British American Tobacco Photovoltaic Project

Notification of Intent to Develop and Request for Exemption

for

Amber Earth (Pty) Ltd

Project file number: ES 10/2/1/8

SAHRIS case ID: 10676

February 2017

This document has been prepared by the Heritage Foundation for:

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Compiled by: Johan Nel 13 February 2017

Revision history:

Version	Action	Reviewer	Date
1.0 1st draft	Review	Tim van Stormbroek	20 February 2017

DECLARATION

I, Johan Nel, hereby declare that I act on behalf of the Heritage Foundation as an independent and objective heritage practitioner. Neither I nor the Heritage Foundation has received in the past or will receive in future, any personal or other benefits that could derive from the proposed development contained in this document, other than fair remuneration that was contractually agreed on between the Heritage Foundation and the person/s, organisation/s or other entity/ies contracted with to complete this document. All remuneration is payable to the Heritage Foundation irrespective of the outcome of the applications for which this document may be used.

Signed on 13 February 2017 in Pretoria.

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Johan Nel

GLOSSARY

APM	Archaeology, Palaeontology and Meteorite unit of the SAHRA
BAT SA	British American Tobacco South Africa (Pty) Ltd
BCE	Synonym for BC, means Before Common Era
CE	Synonym for AD, means Common Era
Cultural landscape	The cultural environment that includes all forms of cultural heritage past and present and within which development will occur
Farming Community / ies	Synonym for the Iron Age, associated with Bantu-speaking agropastoralist groups that entered South Africa from the early 1st century CE. Divided into Early (EFC), Middle (MFC) and Late (LFC) periods
Ha	Hectares, 10 000 m^2
HRM	Heritage Resource Management
Listed Activity	Activities with maximum thresholds listed in the EIA Regulations, 2014 which, if exceeded, trigger Basic Assessments or Environmental Impact Assessments in terms of the NEMA
MWp	Mega watt peak, nominal power of module measured in mega watt
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999)

NID	Notification of Intent to Develop, submitted heritage resources authorities in terms of section 38 of the NHRA
PV	Photovoltaic
RfE	Request for Exemption from one or more heritage studies submitted heritage resources authorities in terms of section 38 of the NHRA
SAHRA	The South African Heritage Resources Agency
SAHRIS	The South African Heritage Resources Information System

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1 INTRODUCTION

British American Tobacco (South Africa) (hereinafter BAT South Africa) appointed Amber Earth (Pty) Ltd (hereinafter Amber Earth) to complete a Basic Assessment in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and the associated Environmental Impact Assessment (EIA) Regulations published in Gazette No. 38282, Volume 594 on 4 December 2014 (hereinafter EIA Regulations, 2014).

Pertinent details for Amber Earth (the 'environmental consultant') and BAT South Africa (the 'developer') are provided in Table 1.

Amber Earth in turn appointed the Heritage Foundation to complete a Heritage Resources Management (HRM) process in terms of Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA).

Table 1 Summary of environmental consultant and developer details

Environmental consultant	
Company name	Amber Earth (Pty) Ltd
Contact person	Tim van Stormbroek
Address	347 Graham road, Tiegerpoort, 0056, Pretoria PO Box 75166, Lynnwood Ridge, 0040
Contact number	082 482 6202
Email	tim@amberearth.co.za
Website	NA
Developer	
Company name	British American Tobacco South Africa

Contact person	Devina Piyarlall
Address	1 Prinsloo Street, Heidelberg, 1441, Gauteng
Contact number	016 340 6257
Email	devina_piyarlall@bat.com
Website	www.batsa.co.za

This document constitutes a Notification of Intent to Develop (NID) and Request for Exemption (RfE)[1] from all further heritage studies, based on evidence collected during a site screening visit and literature review (see Appendix B).

2 PROJECT BACKGROUND

BAT is a global tobacco company headquartered in the United Kingdom and listed on the London Stock Exchange with a secondary listing on the Johannesburg Stock Exchange. BAT has been operating in South Africa since 1904, establishing its Heidelberg Factory in 1976 as a social upliftment project within a low economic area. In 1999 BAT merged with Rothmans International to become BAT South Africa[2].

BAT South Africa is investigating the possibility to construct and install a 10 MWp photovoltaic facility on 20 ha land adjacent to their Heidelberg Facility. The proposed facility will be constructed in two phases: a first phase that will produce 7.0 MWp of electricity and a second phase to produce 3.0 MWp. The proposed design will include:

[1] The NID and RfE was submitted to the South African Heritage Resources Agency (SAHRA) via the online South African Heritage Information System (SAHRIS) for Comment. Given that no structures generally protected in terms of Section 34 of the NHRA exist on the property document has not been formally submitted to the Provincial Heritage Resources Authority of Gauteng (PHRA-G) as this Authority does not have the assessed competency to comment on archaeology, palaeontology and meteorites or burial grounds.

[2] (*British American Tobacco South Africa*, 2017)

- 7 MWp fitted into the available 20 ha BAT South Africa property;
- Existing overhead line servitude;
- Double security perimeter fence and 4 m wide perimeter track; and
- Internal road.

Table 2 Activities requiring a HRM process in terms of Section 38 of the NHRA

NHRA Section 38 Activity No.	Description	Listed Activity vis. EIA Regulations, 2014	Project description
1(a)	Construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length		Construction of perimeter fence and 4 m wide road, internal road.
1(b)	Construction of a bridge or similar structure exceeding 50 m in length		Not applicable
1(c)(i)	Development or other activity that will change the character of a site exceeding 5 000 m^2	Listing Notice 1, Activity 27	Construction of solar PV facility on 20 ha of land
1(c)(ii)	Development or other activity that will change the character of a site involving three or more erven or subdivisions thereof		Not applicable
1(c)(ii)	Development or other activity that will change the character of a site involving three or more erven or subdivisions thereof which have been consolidated with the past five years		Not applicable
1(c)(iv)	Development or other activity that will change the character of a site the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources		Not applicable

NHRA Section 38 Activity No.	Description	Listed Activity vis. EIA Regulations, 2014	Project description
	authority		
1(d)	The re-zoning of a site exceeding 10 000 m^2		To be confirmed
1(e)	Any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority		Not applicable
8	An evaluation of the impact of development on heritage resources is required in terms of the NEMA or the MPRDA or any other legislation.	Listing Notice 1, Activity 27	A Basic Assessment is being completed in terms of the NEMA and EIA Regulations, 2014

3 PROPERTY DETAILS

The proposed study area is situated on land owned by BAT South Africa. The property is bounded in the west by BAT South Africa's Heidelberg Factory and the Eskort abattoir, in the north and east by the Heidelberg Country Club's golf course, and in the south by field and residential areas (see Figure 1). The N3 national highway also lies east of the property and is clearly visible.

More property details are presented in Table 3.

Table 3 Summary of property details

Property name	Erf 1545
Farm	Portion 65 of Langlaagte 186 IR
Nearest town	Heidelberg

Local municipality	Lesedi Local Municipality
District municipality	Sedibeng District Municipality
Province	Gauteng
Relative centre coordinates of development area	26° 30’ 46.37” S 28° 22’ 50.61” E
Approximate property size	30 ha
Approximate maximum development extent	20 ha
Registered land owner	BAT South Africa

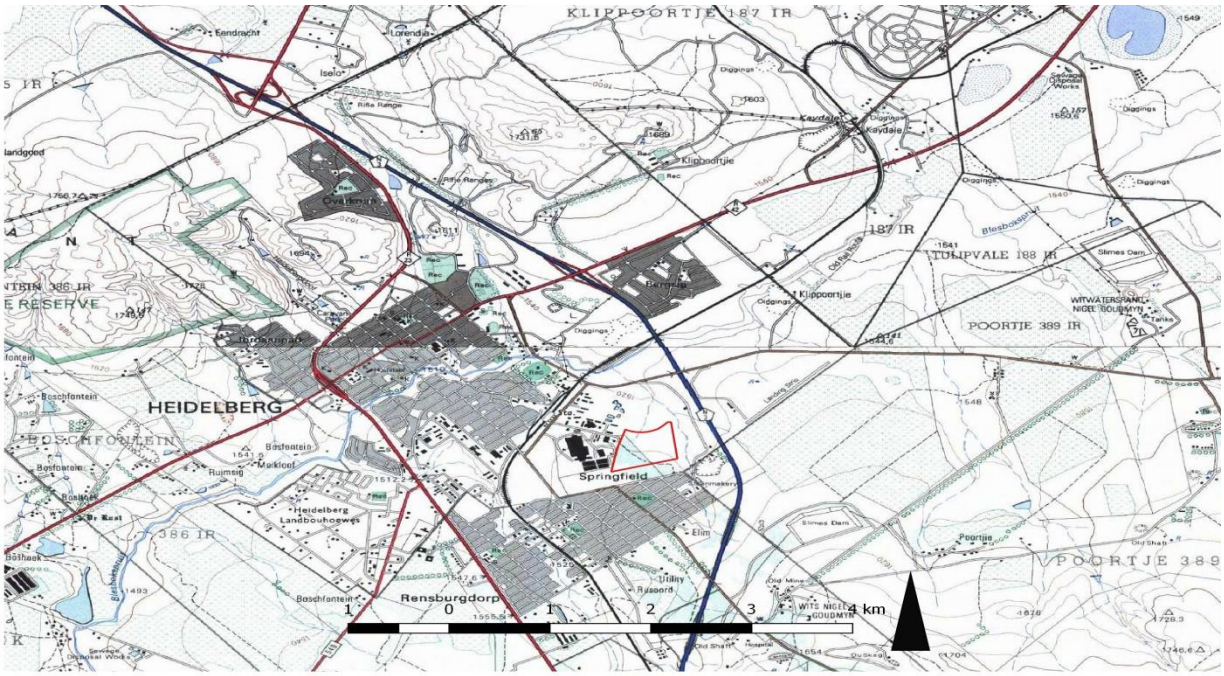

Figure 1 Development context and outline of proposed study area

4 OVERVIEW OF CULTURAL LANDSCAPE BASELINE

4.1 METHODOLOGY

The cultural landscape baseline profile was developed using primary and secondary source material that were reviewed and summarised in the literature review attached as Appendix B. Primary source material included historical aerial photographs and records of sites identified by other archaeologists in previous heritage studies. Secondary source material included published journal articles and other reworked sources.

The study area was also inspected during a site screening visit on 6 February 2017 by Johan Nel and accompanied by other specialists.

4.2 GEOLOGY AND SOILS

The study area is insignificant in terms of palaeontological potential, being underlain by the Johannesburg and Turfontein Subgroups of the Central Rand Group of the Witwatersrand Supergroup. There is evidence of the shales that could relate to the Booysens formation (see Figure 2).

The vegetation types typical of the immediate area include the Soweto Highland Grassland and Andasite Mountain Bushveld. However, the study area is a wholly transformed area as seen in historical imagery and recorded during the site screening (see Figure 3 to Figure 6).

Figure 2 Pebbles and shales present in study area

Figure 4 Dense *Eucalyptus* new-growth in historical plantation

Figure 3 General view of study area adjacent to factory area

Figure 5 General view of study area around *Eucalyptus* plantation

Figure 6 General view of study area, *Eucalyptus* plantation visible to the right, N3 highway on horizon

4.3 CULTURAL HISTORY

Although a relative continuous cultural history is evident within the wider regional cultural landscape (approximately 150 km radius), there are very few recorded sites in the more immediate landscape.

Recorded archaeological sites that were identified through a review of previously completed heritage studies are limited to 26 records of Late Farming Community stonewall sites. Historical structures and burial grounds only account for three and four respectively, excluding all the known sites situated within Heidelberg proper.

All identified sites were recorded around 5 km to 10 km west and north-west of the study area, placing them within the cultural landscape of the Suikerbosrand area.

The extant historical cultural heritage of the study area is limited to a historical *Eucalyptus* plantation in the southwestern corner that has been under cultivation since the 1940s (see Figure 7 to Figure 9). A railway loop is evident on the historical aerial imagery of 1949 and 1958. By 1972 this railway has already been abandoned and encroached on by urban and industrial development. There is no current visible evidence of the railroad.

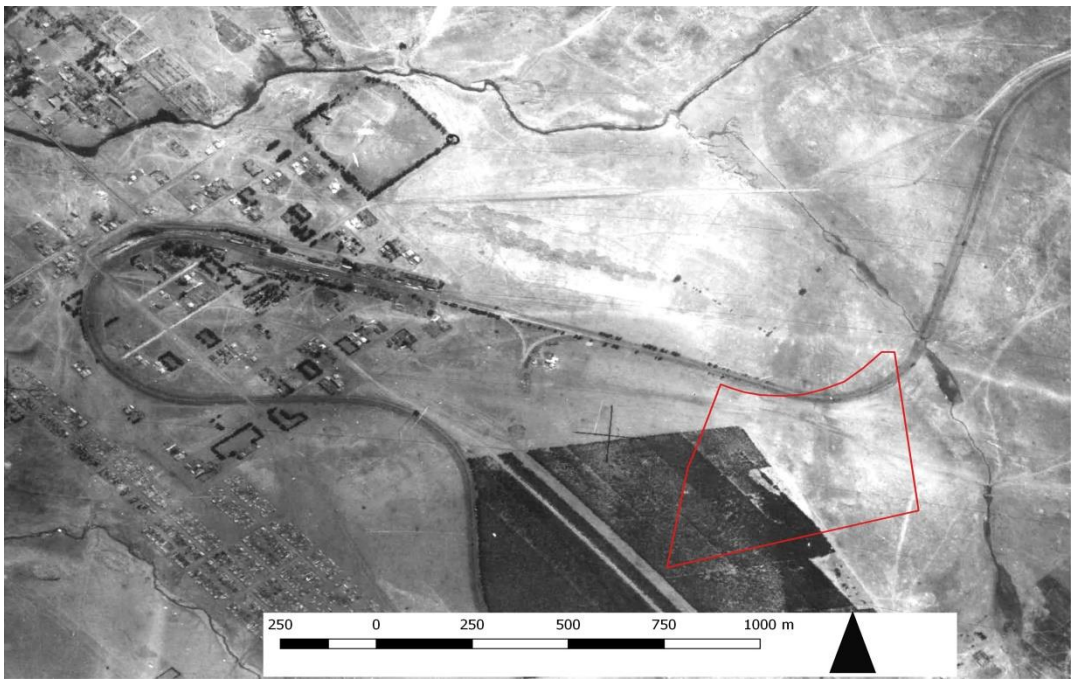

Figure 7 Study area indicated on 1948 aerial photograph

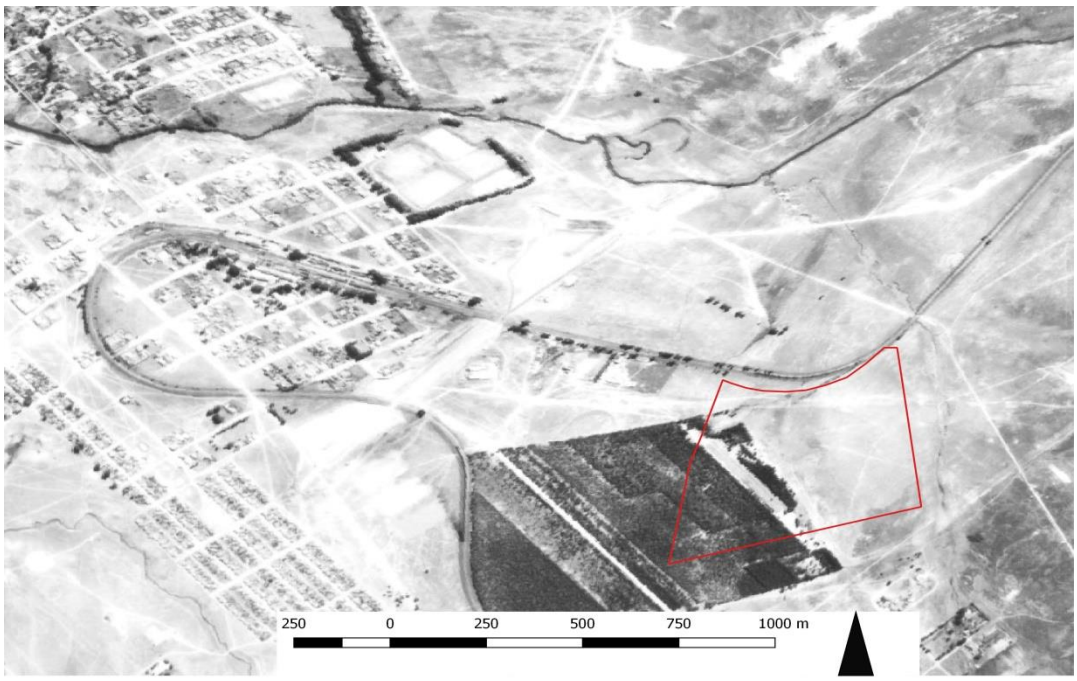

Figure 8 Study area indicated on 1958 aerial photograph

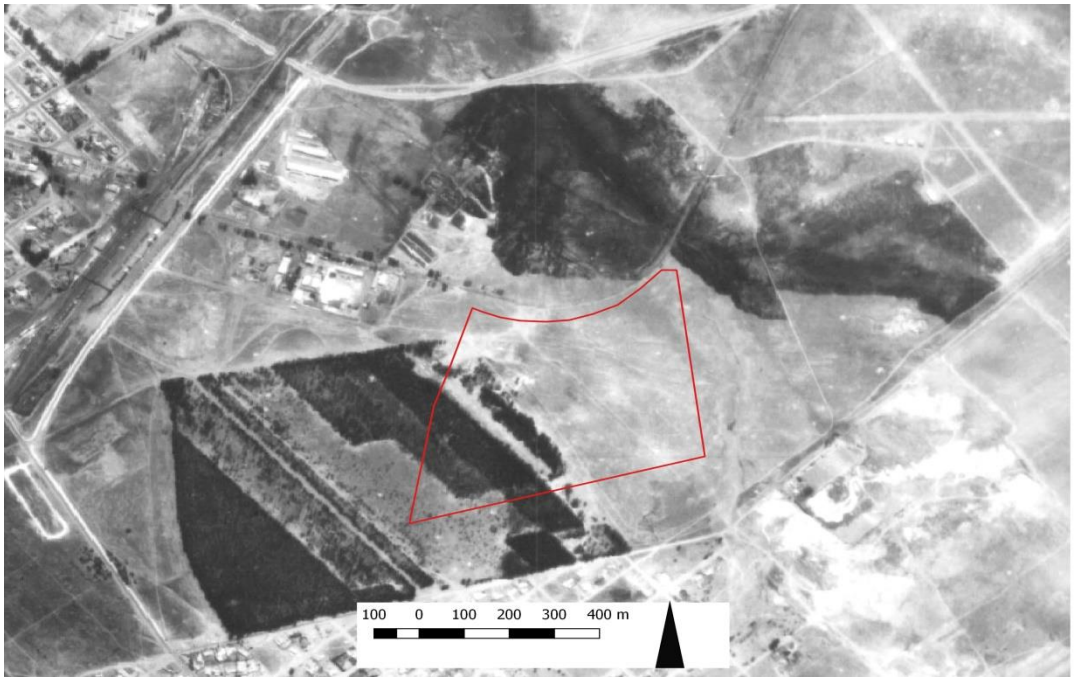

Figure 9 Study area indicated on 1972 aerial photograph

5 SUMMARY OF IDENTIFIED HERITAGE IMPACTS AND RISKS

The proposed development of the solar facility will not impact on any existing, tangible heritage resources, including fossil heritage.

There remains an inevitable risk that subsurface heritage resources may be exposed during construction. The potential that significant subsurface heritage resources are present is, however, very unlikely.

6 CONCLUSION AND RECOMMENDATIONS

BAT South Africa is proposing to construct a 10 MWp solar PV facility on a property which they own, immediately east of their existing Heidelberg factory. To obtain necessary Environmental Authorisation for this facility, a Basic Assessment process was required that in turn initiated a HRM process.

The Heritage Foundation was appointed to undertake the HRM process, which was limited to this NID and RfE. The document was prepared following a brief desktop literature review and a site screening that did not identify any significant tangible heritage resources that will be affected by the proposed development

Based on the results of the literature review and site screening visit it is recommended that the SAHRA APM unit grants exemption from all further heritage studies for this development.

APPENDIX A: CURRICUL VITAE OF HERITAGE SPECIALIST

CURRICULUM VITA

1 PERSONAL DETAILS

Full names	Johan Nel
Nationality	South African citizen
Date of birth	7 January 1980
South African identity number	80 01 07 50 11 080
Driver's licence type	South Africa code B
Home language	Afrikaans and English
Highest qualification obtained	BA Honours (Archaeology) (UP), 2002
Current employer	The Heritage Foundation
Current position	Manager: Conservation Services
Health	Excellent
Criminal record	None

2 EDUCATION

Date	Degree(s) or Diploma(s) obtained	Institution
2014	Integrated Heritage Resources Management Certificate, NQF Level 6	Rhodes University
2002	BA (Honours) (Archaeology)	University of Pretoria
2001	BA	University of Pretoria

1997	Matric with exemption	Brandwag Hoërskool

3 LANGUAGE

Language	Speaking	Writing	Reading
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

4 EMPLOYMENT

Period	Company	Title/position
11/2016 –	The Heritage Foundation	Manager: Conservation Services
05 /2011 to 10/2016	Digby Wells Environmental	Manager: Heritage Resources Management unit
05/2010-2011	Digby Wells Environmental	Archaeologist
10/2005-05/2010	Archaic Heritage Project Management	Manager and co-owner
2003-2007		Freelance archaeologist
(2004-2005)	Rock Art Mapping Project	Resident archaeologist
2002-2003	Department of Anatomy, University of Pretoria	Special assistant: Anthropology

2001-2002	Department of Anatomy, University of Pretoria	Technical assistant
1999-2001	National Cultural History Museum & Department of Anthropology and Archaeology, UP	Assistant: Mapungubwe Project,

5 BIOGRAPHY

My involvement in Cultural Heritage Resources Management spans a period of 17 years. This includes *inter alia* research projects, archaeological and heritage assessments, grave relocation, social consultation and mitigation of archaeological sites. I have worked in both urban settings and remote rural landscapes throughout South Africa, as well as Botswana, the Democratic Republic of the Congo, Liberia Sierra Leone and Swaziland. In addition, I have also acted as a specialist reviewer of heritage studies undertaken by local specialists in countries such as Cameroon, Malawi, Mali and Tanzania.

Since 2010 I have been fortunate to complement my experience in the heritage arena with Integrated Environmental Management. This exposure has enabled me to investigate and implement the integration of Cultural Heritage Resources Management into Environmental Management processes. Many of the projects have required compliance with International Finance Corporation requirements and other World Bank standards. This knowledge has allowed me to develop and implement a Cultural Heritage Resources Management approach that is founded on international best practice and leading international conservation bodies such as UNESCO and ICOMOS.

I have been appointed by the Heritage Foundation, a Section 21 not-for-profit company in November 2016 as Manager: Conservation Services. My duties here include among other things review, drafting and implementing Integrated

Management Plans and Conservation Management Plans for various heritage sites in South Africa, identifying funding opportunities and drafting funding proposals, heritage focussed research and liaison with various government and NGO bodies. In addition, I still maintain a level of general Heritage Resources Management consulting services through the Heritage Foundation.

I am fluent in English and Afrikaans, with excellent writing and research skills. My fully computer literacy includes proficiency in all Microsoft programmes. I am fortunate to be able to work very well under pressure, especially when projects demand grasping complex, interconnected processes.

6 PROFESSIONAL REGISTRATION

Position	Professional Body	Registration Number
Professional member (Council member) (2013-2015)	Association for Southern African Professional Archaeologists (ASAPA); ASAPA Cultural Resources Management (CRM) section	095
Member	International Council on Monuments and Sites (ICOMOS)	13839
Professional member	International Association of Impact Assessors – South Africa (IAIAsa)	NA
Institutional member	South African Museums Association (SAMA)	NA

7 PUBLICATIONS AND CONFERENCE PAPERS

Author/s & date	Title	Published in/presented at
Nel, J. (2001)	Cycles of Initiation in Traditional South African Cultures.	South African Encyclopaedia (MWEB).
Nel, J. 2001.	Social Consultation: Networking Human Remains and a Social Consultation Case Study	Research poster presentations at the. Bi-annual Conference (SA3) Association of Southern African Professional Archaeologists the National Museum, Cape Town
Nel, J. 2002.	Collections policy for the WG de Haas Anatomy museum and associated Collections.	Unpublished. Department of Anatomy, School of Medicine: University of Pretoria.
Nel, J. 2004.	Research and design of exhibition for Eloff Belting and Equipment CC	Institute of Quarrying 35th Conference and Exhibition on 24 – 27 March 2004
Nel, J. 2004.	Ritual and Symbolism in Archaeology, Does it exist?	Research paper presented at the Bi-annual Conference (SA3) Association of Southern African Professional Archaeologists: Kimberley
Nel, J & Tiley, S. 2004.	The Archaeology of Mapungubwe: a World Heritage Site in the Central Limpopo Valley, Republic	Archaeology World Report, (1) United Kingdom p.14-22.

	of South Africa.	
Nel, J. 2007.	The Railway Code: Gautrain, NZASM and Heritage.	Public lecture for the South African Archaeological Society, Transvaal Branch: Roedean School, Parktown.
Nel, J. 2009.	Un-archaeologically speaking: the use, abuse and misuse of archaeology in popular culture.	The Digging Stick. April 2009. 26(1): 11-13: Johannesburg: The South African Archaeological Society.
Nel, J. 2011.	'Gods, Graves and Scholars' returning Mapungubwe human remains to their resting place.' In: Mapungubwe Remembered.	University of Pretoria commemorative publication: Johannesburg: Chris van Rensburg Publishers.
Nel, J. 2012	HIAs for EAPs.	. Paper presented at IAIA annual conference: Somerset West.
Nel, J. 2013.	The Matrix: A proposed method to evaluate significance of, and change to, heritage resources.	Paper presented at the 2013 ASAPA Biennial conference: Gaborone, Botswana.
Nel, J. 2013	HRM and EMS: Uncomfortable fit or separate process.	Paper presented at the 2013 ASAPA Biennial conference: Gaborone, Botswana.

8 PROJECT EXPERIENCE

Archaeological and Heritage Impact Assessments	80+

Burial grounds and graves consultation and relocation processes	20
Heritage mitigation projects	10+
Research reports and reviews	10+
Management plans	2

9 REFEREES

A list of referees can be provided on request.

APPENDIX B: LITERATURE REVIEW

LITERATURE REVIEW FOR THE BAT SOUTH AFRICA PHOTOVOLTAIC PROJECT, HEIDELBERG, GAUTENG

Compiled by

Johan Nel

Manager: Conservation Services, The Heritage Foundation

February 2017

7 INTRODUCTION AND METHODOLOGY

This literature review consulted primary and secondary source material to develop the cultural landscape baseline profile for the BAT South Africa Notification of Intent to Develop.

Primary source material included historical aerial photographs and records of sites identified by other archaeologists in previous heritage studies. Secondary source material included published journal articles and other reworked sources. Sources that were cited are marked with asterisks in the reference list.

8 GEOLOGY AND SOILS

The study area is underlain by two lithostratigraphic units, namely the Johannesburg and Turfontein Subgroups of the Central Rand Group of the Witwatersrand Supergroup (see Figure 10). The Vryheid Formation of the Ecca Group of the Karoo Supergroup underlies an area outside the eastern boundary of the study area, and will not be discussed further[3].

The sedimentation processes that created the Witwatersrand Supergroup are generally considered to date between 2300 Ma and 2800 Ma. A maximum age for the onset of sedimentation has been dated to 3074 ± 6 Ma, based on the age of volcanic rock of the Dominion Group. Two terminal dates have been postulated.

[3] (Council for Geoscience, 2017)

Using Mooihoek Granite some have argued that sedimentation ceased around 2824 ± 6 Ma[4]. When the onset of the Ventersdorp Supergroup volcanism is considered, terminal sedimation is dated at 2714 Ma[5]. Sedimentation of the Central Rand Group is largely due to alluvial braid-plain and lesser alluvial fan conditions, i.e. river-based sedimentation, and marine influence is relatively minor[6].

The Johannesburg Subgroup primarily consists of quartzites that were deposited in a fluvial braid-plain environment. A single volcanic unit of limited extent is found in this Subgroup. The Booysens Formation, a shale unit occurs in basin-wide extent. Incised valleys developed in certain areas that led to the development of thin gravel lags. These lags are generally characterised by single pebble layers and carbonaceous material, referred to as kerogen or bitumen[7]. The Turfontein Subgroup is the final sedimentation phase of the Witwatersrand Basin, with several developed conglomerate units[8].

The Witwatersrand Supergroup including the associated Johannesburg and Turffontein Subgroups are considered to be insignificant in terms of palaeontology. Although the bitumen / kerogen referred to above may be derived from microbial material, it probably derives from inorganic radioactive precipitate[9].

[4] (McCarthy, 2006, p. 160)
[5] (McCarthy, 2006, p. 161)
[6] (McCarthy, 2006, p. 160)
[7] (McCarthy, 2006, p. 159)
[8] (McCarthy, 2006, p. 161)
[9] (*SAHRIS*, no date)

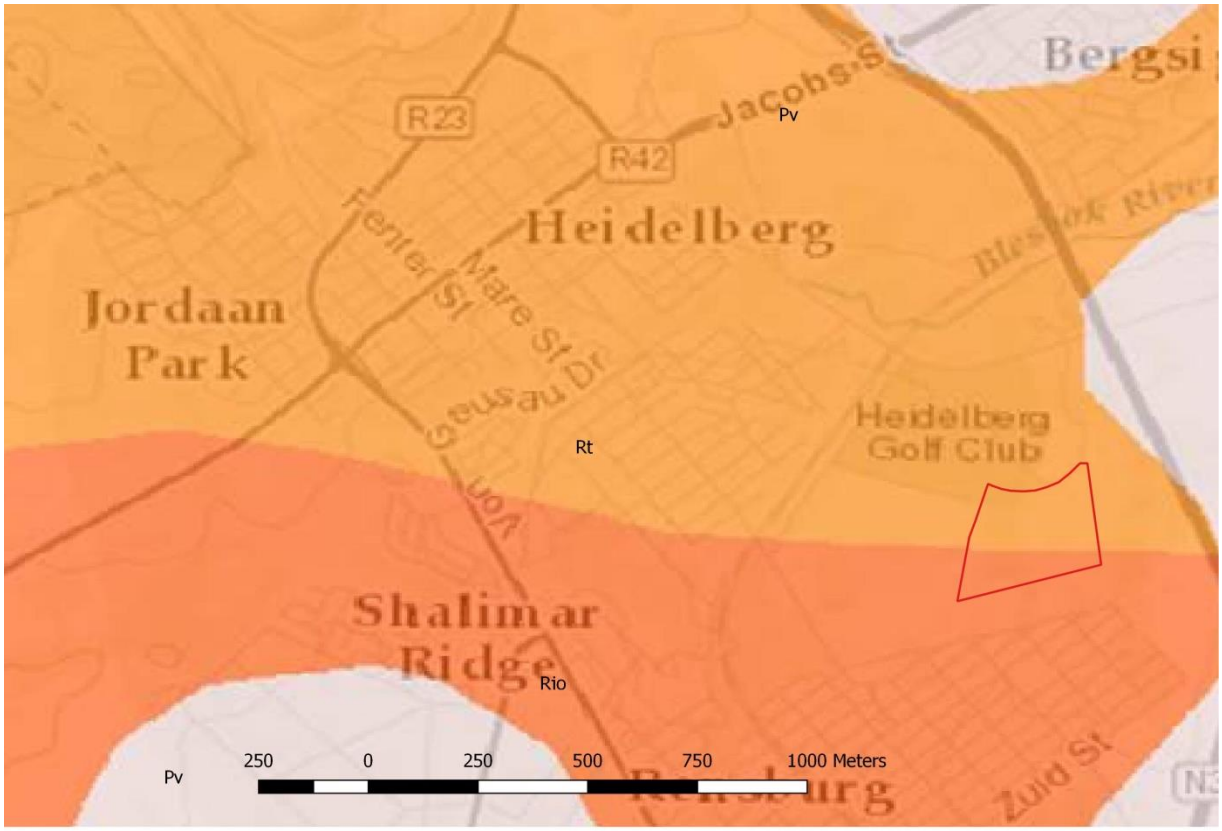

Figure 10 Local underlying geology

The soils and vegetation of the study area are characterised by Soweto Highland Grassland (Gm8) and Andasite Mountain Bushveld (SVcb11)[10]. The former comprises the largest surface area in the study area, whilst the latter is restricted to the southern boundary.

The western parts of the Soweto Highland Grassland is influenced by the Witwatersrand Supergroup rocks on which deep reddish soils on flat plains occur, typically associated with land types Ea, Ba and Bd[11]. The Andasite Mountain Bushveld soils resulted from weathered dark shales, micaceous sandstone / siltstone, coal seams, andesite and conglomerate rocks. This weathering created

[10] (Mucina and Rutherford, 2006)

[11] (Mucina *et al* 2006, p.397)

shallow, rocky and clayey soils mainly associated with the Mispah and Glenrosa soil forms. Land types within this Bushveld are mainly Ib and Fb, with some Ba and Bb types found[12].

9 CULTURAL HISTORY

The cultural history of South Africa can broadly be divided into four generic periods, i.e. the Stone Age (c. 2 Ma to recent), the Iron Age or Farming Community period (c. 200 to 1840 CE), historic (c. mid-17th Century to early 20th Century) and contemporary (20th and 21st Centuries). Each broad, generic period is further divided into more specific periods, the cultural history of which are often spatially localised.

The Stone Age is divided into the Early, Middle and Later Stone Ages (respectively ESA, MSA and LSA). In a regional context each is represented by sites within 150 km of the study area, most notably in the Sterkfontein area[13]. Table 4 provides a brief summary of the Stone Age relevant to the study area.

Table 4 – Regional Stone Age sequence within 150 km of study area (adapted from Lombard et al. 2012).

Stone Age	Description	Sites within 150 km of study area
Later Stone Age		
Ceramic final LSA **< 2000**	Contemporaneous with, and broadly similar to, final LSA, but includes ceramics, economy may be associated with hunter-gatherers or herders, grindstones common, ground stone artefacts, stone bowls and boat-shaped grinding grooves may	Fort Troje (500 ± 80 bp) (~100 km N)

[12] (Rutherford *et al* 2006, p. 397)
[13] (Lombard *et al*,. 2012: 128 - 140)

Stone Age	Description	Sites within 150 km of study area
	occur, grit- or grass-tempered pottery, metal objects, glass beads and glass artefacts occur.	
Final LSA **~100 to 4 Ka**	Macro- and microlithic assemblages, worked bone common, OES common, ochre common, iron objects rare, no pottery.	Cave James (3870 ± 50 bp) (`100 km N) Hope Hill Shelter (4400 ± 100 bp)
Wilton **~4 Ka to 8 Ka**	Fully developed microlithic with numerour formal tools, OES and ochre common, bone, shell and wooden artefacts occur	Cave James (6130 ± 110 bp) (~100 km N) Jubilee Shelter (310 150 bp) (~100 km N)
Oakhurst **~7 Ka to ~12 Ka**	Flake-based industry, wide range of polished bone tools, few or no microliths	Jubilee Shelter (8500 ± 240 bp) ~100 km N) Kruger Cave (5400 ± 160 bp to 10 430 ± 1450 bp)
Early LSA **~18 to 40 Ka**	Unstandardized often microlithic pieces including bipolar technique	Cave James (>29 000 bp) (~100 km N)
Middle Stone Age		
Early MSA **~130 to ~300 Ka**	Discoidal and Levallois flake technologies, blades from volumetric cores and generalised toolkit	Sterkfontein (210-290 Ka) (150 km N)
Earlier Stone Age		
Acheulean **~300 Ka to ~1.5 Ma**	Bifacially worked handaxes and cleavers, large flakes >10 cm, some flakes with retouch at times classified as scrapers, generally found in disturbed	Maropeng (1.7 to 1.3 Ma) (150 km N)

Stone Age	Description	Sites within 150 km of study area
	open-air locations	Sterkfontein Cave (1.1 to 1.7 Ma) (150 km N) Swartkrans (0.6 ti 1.0 Ma) (150 km N)
Oldowan **~1.5 to >2 Ma**	Cobble, core or flake tools with little retouch and no flaking, hammerstones, manuports, cores, polished bone fragments / tools	Sterkfontein Cave (1.32 ± 0.08 Ma) (150 km N) Swartkrans (1.5 to 1.8 Ma) 150 km N)

Farming Communities (also referred to as the Iron Age) entered South Africa around 200 CE. Within a regional context Farming Communities are divided into Early and Late (Early Iron [EIA} and Later Iron Age [LIA]). No evidence for the EFC period has yet been found on the Highveld. The closest EFC site is located near Broederstroom, around 100 km north-north-west of the study area[14]. The LFC period in the region is largely associated with *Uitkomst* pottery and Klipriviersberg stonewalled sites that date from the 17th to the 19th Centuries. *Uitkomst* pottery is a merger of earlier *Ntsuanatsatsi* and *Olifantspoort* styles, whilst the walling is a variant of the Type N walling that characterises the LFC south of the Vaal River[15]. These sites are associated with the Fokeng, an early Nguni-speaking group that became "Sotho-ized" sometime during the 17h Century[16]. The current premise is that the Fokeng was the main Bantu-speaking group present in the general region until the 1820s when Mzilikazi entered the area during the *Mfecane*[17].

[14] (Huffman, 2007, p. 81)
[15] (Huffman, 2007, pp. 431, 433)
[16] (Huffman, 2007, p. 436)
[17] (Huffman, 2007, p. 433)

Stonewalled sites in the region are associated with the Central Cattle Pattern (CPP), which is a tangible expression of the people's ideology in areas with insufficient trees to use in constructing walls, huts, etc, and most stonewalled settlements are therefore found near rocky outcrops that were used as the source material for the walls. Type-N walling typically consists of some cattle kraals in the centre, linked by other walls and surrounded by a perimeter wall that may incorporate small stock enclosures or pens[18].

A few LFC sites have been recorded as findings of Heritage Impact assessments conducted previously. These are listed in

Figure 11 Type-N / Klipriviersberg stonewalled sites in Suikerbosrand Nature Reserve 15 km west of study area

[18] (Huffman, 2007, p. 33)

Table 5 Identified LFC sites in general region of study area

Site names	Distance from study area	Reference	SAHRIS reference
LIA 001 to 007	~10 km SSW	(Pistorius, 2003)	Archive reference 9/2/226/0006
Site 1 to 19	~5 km W	(Coetzee, 2003)	MapID 00585

Heidelberg was established as trading post by Heinrich Julius Ueckerman in 1862 who named the post after his German hometown. The District of Heidelberg was formed out of a portion of the eastern part of the District of Potchefstroom in March 1866. The magistrate (*landdrost*) was stationed in the village of Heidelberg that was laid out in 1865 to serve the Dutch Reformed Church around the initial trading post[19]. During the First Anglo Boer War or War of Independence from 1880 to 1883 the capital of the *Zuid-Afrikaansche Republiek* (ZAR) was also moved from Pretoria to Heidelberg[20]. The first gold in the now famous Witwatersrand Gold Reef was discovered in quartz-pebble conglomerates by George Harrison on the farm Langlaagte in March 1886. Gold mining started in Heidelberg soon after, but was not viable and therefore short-lived[21].

Table 6 Identified historical heritage in general region of study area

Site names	Distance from study area	Reference	SAHRIS reference
Burial grounds - site 1, 2, 6, 8	~8 km W	(Coetzee, 2008)	MapID 02367

[19] (Theal, 1919a: 449)
[20] (Theal, 1919b: 116)
[21] (McCarthy, 2006, p. 155)

Site names	Distance from study area	Reference	SAHRIS reference
Structures – site 3-5, 7	~8 km W	(Coetzee, 2008)	MapID 02367

10 SOURCES CONSULTED

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