed.

REFERENCES

1. Birkholtz, P. D. 2008. Phase I Heritage Impact Assessment: Proposed Pipeline between Vlakfontein and Mamelodi, Tshwane, Kungwini & Ekurhuleni Municipalities, Gauteng Province. Unpublished Scientific Report Archaeology Africa cc.
2. Esterhuysen, A., 2007. The Earlier Stone Age. In Bonner, P., Esterhuysen, A., Jenkins, T. (eds.): *A Search for Origins: Science, History and South Africa's 'Cradle of Humankind'*. Johannesburg: Wits University Press. Pg 110 -121.
3. Huffman, T. N., 2007. The Early Iron Age at Broederstroom and around the 'Cradle of Humankind'. In Bonner, P., Esterhuysen, A., Jenkins, T. (eds.): *A Search for Origins: Science, History and South Africa's 'Cradle of Humankind'*. Johannesburg: Wits University Press. Pg 148 -161.
4. Huffman, T. N. 2005. Phase I Archaeological Impact Assessment for the Farm Zwartkoppies. Unpublished Scientific Report Witz Contracts Office.
5. Kusel, U. 2008. Cultural Heritage Resources Impact Assessment of Holding 205 Swavelpoort, Tshwane, Gauteng.
6. Pearce, D. 2007. Rock Engraving in the Magaliesberg Valley. In Bonner, P., Esterhuysen, A., Jenkins, T. (eds.): *A Search for Origins: Science, History and South Africa's 'Cradle of Humankind'*. Johannesburg: Wits University Press. Pg 136 – 139.
7. SAHRA, 2005. *Minimum Standards for the Archaeological and the Palaeontological Components of Impact Assessment Reports*, Draft version 1.4.
8. Van Schalkwyk, J. 2001. A Survey of Cultural Resources on the Farm Tweefontein 372JR, Pretoria District, Gauteng Province.

9. Wadley, L. 2007. The Middle Stone Age and Later Stone Age. In Bonner, P., Esterhuysen, A., Jenkins, T. (eds.): *A Search for Origins: Science, History and South Africa's 'Cradle of Humankind'*. Johannesburg: Wits University Press. Pg 122 -135.