



**NOTIFICATION OF INTENT TO  
DEVELOP AND HERITAGE STATEMENT  
FOR THE LONDON ROAD PETROL  
STATION**

**ERM (SOUTH AFRICA) (PTY) LTD**

**FEBRUARY 2014**

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Digby Wells & Associates (Pty) Ltd. Co. Reg. No. 1999/05985/07. Fern Isle, Section 10, 359 Pretoria Ave Randburg Private Bag X10046, Randburg, 2125, South Africa

Tel: +27 11 789 9495, Fax: +27 11 789 9498, [info@digbywells.com](mailto:info@digbywells.com), [www.digbywells.com](http://www.digbywells.com)

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Directors: A Sing, AR Wilke, LF Koeslag, PD Tanner (British)\*, AJ Reynolds (Chairman) (British)\*, J Leaver\*, GE Trusler (C.E.O)

\*Non-Executive

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This document has been prepared by **Digby Wells Environmental**.

**Report Title:** Notification of Intent to Develop and Heritage Statement for the London Road Petrol Station

**Project Number:** ERM2666

Name	Responsibility	Signature	Date
Natasha Higgitt <i>Junior heritage consultant: archaeologist</i>	Specialist and report writer		11 February 2014
Johan Nel <i>HRM Unit Manager</i>	Specialist and 1 <sup>st</sup> Review		11 February 2014

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## EXECUTIVE SUMMARY

### Introduction

Digby Wells Environmental (Digby Wells) has been appointed by ERM Southern Africa (Pty) Ltd (ERM) for the compilation and submission of a Notification of Intent to Develop (NID) and Heritage Statement Report (HSR) for the development of a new petrol station on London Road, Alexandria, Johannesburg in terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) Section 38(1).

### Project Location

<b>Name of property</b>	Lombardy 36 IR
<b>Erf or farm numbers</b>	Remainder of Portion 16
<b>Coordinates of approximate centre of project area</b>	-26.105470/28.124961
<b>1: 50 000 Topographical map number</b>	2628AA Johannesburg
<b>Nearest Towns</b>	Alexandra
<b>Magisterial district</b>	Randburg
<b>District municipality</b>	City of Johannesburg
<b>Local municipality</b>	City of Johannesburg Metropolitan Municipality
<b>Maximum extent of proposed development</b>	3 ha
<b>Current use</b>	SANRAL Storage area
<b>Predominant land use/s of surrounding properties</b>	Residential and road network )N3 highway and the London Road bridge

### Registered owner of the property

ITEM	CONTACT DETAILS
<b>Title Deed Owner</b>	South African National Department of Transport (SANRAL)
<b>Contact person</b>	Numo Gomes
<b>Tel no</b>	012 426 6204

### Project/Development Details

The proposed project includes the construction of an Engen filling station at the south western quadrant of the N3/London Road interchange, and the associated widening of the London Road Bridge including the construction of new access roads.

The project involves the establishment of facilities for fuel storage and dispensing diesel and unleaded petrol (ULP), convenience shopping, ablutions, a truck-stop and a restaurant. The following infrastructure will be constructed:

- Steel Composite underground storage tanks (USTs) for the storage of petroleum products with a maximum combined capacity of 200,000 litres (diesel and ULP);
- Forecourt with pump islands and overhead canopy plus single storey building housing offices, a convenience store, a bakery, restaurant/ take away including the kitchen/ preparation area, storage areas, ablution facilities including truckers restroom (with toilets/showers), and ATMs covering an area of approximately 700m<sup>2</sup>; and
- Approximately 30 parking bays for motorists and between 6-10 parking bays for trucks.
- The site will be constructed to meet Engen's corporate standards and the South African National Standards relevant to fuel storage.

### NHRA Section 38 Triggers

The following activities may require a HIA in terms of Section 38 of the NHRA.

		<b>NHRA Section 38 (1) Activities / Triggers</b>	<b>Summary description (E.g. 500 m conveyor belt, open cast pit, etc.)</b>
<input checked="" type="checkbox"/>	a	Any linear development or barrier >300 m	New access roads such as slipways off the N3 highway
<input checked="" type="checkbox"/>	b	Any bridge or similar structure >50 m	Widening of the London Road bridge
<input checked="" type="checkbox"/>	c	Any development or activity that will change the character of a site:	
<input checked="" type="checkbox"/>	i	≥5 000m <sup>2</sup> in extent	The project area is approximately 35 000 m <sup>2</sup> and will be cleared of infrastructure and topsoil
<input type="checkbox"/>	ii	Involving ≥3 existing erven/ subdivisions	
<input type="checkbox"/>	iii	Involving ≥3 or more erven/ divisions consolidated within past 5 years.	
<input type="checkbox"/>	d	Rezoning of a site ≥10 000m <sup>2</sup> in extent.	Rezoning includes from Agricultural to Public

		<b>NHRA Section 38 (1) Activities / Triggers</b>	<b>Summary description (E.g. 500 m conveyor belt, open cast pit, etc.)</b>
			Road including a filling station, truck stop and related facilities
<input checked="" type="checkbox"/>	8	Other triggers, e.g.: in terms of other legislation, (i.e.: National Environment Management Act, etc.)	NEMA Basic Assessment Report

**Activities**

The following activities will take place during the lifespan of the proposed project.

Activity	Description	Interpretation	Development as defined in NHRA	Trigger for HIA	Source of risk
GN. R. 544 LN 1 Activity 13	The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous goods, where such storage occurs in containers with a combined capacity of 80 but not exceed 500 cubic meters	The construction of the London Road Petrol Station	This activity constitutes development as defined in terms of NHRA Section 2(viii) (a) construction, alteration, demolition, removal or change of use of a place or a structure at a place;	NHRA Section 38(8)	There are no risks from, as no significant heritage resources were identified within the project area.
Identified Project Activity (not Listed)	Widening of a bridge	The widening of the London Road Bridge over the N3 highway	This activity constitutes development as defined in terms of NHRA Section 2(viii) (a) construction, alteration, demolition, removal or change of use of a place or a structure at a place;	NHRA Section 38 (1) b	There are no risks from the widening of the bridge, as no significant heritage resources were identified within the project area.
Identified Project Activity (not Listed)	Construction of access roads	Construction of access roads for the London Road Petrol Station	This activity constitutes development as defined in terms of NHRA Section 2(viii) (a) construction, alteration, demolition, removal or change of use of a place or a structure at a place;	NHRA 38 (1) a	There are no risks from the construction of the access roads, as no significant heritage resources were identified within the project area.

### **Additional Impact Assessment Process**

The following impact assessment processes are currently being undertaken for the proposed project.

Legislation, i.e. NEMA, MPRDA, etc.	NEMA
Consenting Authority that has/will receive information	GDARD
Reference Number	GDARD GAUT 002/13-14/E0/177
Present phase of process at Authority, e.g. Draft Scoping Report	Draft Basic Assessment Report

### **Identified/known heritage resources and potential impacts**

The following categories of heritage resources as defined in Section 3 of the NHRA are known to occur within the proposed project area.

<input type="checkbox"/>	<b>3(2)(a)</b>	<b>Places, buildings, structures and equipment of cultural significance</b>
		<i>Description of resource:</i> None
		<i>Potential impact:</i> None
<input type="checkbox"/>	<b>3(2)(b)</b>	<b>Places to which oral traditions are attached or which are associated with living heritage</b>
		<i>Description of resource:</i> None
		<i>Potential impact:</i> None
<input type="checkbox"/>	<b>3(2)(c)</b>	<b>Historical settlements and townscapes</b>
		<i>Description of resource:</i> None
		<i>Potential impact:</i> None
<input type="checkbox"/>	<b>3(2)(d)</b>	<b>Landscapes and natural features of cultural significance</b>
		<i>Description of resource:</i> None
		<i>Potential impact:</i> None
<input type="checkbox"/>	<b>3(2)(e)</b>	<b>Geological resources of scientific or cultural importance</b>
		<i>Description of resource:</i> None
		<i>Potential impact:</i> None

<input type="checkbox"/>	3(2)(f)	<b>Archaeology and/or palaeontology (Including archaeological sites and material, fossils, rock art, battlefields &amp; wrecks)</b>
		<i>Description of resource:</i> None
		<i>Potential impact:</i> None
<input type="checkbox"/>	3(2)(g)	<b>Graves and burial grounds (e.g.: ancestral graves, graves of victims of conflict, historical graves &amp; cemeteries)</b>
		<i>Description of resource:</i> None
		<i>Potential impact:</i> None
<input type="checkbox"/>	3(2)(a)	<b>Other human remains</b>
		<i>Description of resource:</i> None
		<i>Potential impact:</i> None
<input type="checkbox"/>	3(2)(h)	<b>Sites of significance relating to the history of slavery in South Africa</b>
		<i>Description of resource:</i> None
		<i>Potential impact:</i> None
<input type="checkbox"/>	3(2)(i)	<b>Movable objects</b>
		<i>Description of resource:</i> None
		<i>Potential impact:</i> None

### **Recommendations**

<b>Is a Heritage Impact Assessment required?</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<p><b>If NO, provide motivation:</b></p> <p>The project area is located within a recent, extensively industrialised, commercial and urban setting. Major developments include the residential areas and warehousing in the immediate surrounding landscape dating from 2007. In addition, the proposed development will be constructed in an existing industrial footprint that had been constructed and used as a SANRAL laydown yard.</p> <p>The proposed development will therefore not alter any significant landscape or threaten any tangible heritage resources.</p>		



## GLOSSARY OF ABBREVIATIONS AND TERMS

<b>ASAPA</b>	Association of Southern African Professional Archaeologists
<b>BAR</b>	Basic Assessment Report
<b>GFIP</b>	Gauteng Freeway Improvement Project
<b>GN</b>	Government Notice
<b>HIA</b>	Heritage Impact Assessment
<b>HSR</b>	Heritage Statement Report
<b>HSS</b>	Heritage Screening Survey
<b>NEMA</b>	National Environmental Management Act, 1998 (Act No. 107 of 1998)
<b>NHRA</b>	National Heritage Resources Management Act, 1999 (Act No. 25 of 1999)
<b>NID</b>	Notification of Intent to Develop
<b>PHRAG</b>	Provincial Heritage Resources Authority - Gauteng
<b>RDP</b>	Reconstruction and Development Programme
<b>SAHRA</b>	South African Heritage Resources Agency
<b>SAHRIS</b>	South African Heritage Resources Information Service
<b>SANRAL</b>	South African National Roads Agency Limited

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## 1 INTRODUCTION

Digby Wells Environmental (Digby Wells) has been appointed by ERM Southern Africa (Pty) Ltd (ERM) for the compilation and submission of a Notification of Intent to Develop (NID) and Heritage Statement Report (HSR) for the development of a new petrol station on London Road, Alexandria, Johannesburg. A Basic Assessment Report (BAR) is required in terms the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and the National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA). See Table 1-1 for applicable reference numbers.

**Table 1-1: Relevant reference numbers assigned to the London road project**

<b>GDARD</b>	002/13 14E0/177
<b>DEA</b>	N/A
<b>SAHRIS Case ID</b>	4740

## 2 BACKGROUND INFORMATION OF PROJECT

### 2.1 Project Details

The proposed project includes both listed and unlisted activities that require authorisation for the construction of an Engen filling station, widening of the London Road Bridge and construction of new access roads. The project will be located in the south-western quadrant of the N3/London Road interchange.

The project is subject to a Basic Assessment in terms of GN. R 544 Listing Notice 1, Activity 13 that describes the project as 'the construction of facilities or infrastructure for the storage, or for the storage and handling, of dangerous goods, where such storage occurs in containers with a combined capacity of 80 but not exceed 500 cubic meters'. This will include the following infrastructure:

- Steel composite underground storage tanks for the storage of petroleum products with a maximum combined capacity of 200,000 litres (diesel and unleaded petrol);
- Forecourt with pump islands and overhead canopy including a single storey building housing offices, a convenience store, a bakery, restaurant/ take away including the kitchen/ preparation area, storage areas, ablution facilities including truckers restroom(with toilets/showers), and ATMs covering an area of approximately 700m<sup>2</sup>; and
- Approximately 30 parking bays for motorists and between 6-10 parking bays for trucks.

The sites will be constructed to meet Engen's corporate standards and the South African National Standards relevant to fuel storage.

In addition to the above listed activity, the project will also include the widening of the London Road Bridge and construction of new access roads that do not require environmental authorisation. These activities are however defined as development in terms of the NHRA and are therefore subject to Section 38 of this Act.

## 2.2 Description of Property and/or Affected Environment

The proposed London Road petrol station neighbours Alexandra township and the Linbro Office Park. Detailed location data is provided in Table 2-1. The total project area is approximately 3 ha in size. The project area is located within a recent, extensively industrialised, commercial and urban setting. Major developments include the residential areas and warehousing in the immediate surrounding landscape dating from 2007. In addition, the proposed development will be constructed in an existing industrial footprint that had been constructed and used as a South African National Roads Agency Limited (SANRAL) laydown yard.

**Table 2-1: Location data for the London Road Petrol Station Project**

<b>Province</b>	Gauteng Province
<b>Magisterial district</b>	Randburg Magisterial District
<b>District municipality</b>	City of Johannesburg District Municipality
<b>Local municipality</b>	City of Johannesburg Metropolitan Municipality
<b>Town</b>	Johannesburg
<b>Farm name/s and number/s:</b>	Lombardy 36 IR Remainder of Portion 16
<b>Map reference</b>	2628AA Johannesburg
<b>Co-ordinates for the centre of the project area</b>	Latitude: -26.105470 Longitude: 28.124961

## 2.3 Relevant Contact Details

The contact details of the Client, Consultant and Landowners are provided in Table 2-2, Table 2-3 and Table 2-4 below.

### 2.3.1 Client Details

**Table 2-2: Contact details of the client**

ITEM	COMPANY CONTACT DETAILS
Company	ERM Southern Africa (Pty) Ltd
Contact person	Kate de Courcy Hamilton
Tel no	011 798 4300
Cell no	072 850 0801
E-mail address	Kate.hamilton@erm.com

### 2.3.2 Consultant

Table 2-3: Contact details of the consultant

ITEM	CONSULTANT CONTACT DETAILS
Name of company:	Digby Wells Environmental
Contact person:	Johan Nel
Tel no:	(011) 789 9495
Fax no:	(011) 789 9498
Cellular no:	072 288 5496
E-mail address:	<a href="mailto:johan.nel@digbywells.com">johan.nel@digbywells.com</a>
Postal address:	Private Bag X10046, Randburg, 2125

### 2.3.3 Landowners

Table 2-4: Landowner information

ITEM	CONTACT DETAILS
Title Deed Owner	SANRAL
Contact person	Numo Gomes
Tel no	012 426 6204

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## 2.4 Legislative Framework

### 2.4.1 National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA)

The NEMA stipulates under section 2 (4)(a) that sustainable development requires the consideration of all relevant factors including (iii) the disturbance of landscapes and sites that constitute the nation's cultural heritage must be avoided, or where it cannot be altogether avoided, is minimised and remedied. Under Sections 23 (2) b it states that "identify, predict and evaluate the actual and potential impact on the...cultural heritage... the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts, maximizing benefits and promoting compliance with the principles of environmental management set out in section 2". Sections 24 (1) c and 24 (7) b state "the potential impact on...the cultural heritage of activities that require authorisation or permission by law and which may significantly affect the environment, must be considered investigated and assessed prior to their implementation and reported to the organ of state charged by law with authorizing permitting, or otherwise allowing the implementation of an activity."

With regards to NEMA Activities that trigger a Basic Assessment Report, the relevant activity for this project is GNR 544 (LN1) Activity 13. It states that "the construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500 cubic metres". In this case of this project, a petrol station is to be developed.

### 2.4.2 National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA)

The Heritage Study was completed in terms of Section 38(8) of the NHRA where impacts on potential heritage resources must be assessed as part of the EIA required under Sections 23 (2) b; 24 (1) c and 24 (7) b of the NEMA.

A development is defined in the NHRA as the "physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of a heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including- (a) construction, alteration, demolition, removal or change of use of a place or a structure at a place". With reference to the listed NEMA Activity (LN1 -13) this defines the construction of a petrol station as a development that will change the "appearance or physical nature of a place".

The unlisted (not NEMA activities) project activities associated with the proposed project include the widening of a bridge and the construction of access roads. This does not trigger the NEMA; however they trigger Section 38 of the NHRA. The activity concerning the construction of access roads triggers Section 38(1) a, and it states that any construction of a road exceeding 300 m will require a Heritage Study. Section 38(1) b is triggered by the widening of the London Road Bridge the section states that any construction of a bridge exceeding 50 m in length requires a heritage study to be completed.

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The HRM approach developed and implemented by Digby Wells is founded on Section 38(1) and 38(2) of the NHRA. These sections of the NHRA require that HRAs be notified as early as possible of any developments that may exceed certain minimum thresholds. The heritage specialist is required to provide the Provincial Heritage Resources Authority – Gauteng (PHRAG) with sufficient information regarding the proposed development in order for the PHRAG to determine whether a comprehensive HIA is required. The PHRAG should respond within 14 days whether or not a HIA is required, and if required should state which specialist studies should be included.

## **2.5 Scope of Work**

In order to comply with the legislated requirements, a Heritage Statement was compiled to inform the Notice of Intent to Develop (NID) required under Section 38 of the NHRA. The Heritage Statement includes appropriate information regarding existing and potential heritage resources that may occur in the project location. The nature of the development was also described in sufficient detail to enable the South African Heritage Resources Agency (SAHRA) and PHRA-G to determine whether a Heritage Impact Assessment (HIA) is required.

## **3 EXPERTISE OF THE SPECIALISTS**

Natasha Higgitt has completed a BA Honours degree in Archaeology at the University of Pretoria. She currently holds the position of Assistant Heritage Consultant at Digby Wells, where she has worked for over two years with experience in Heritage Impact Assessments (HIA's) in Limpopo and Mpumalanga. Ms Higgitt is a member of the Association of Southern African Professional Archaeologists (ASAPA) and has Cultural Resources Management Accreditation Status. The curriculum vitae of the specialists are presented in Appendix A.

The NID was reviewed by Johan Nel who completed a Bachelor of Arts (BA) in Archaeology and Anthropology and a BA Honours degree in Archaeology at the University of Pretoria. He has been in employ with Digby Wells since 2010 and currently holds the position of HRM: Unit Manager

## **4 METHODOLOGY**

In order to compile the Heritage Statement, a number of tasks were required to be completed. This study employed qualitative text-based research methodologies to aid in assessing the cultural landscape within which the London Road Petrol Station is situated. These methodologies are discussed separately below.

### **4.1 Literature review**

The baseline characterisation of the proposed project area was informed through a review of relevant and available publications. Sources included peer reviewed academic publications, unpublished reports, relevant heritage assessments databases and authoritative websites.



These are listed in the References section below. It should be noted that given the setting of the proposed project research primarily focussed on the social history of the area.

## 4.2 Historical layering

A review of historical cartographic information was undertaken to conduct historical layering. Historical layering is a process whereby diverse cartographic sources from various time periods are layered chronologically to:

- Enable the virtual representation of changes in the land use over time;
- Provide relative dates based on the presence or absence of features; and
- Identify potential locations where heritage resources may exist.

Historical aerial imagery was reviewed, dating from 1954 to 1991.

The cartographic sources used in this study are listed in Table 4-1 below.

**Table 4-1: Historical aerial photographs**

Aerial photographs						
Job no.	Flight plan	Photo no.	Map ref.	Area	Date	Reference
314	003	42591	2627 2628	Johannesburg/Vereeniging	1952	1952/314
498/190	003	06081	2627 2628	Johannesburg	1984	1984/498/ 190
952	002	04025	2627 2628 2629	Johannesburg	1991	1991/952

The results from the historical layering contributed to the characterisation of the cultural landscape and are discussed under Sections 5 and 7 below.

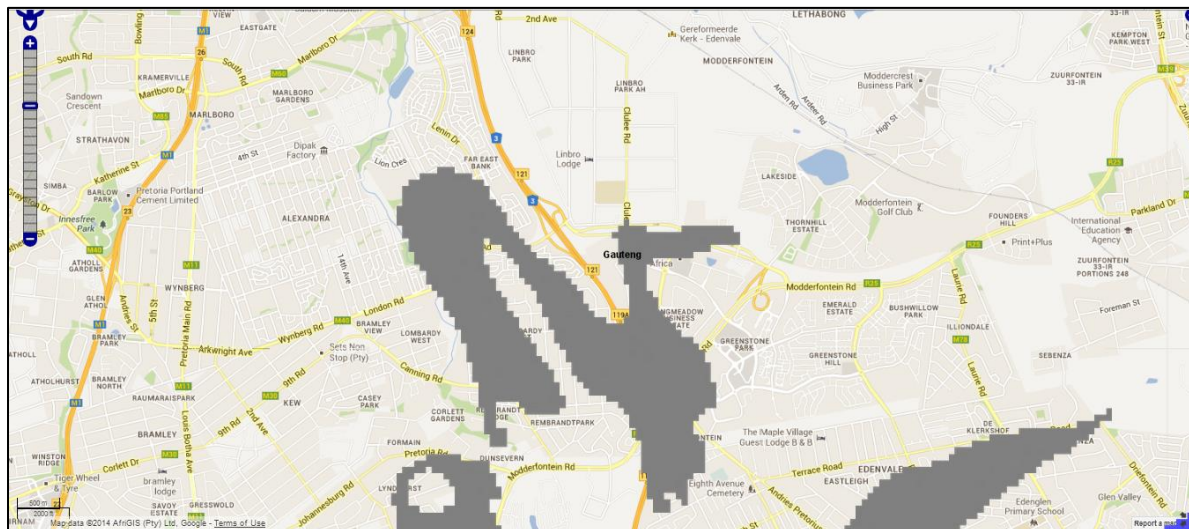
## 4.3 Heritage Screening Survey

A Heritage Screening Survey (HSS) was conducted for the project on 5<sup>th</sup> February 2014 on the directly affected properties in the project area. It was conducted through a vehicular survey and the landscape of the project area was recorded and photographed. The aim of the HSS was to record the current state of the environment. The results of the HSS are discussed under sections 5 and 7 below.

## 5 STATE OF RECEIVING ENVIRONMENT/CULTURAL LANDSCAPE

There is evidence of earlier occupation in the general region from at least the Middle Stone Age (MSA) (Mason, 2012). However, given the current setting of the project the baseline described in this section focussed on the social history of the project. For this reason also, detailed palaeontological desktop research was not completed. The SAHRIS PalaeoSensitivity map was however consulted. This map, copied in Figure 5-1, indicated the

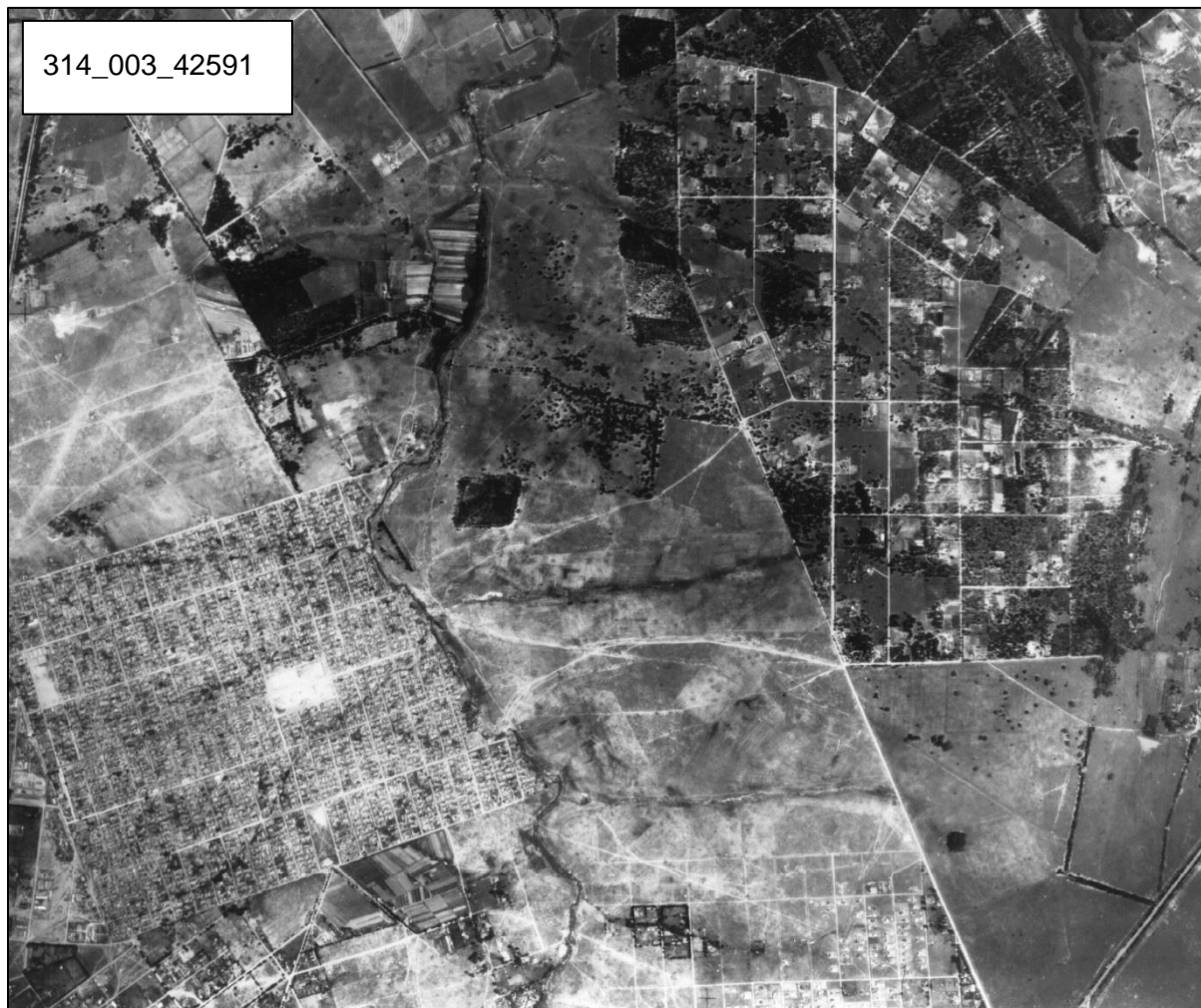
palaeontological status of the proposed project area as 'unknown' (white background). The surrounding area is indicated as 'insignificant/zero' potential (grey background).



**Figure 5-1: PalaeoSensitivity map of the London Road Petrol Station Project area (Council for GeoScience, 2014)**

Alexandra was established in 1904 by Mr Papenfus as a white residential township and named after his wife (Brodie, 2008: 294). The intent was to create a white residential township. However, the area proved to be too far from the Johannesburg CBD: he therefore sold land to prospective black buyers (Brodie, 2008: 294). In 1912, the land was proclaimed a Native Township, before the promulgation of the 1913 Land Act. As a result it was one of the few places where black people could own land (Brodie, 2008).

Alexandra's population increased significantly to an estimated 50 000 in 1940 (Anonymous, 2014). Aerial photographs from 1952 show a well-established township with open fields to the east and north, illustrated in in Figure 5-2.



**Figure 5-2: Aerial photograph of Alex in 1952 (1952/314)**

There were allegations by Deneys Reitz (then Minister of Native Affairs) that Alexandra was becoming a criminal area (Brodie, 2008: 295). This led to forced removals from the late 1950s to the early 1970s to Soweto and other black townships (Brodie, 2008: 295). An urban renewal project was implemented under order of Minister Koornhof (Minister of Co-operation and Development) in the 1980's they sought to upgrade and expand the township (Brodie, 2008). The results of this project can be seen in the 1984 photograph in Figure 5-3, for example, the establishment of Lombardy East and the N3 highway, south and east of the project area. Also evident is the demolition of sections in Alexandra, replaced by new infrastructure (See Figure 5-3).



**Figure 5-3: Aerial view of Alex and surrounds in 1984 (1984/498/190)**

The urban renewal project continued into the 1990s. By 1991, Alexandra had expanded across the Jukskei river towards the N3 highway (See Figure 5-4). This project was suspended due to violence in the run-up to the 1994 democratic elections (Brodie, 2008: 302).



**Figure 5-4: Aerial view of Alex in 1991 (1991/952)**

The All Africa Games took place in South Africa in 1999. An athlete village was built by the Johannesburg Metro Council from 1999 on the Far East Bank, approximately 300 m from the proposed project area (Anonymous, 1999). After this event, the 'village' was handed over to qualifying residents as part of a RDP initiative (Kunene, 2009).

Development continued to the extent that by 2010 most vacant land had been developed. During this time, the London Road/N3 off-ramp was used as a South African National Roads Agency Limited (SANRAL) laydown yard / storage facility for the Gauteng Freeway Improvement Project (GFIP) (See Figure 5-5 and Figure 5-6).



**Figure 5-5: Aerial view of London Road/N3 off-ramp in 2010 (Google Earth, 2014)**



**Figure 5-6: SANRAL Storage area (Higgitt, 2014)**

## **6 SOURCES OF RISK**

As per the identified listed activities and unlisted activities in the Executive Summary, there are no sources of risks toward heritage due to the construction of the petrol station, access roads and the widening of the London Road Bridge.

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## 7 DISCUSSION

The palaeontological potential of the project area is unknown, however based on the adjacent area it may be inferred that the area also has insignificant/zero value. In terms of human occupation evidence in the general region indicates occupation from at least the MSA (Mason, 2012).

However, the setting of the proposed project is such that the likelihood of any significant *in situ* palaeontological and archaeological resources occurring is negligible at best.

The proposed develop is situated within the historically important Alexandra township. As stated before, the present setting does not include any tangible resources that may be associated with the historical Alexandra landscape. Nor will the proposed development impact on a more intangible level such as sense of place.

All structures currently in place are relatively recent and can be associated with the intensive urban sprawl, commercialisation and industrialisation of the wider project area evident from the 1980s to the present. This has significantly altered both the natural and cultural environment. The construction of the N3 highway in the 1980's and the All Africa Games 'village' built in 1999, would have destroyed any archaeological sites and surface palaeontology that may have existed in the area where the proposed development will be situated. Neither will any indirect or cumulative impacts – such as increased traffic – have any significance.

## 8 CONCLUSION

ERM appointed Digby Wells to complete a NID and HSR for a proposed new Engen filling station that will be situated on London Road, off the N3 highway. The NID and HSR will form part of a BAR required in terms of NEMA and GN. R 544 Activity 13.

The NID and HSR were informed by a review of academic and popular sources such as journal articles, web-based articles and databases. Findings indicated that the proposed project area is situated in a setting with no heritage value. In addition, it was found that the project area has been significantly altered since the 1980s to the extent that any tangible resources that may have existed would have been destroyed.

Digby Wells therefore recommends that the proposed project be exempted from a HIA, provided that in the unlikely event heritage resources are found during construction, SAHRA and the PRHAG are informed immediately.

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## 9 REFERENCES

- Anonymous. (1999, June 4). *Sports village an energy-efficiency model*. Retrieved February 6, 2014, from Engineering News: <http://www.engineeringnews.co.za/article/sports-village-an-energyefficiency-model-1999-06-04>
- Anonymous. (2014). *The History of Aleandra Township, Johannesburg, Gauteng*. Retrieved February 6, 2014, from Show Me South Africa: <http://showme.co.za/lifestyle/the-history-of-alexandra-township-johannesburg-gauteng/>
- Brodie, N. (2008). *The Joburg Book: A guide to the city's history, people and places*. Northlands: Pan Macmillian.
- Council for GeoScience. (2014). *PalaeoSensitivity Map*. Retrieved February 7, 2014, from The South African Heritage Resources Agency: <http://www.sahra.org.za/map/palaeo>
- Kunene, M. (2009). Can South Africa use the hosting of the 2010 FIFA World Cup to address issues of unemployment and poverty? University of the Witwatersrand: Unpublished Masters Thesis.
- Mason, R. J. (2012). A Built Stone Alignment associated with an LSA artefact assemblage on Mia Farm, Midrand, South Africa. *The South African Archaeological Bulletin*, 67(196), 214-220.



## **Appendix A: Curriculum Vitae of Specialist**



DIGBY WELLS  
ENVIRONMENTAL

## NATASHA HIGGITT

Ms Natasha Higgitt  
Assistant Heritage Consultant  
Social Department  
Digby Wells Environmental

### 1 EDUCATION

- University of Pretoria
- BA Degree (2008)
- Archaeology Honours (2010)
- Title of Dissertation- Pass the Salt: An Archaeological analysis of lithics and ceramics from Salt Pan Ledge, Soutpansberg, for evidence of salt working and interaction.

### 2 LANGUAGE SKILLS

- English - Excellent (read, write and speak)
- Afrikaans - Fair (read, write and speak)
- Italian – Poor (Speaking only)

### 3 EMPLOYMENT

- July 2011 to Present: Assistant Heritage Consultant at Digby Wells Environmental
- April 2011 to June 2011: Lab assistant at the Albany Museum Archaeology Department, Grahamstown, Eastern Cape
- April 2010 to March 2011: Intern at the Archaeology Department, Albany Museum, Grahamstown, Eastern Cape under the Department of Sports, Recreation, Arts and Culture, Eastern Cape Government, South Africa (DSRAC)

### 4 FIELD EXPERIENCE

- Human remains rescue excavation at St Francis Bay, Eastern Cape
- Human remains rescue excavation at Wolwefontein, Eastern Cape

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Digby Wells & Associates (Pty) Ltd. Co. Reg. No. 1999/05985/07. Fern Isle, Section 10, 359 Pretoria Ave Randburg Private Bag X10046, Randburg, 2125, South Africa

Tel: +27 11 789 9495, Fax: +27 11 789 9498, [info@digbywells.com](mailto:info@digbywells.com), [www.digbywells.com](http://www.digbywells.com)

Directors: A Sing\*, AR Wilke, LF Koeslag, PD Tanner (British)\*, AJ Reynolds (Chairman) (British)\*, J Leaver\*, GE Trusler (C.E.O)

\*Non-Executive

- Recorded two rock art sites at Blaauwbosch Private Game Reserve, Eastern Cape
- Attended a 2 week excavation/study tour in the Friuli Region in Italy, organised by the *Società Friulana di Archeologia*, sponsored by *Ente Friuli nel Mondo*, and excavated a 12th century medieval castle
- Attended a 2 week excavation in Limpopo, Waterpoort Archaeological Project organised by Xander Antonites (Yale PhD Candidate)
- A total of 5 University of Pretoria Archaeology field schools in Limpopo and Gauteng spanning over 4 years

## 5 PROJECT EXPERIENCE

- Heritage Statement for a Proposed Acetylene Gas Production Facility, located near Witkopdorp, Daleside, south of Johannesburg, Gauteng Province for Erm Southern Africa (Pty) Ltd (Digby Wells Environmental)
- Heritage Impact Assessment for the Platreef Platinum Project, Mokopane, Limpopo for Platreef Resources (Digby Wells Environmental)
- Heritage Statement for ATCOM and Tweefontein Dragline Relocation Project, near Witbank, Mpumalanga Province for Jones and Wagner Consulting Civil Engineers (Digby Wells Environmental)
- Heritage Statement Report for the Wilgespruit Bridge Upgrade, Pretoria, Gauteng Province for Iliso Consulting (Pty) Ltd (Digby Wells Environmental)
- Heritage Statement Report for the Kosmosdal sewer pipe bridge upgrade, Pretoria, Gauteng Province for Iliso Consulting (Pty) Ltd (Digby Wells Environmental)
- Phase 1 Heritage Impact Assessment for the Thabametsi Coal Mine, Lephalale, Limpopo for Exxaro Coal (Digby Wells Environmental)
- Heritage Statement for the Zandbaken Coal Mine Project, Zandbaken 585 IR, Sandbaken 363 IR and Bosmans Spruit 364 IS, Standerton, Mpumalanga for Xtrata Coal South Africa (Digby Wells Environmental)
- Phase 1 Heritage Impact Assessment for the Brakfontein Thermal Coal Mine, Mpumalanga for Universal Coal (Digby Wells Environmental)
- Development of a RAP for Aureus Mining for the New Liberty Gold Mine Project, Liberia (Digby Wells Environmental)
- Phase 1 Archaeological Impact Assessment for the MBET Pipeline, Steenbokpan, Limpopo (Digby Wells Environmental)
- Notice of Intent to Develop and Cultural Resources Pre-Assessment for Orlight SA (PTY) Ltd Solar PV Project. 2012. (Digby Wells Environmental)
- Agricultural Survey for Platreef ESIA, Mokopane, Limpopo. 2011. (Digby Wells Environmental)

- Cultural Resources Pre-Assessment for the Proposed Sylvania Everest North Mining Development in Mpumalanga, near Lydenburg. 2011. (Digby Wells Environmental)
- Phase 2 Mitigation of Archaeological sites at Boikarabelo Coal Mine, Steenbokpan, Limpopo. 2011. (Digby Wells Environmental)
- Cultural Resources Pre-Assessment for Proposed Platinum Mine Prospecting in Mpumalanga, near Bethal for Anglo Platinum. 2011. (Digby Wells Environmental)
- Cultural Resources Pre-Assessment for proposed Platinum Mine at Mokopane, Limpopo for Ivanhoe Platinum. 2011. (Digby Wells Environmental)
- Phase 1 AIA Mixed-use housing Development, Kwanobuhle, Extension 11, Uitenhage, Eastern Cape. 2011.
- Phase 1 AIA Centane to Qholora and Kei River mouth road upgrade survey, Mnquma Municipality, Eastern Cape. 2011. (SRK Consulting)
- Phase 1 AIA Clidet Data Cable survey, Western Cape, Northern Cape, Free State and Eastern Cape. 2011. (SRK Consulting)
- Phase 1 AIA Karoo Renewable Energy Facility, Victoria West, Northern Cape. 2011. (Savannah Environmental)
- Phase 1 AIA Windfarm survey in Hamburg, Eastern Cape. 2010. (Savannah Environmental)
- Phase 1 AIA Windfarm survey in Molteno, Eastern Cape. 2010. (Savannah Environmental)
- Phase 1 AIA Housing Development at Motherwell, P.E. 2010. (SRK Consulting)
- Phase 1 AIA Sand quarry survey in Paterson, Eastern Cape. 2010. (SRK Consulting)
- Phase 1 AIA Quarry Survey at Victoria West. 2010. (Acer [Africa] Environmental Management Consultants)
- Phase 1 AIA Quarry Survey at Port Elizabeth. 2010. (E.P Brickfields)

## 6 PROFESSIONAL AFFILIATIONS

- Association of Southern African Professional Archaeologists (ASAPA): Professional member
- Association of Southern African Professional Archaeologists (ASAPA): CRM Practitioner (Field Supervisor: Stone Age, Iron Age and Rock Art)
- South African Museums Association: Member



## JOHAN NEL

Mr Johan Nel

Unit manager: Heritage Resources Management

Social Sciences

Digby Wells Environmental

### 1 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

### 2 LANGUAGE SKILLS

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

### 3 EMPLOYMENT

Period	Company	Title/position
09/2011 to present	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

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Tel: +27 11 789 9495, Fax: +27 11 789 9498, [info@digbywells.com](mailto:info@digbywells.com), [www.digbywells.com](http://www.digbywells.com)

Directors: A Sing\*, AR Wilke, LF Koeslag, PD Tanner (British)\*, AJ Reynolds (Chairman) (British)\*, J Leaver\*, GE Trusler (C.E.O)

\*Non-Executive



2003-2007		Freelance archaeologist
	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,

#### 4 EXPERIENCE

Johan Nel has 13 years of combined experience in the field of cultural heritage resources management (HRM) including archaeological and heritage assessments, grave relocation, social consultation and mitigation of archaeological sites. I have gained experience both within urban settings and remote rural landscapes. Since 2010 I have been actively involved in environmental management that has allowed me to investigate and implement the integration of heritage resources management into environmental impact assessments (EIA). Many of the projects since have required compliance with International Finance Corporation (IFC) requirements and other World Bank standards. This exposure has allowed me to develop and implement a HRM approach that is founded on international best practice and leading international conservation bodies such as UNESCO and ICOMOS. I have worked in most South African Provinces, as well as Swaziland, the Democratic Republic of the Congo, Liberia and Sierra Leone. I am fluent in English and Afrikaans, with excellent writing and research skills.

#### 5 PROFESSIONAL REGISTRATION

<b>Position</b>	<b>Professional Body</b>	<b>Registration Number</b>
Council member	Association for Southern African Professional Archaeologists (ASAPA); ASAPA Cultural Resources Management (CRM) section	095
Member	International Association of Impact Assessors (IAIA)	N/A
Member	International Council on Monuments and Sites (ICOMOS)	
Member	Society for Africanist Archaeologists (SAfA)	N/A



## 6 PUBLICATIONS AND CONFERENCE PAPERS

<b>Authors and Year</b>	<b>Title</b>	<b>Published in/presented at</b>
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 of South Africa.	Archaeology World Report, (1) United Kingdom p.14-22.
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.

## 7 PROJECT EXPERIENCE

- 2003-2004. Freelance consulting archaeologist. Archaeological Impact Assessment. Roodt&Roodt. RSA. Limpopo, Mpumalanga, Northwest. Project manager/specialist
- 2004-2005. Resident archaeologist Rock Art Mapping Project. Archaeological surveys. UKZN. RSA. Didima, KZN. Specialist
- 2006. Exploratory excavation of an unknown cemetery at Du Preezhoek, Fountains Valley, Portion 383 of the farm Elandspoort 357 JR, Pretoria, Gauteng. Section 36 Grave relocation. Bombela Civil Joint Venture. RSA. Pretoria, Gauteng. Specialist
- 2006. Report on exhumation, relocation and re-internment of 49 graves on Portion 10 of the farm Tygervallei 334 JR, Kungwini Municipality, Gauteng. Section 36 Grave relocation. D. Georgiades East Farm (Pty) Ltd. RSA. Kungwini, Gauteng. Specialist
- 2006. Social consultation for Elawini Lifestyle Estate Grave Relocation. Section 36 Consultation. PGS (Pty) Ltd. RSA. Nelspruit, Mpumalanga. Project manager/specialist
- 2007-2008. Research report on the remains of kings Mampuru I and Nyabela. Research report. National Department of Arts and Culture. RSA. Graafwater, Western Cape. Specialist
- 2007. Summary report: Old dump on premises of the new Head Offices, Department of Foreign Affairs, Pretoria, Gauteng. Archaeological Impact Assessment. Imbumba-Aganang D & C Joint Venture. RSA. Pretoria, Gauteng. Project manager/specialist
- 2007. Final consolidated Heritage Impact Assessment report: Proposed development of high-cost housing and filling station, Portion of the farm Mooiplaats 147 JT. Heritage Impact Assessment. Go-Enviroscience. RSA. Schoemanskloof, Mpumalanga. Project manager/specialist
- 2007. Final consolidated report: Watching Brief on Soutpansberg Road Site for the new Head Offices of the Department of Foreign Affairs, Pretoria Gauteng. Section 35 Phase 2 Archaeological Mitigation. Imbumba-Aganang D & C Joint Venture. RSA. Pretoria, Gauteng. Project manager/specialist





- 2007. Recommendation of Exemption: Above ground SASOL fuel storage tanks located at grain silos in localities in the Eastern Free State. Request for Exemption. SASOL (Pty) Ltd. RSA. Eastern Free State. Project manager/specialist
- 2007. Final consolidated report: Phase 2 test excavations ascertaining the existence of alleged mass graves, Tlhabane West, Extension 2, Rustenburg, Northwest Province. Section 36 Test excavations. Bigen Africa Consulting Engineers. RSA. Rustenburg, Northwest. Project manager/specialist
- 2007. Archaeological investigation of Old Johannesburg Fort. Section 35 Phase 2 Archaeological Mitigation. JDA. RSA. Johannesburg, Gauteng. Project manager/specialist
- 2007. Social consultation for Motaganeng Residential Development Grave Relocation. Section 36 Consultation. PGS (Pty) Ltd. RSA. Burgersfort, Limpopo. Project manager/specialist
- 2007. Repatriation of Mapungubwe Human Remains. Repatriation. DEAT. RSA. Mapungubwe, Limpopo. Project manager/specialist
- 2007. Research report on cultural symbols. Research report. Ministry of Intelligence Services. RSA. Graafwater, Western Cape. Project manager/specialist
- 2008. Phase 1 Heritage and Archaeological Impact Assessment: Proposed establishment of an access road between Sapekoe Drive and Koedoe Street, Erf 3366 (Extension 22) and the Remainder of Erf 430 (Extension 4). Archaeological Impact Assessment. AGES (Polokwane). RSA. Tzaneen, Limpopo. Specialist
- 2008. Heritage Impact Assessment for proposed water pipeline routes, Mogalakwena District, Limpopo Province. Heritage Statement. AGES (Polokwane). RSA. Mogalakwena District Municipality, Limpopo. Specialist
- 2008. Final report: Heritage resources Scoping survey and preliminary assessment for the Transnet Freight Line EIA, Eastern Cape and Northern Cape. Heritage Statement. Transnet. RSA. Eastern Cape; Northern Cape. Specialist
- 2008. Heritage resources scoping survey and preliminary assessment: Proposed establishment of township on Portion 28 of the farm Kennedy's Vale 362 KT, Steelpoort, Limpopo Province. Heritage Statement. AGES (Polokwane). RSA. Steelpoort, Limpopo. Specialist
- 2008. Report on skeletal material found at Pier 30, R21 Jones Street offramp, Kempton Park. Heritage Statement. Bombela Civil Joint Venture. RSA. Kempton Park, Gauteng. Specialist
- 2008. Social consultation for Smoky Hills Platinum Mine Grave Relocation. Section 36 Consultation. PGS (Pty) Ltd. RSA. Maandagshoek, Limpopo. Specialist
- 2008. Southstock Collieries Grave Relocation. Section 36 Grave relocation. Doves Funerals, Witbank. RSA. Southstock, Mpumalanga. Specialist



- 2008. Social consultation for Zondagskraal Coal Mine Grave Relocation. Section 36 Consultation. PGS (Pty) Ltd. RSA. Zondagskraal, Mpumalanga. Specialist
- 2009. Proposed road upgrade of existing, and construction of newroads in Burgersfort, Limpopo Province. Archaeological Impact Assessment. AGES (Polokwane). RSA. Burgersfort, Limpopo. Specialist
- 2009. Randwater Vlakfontein-Mamelodi water pipeline survey. Heritage Impact Assessment. Archaeology Africa cc. RSA. Pretoria, Gauteng. Specialist
- 2009. Van Reenen Eco-Agri Development Project. Heritage Impact Assessment. Go-Enviroscience. RSA. Vanreenen, Freestate/KwaZulu-Natal. Specialist
- 2009. Social consultation for Zonkezizwe Grave Relocation. Section 36 Consultation. PGS (Pty) Ltd. RSA. Midrand, Gauteng. Specialist
- 2009. Heritage Impact Assessment for conversion of PR to MRA. Heritage Impact Assessment. Georock Environmental. RSA. Musina, Limpopo. Specialist
- 2010-2012. Kibali Gold Mine Grave Relocation. International grave relocation project. Randgold Resources. DRC. Watsa, Province Orientale. Specialist
- 2010. Archaeological Impact Assessment for Galaxy Gold Mine Tailings Dam Extension, Barberton, Mpumalanga Province. Archaeological Impact Assessment. Galaxy Gold. RSA. Barberton, Mpumalanga. Specialist
- 2010. Archaeological Impact Assessment for the HCI Khusela Coal: Palesa Extension ESIA Update on portions of the farm Roodepoort 349 JR, Thembisile Local Municipality (Mpumalanga) and Kungwini Municipality (Gauteng). Archaeological Impact Assessment. HCI Khusela. RSA. Mpumalanga; Gauteng. Specialist
- 2010. Heritage scoping survey for the amendment of the existing City Deep EMP for the reclamation of Slimes Dam 3/L/42 and 3/L/40. Heritage Statement. Crown Gold Recoveries. RSA. Johannesburg, Gauteng. Specialist
- 2010. Letter of Recommendation of Exemption for the proposed Crown Gold Recoveries (Pty) Ltd Pipeline Project. Request for Exemption. Crown Gold Recoveries. RSA. Johannesburg, Gauteng. Specialist
- 2010. Mitigation of an archaeological metalworking site for Kibali Gold Mine. Archaeological mitigation. Randgold Resources. DRC. Watsa, Province Orientale. Specialist
- 2010. Heritage Impact Assessment for Nzoro Hydropower Station. Heritage Impact Assessment. Randgold Resources. DRC. Watsa, Province Orientale. Specialist
- 2010. Heritage Impact Assessment for Temo Coal EIA. Heritage Impact Assessment. Temo Coal. RSA. Steenbokpan, Limpopo. Specialist
- 2011-2012. Platreef Platinum Mine Burial Grounds and Graves Census. Burial Grounds and Graves Census. Platreef (Pty) Ltd. RSA. Mokopane, Limpopo. Project manager/specialist



- 2011. Addendum to Phase 1 Archaeological Impact Assessment for the Boikarabelo Coal Mine (proposed railway link from the farm Kruishout to the farm Buffelsjagt). Archaeological Impact Assessment. Resources Generation. RSA. Lephalale, Limpopo. Project manager/specialist
- 2011. Heritage Impact Assessment for Koidu Diamond Mine. Heritage Impact Assessment. Koidu . Sierra Leone. Koidu, . Project manager/specialist
- 2011. Mitigation of an archaeological metalworking site for Koidu Diamond Mine. Archaeological mitigation. Koidu . Sierra Leone. Koidu, . Project manager/specialist
- 2011. Nzoro hydropower station ESIA. Heritage Impact Assessment. Randgold Resources. DRC. Watsa, Province Orientale. Project manager/specialist
- 2011. Specialist review of Heritage Impact Assessment report for Zod Gold Mine, Armenia. Review report. Zod Gold Mine. Armenia. Desktop review. Project manager/specialist
- 2012. Phase 1 Archaeological Impact Assessment for MBET Pipeline. Archaeological Impact Assessment. Resources Generation. RSA. Lephalale, Limpopo. Project manager/specialist
- 2012. Heritage Impact Assessment for the Witwatersrand Goldfields Acid Mine Drainage Project (Western Basin). Heritage Impact Assessment. BKS (PTY) LTD. RSA. Johannesburg, Gauteng. Project manager/specialist
- 2012. Phase 1 Heritage Impact Assessment of the proposed Geluksdal Tailings Storage Facility and Pipeline Infrastructure. Heritage Impact Assessment. Gold One. RSA. Johannesburg, Gauteng. Project manager/specialist
- 2012. Heritage Statement for the Central Basin, Witwatersrand AMD Project. Heritage Statement. BKS (PTY) LTD. RSA. Johannesburg, Gauteng. Project manager/specialist
- 2012. Heritage Statement for Rhodium Reefs Ltd Platinum Operation, 2430CA & CC, De Goedeverwachting 332 KT; Boschkloof 331 KT; Belvedere 362 KT; Kennedy's Vale 361 KT; and Tweefontein 360 KT, Limpopo. Heritage Statement. Eastplats Group. RSA. Steelpoort, Limpopo. Project manager/specialist
- 2012. Notification of Intent to Develop: Proposed Aggeneys Photo-voltaic solar power plant on Portion 1 of the farm Aroams 57 RD, Northern Cape (DEA ref: 12/12/20/2630). Heritage Statement. Orlight Solar. RSA. Aggeneys, Northern Cape. Specialist
- 2012. Notification of Intent to Develop: Proposed Kenhardt Photo-voltaic solar power plant on RE of the farm Klein Zwartbast 188 RD, Northern Cape (DEA ref: 12/12/20/2631). Heritage Statement. Orlight Solar. RSA. Kenhardt, Northern Cape. Project manager/specialist
- 2012. Notification of Intent to Develop: Proposed Loeriesfontein Photo-voltaic solar power plant on Portion 1 of the farm Klein Rooiberg 227 RD, Northern Cape (DEA ref: 12/12/20/2632). Heritage Statement. Orlight Solar. RSA. Loeriesfontein, Northern Cape. Specialist

- 2012. Notification of Intent to Develop: Proposed Vanrhynsdorp Photo-voltaic solar power plant on RE of the farm Paddock 257 RD, Western Cape (DEA ref: 12/12/20/2633). Heritage Statement. Orlight Solar. RSA. Vanrhynsdorp, Western Cape. Project manager/specialist
- 2012. Notification of Intent to Develop: Proposed Graafwater Photo-voltaic solar power plant on Portion 1 of the farm Graafwater 97 RD and RE of Bueroskraal 220 RD, Western Cape (DEA ref: 12/12/20/2636). Heritage Statement. Orlight Solar. RSA. Graafwater, Western Cape. Specialist
- 2012. Phase 2 archaeological impact assessment mitigation for Boikarabelo Coal Mine (SAHRA Permit No: 80/11/07/015/51). . Section 35 Phase 2 Archaeological Mitigation. Resources Generation. RSA. Steenbokpan, Limpopo. Project manager/specialist
- 2012. Final Phase 2 archaeological impact assessment mitigation report for Boikarabelo Coal Mine, Limpopo (SAHRA Permit No: 80/11/07/015/51). . Section 35 Phase 2 Archaeological Mitigation. Resources Generation. RSA. Steenbokpan, Limpopo. Specialist
- 2012. Holder of Destruction Permit No. 84 for archaeological sites at Boikarabelo Coal Mine. Section 35 Destruction permit. Resources Generation. RSA. Steenbokpan, Limpopo. Project manager/specialist
- 2012. Specialist review of Heritage Impact Assessment report for Mkuju Uranium Mine. Review report. Uranex . Zambia. Desktop review. Project manager/specialist
- 2013. Heritage Impact Assessment for the proposed Consbrey Colliery Project, 2629BB and 2629BD, Mpumalanga Province. Heritage Impact Assessment. Msobo Coal. RSA. Breyten, Mpumalanga. Project manager/specialist
- 2013. Heritage Impact Assessment for Rhodium Reef Limited Platinum Operation, 2430CC Kennedys Vale, De Goedevoering 332 KT, Limpopo Province. Heritage Impact Assessment. Rhodium Reefs Limited. RSA. Steelpoort, Limpopo. Project manager/specialist
- 2013. Heritage Statement for the Consbrey Colliery. Heritage Statement. Msobo Coal. RSA. Chrissiesmeer, Mpumalanga. Project manager/specialist
- 2013. Heritage Statement for the Harwar Colliery. Heritage Statement. Msobo Coal. RSA. Chrissiesmeer, Mpumalanga. Project manager/specialist
- 2013. Heritage Statement for the Waterberg Prospecting Rights Application, Blouberg, Limpopo Province. Heritage Statement. Platinum Group Metals Ltd. RSA. Breyten, Mpumalanga. Specialist
- 2013. Destruction Permit Application Report for Kangala Coal Project. Section 34 Built Environment Permit. Universal Coal (Pty) Ltd. RSA. Delmas, Mpumalanga. Specialist
- 2013. Holder of Destruction Permit No. 399 for archaeological sites at Boikarabelo Coal Mine. Section 35 Destruction permit. Resources Generation. RSA. Steenbokpan, Limpopo. Project manager/specialist
- 2013. Relocation of graves in Kinjor and Larjor for Aureus New Liberty Gold Mine. International grave relocation project. Aureus Mining. Liberia. Kinjor. Specialist



- 2013. New Liberty Gold Mine Grave Relocation Plan. International grave relocation project. Aureus Mining. Liberia. Kinjor. Project manager/specialist
- 2013. Thabametsi Coal Mine Burial Grounds and Graves Census. Burial Grounds and Graves Census. Exxaro Coal. RSA. Lephalale, Limpopo. Specialist
- 2013. Bokoni Platinum Mine Burial Grounds and Graves Census. Burial Grounds and Graves Census. Bokoni Platinum. RSA. Atok, Limpopo. Specialist
- 2013. Specialist review of Heritage Impacts Assessment for Songwe REE project. Review report. Mkango Resources. Malawi. Desktop review. Project manager/specialist
- 2013: Heritage Impact Assessment for the Platreef Platinum Mine EIA project. Platreef Resources. RSA. Mokopane, Limpopo. Specialist project manager.