



PGS
HERITAGE & GRAVE
RELOCATION CONSULTANTS

HERITAGE IMPACT ASSESSMENT

Proposed Lady Slipper Country Estate located on Farm 415, Uitenhage, Eastern Cape

Version 1.0

8 December 2011

ACKNOWLEDGEMENT OF RECEIPT

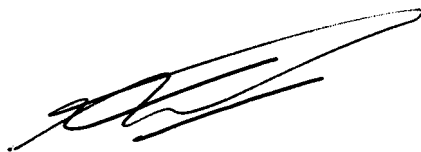
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ARCHAEOLOGICAL CONSULTANT: PGS Heritage & Grave Relocation Consultants

PRINCIPAL INVESTIGATOR: Wouter Fourie



SIGNATURE:

EXECUTIVE SUMMARY

PGS Heritage and Grave Relocation Consultants was appointed by Indwe Environmental Consulting CC, to undertake an Heritage Assessment for the development of the Lady Slipper Country Estate located on Farm 415, Uitenhage, Eastern Cape.

During the survey two sites of heritage significance were found.

LS001

Is a cemetery consisting of 3 well maintained graves. This site is incorporated as Portion 36 of the development and will be preserved on site.

LS002

Is a historic ruin possible older than 60 years.

1. The site is situated close to the proposed access road into the estate and might be impacted by construction. If it is possible to move the access route not to impact the site, this must be considered as first prize.
2. In the event that the structure will be impacted on a destruction permit in terms of Section 34 of the NHRA will be required before it can be demolished. Such a destruction permit must be accompanied by a plan sketch an document containing photos documenting the current state of the structure and major design elements.

Palaeontological analysis of the available data and geotechnical work conducted on the site has recommended an exemption from any further palaeontological studies.

General recommendations

- If during construction any possible finds are made, the operations must be stopped and a qualified archaeologist be contacted for an assessment of the find.
- Any substantial fossil remains (e.g. vertebrates, petrified wood) encountered during excavation should be reported to SAHRA for possible mitigation by a professional palaeontologist.

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1. INTRODUCTION

PGS Heritage and Grave Relocation Consultants was appointed by Indwe Environmental Consulting CC, to undertake an Heritage Assessment for the development of the Lady Slipper Country Estate located on Farm 415, Uitenhage, Eastern Cape.

1.1 Project Background

The proposal envisages the development of a low density mixed land use estate, which will include the following land uses:

- An agricultural portion on the part of the site to the south of the R334.(Agriculture Zone 1)
- A public roadway portion to accommodate the existing R334 road.(Transport Zone 2)
- A portion to accommodate a Post Office, Shop, Dwelling House, road and restaurant – On the site of the existing Die Hoek Winkel. (Special Zone)
- A portion to accommodate an existing private cemetery (Special Zone)
- Two portions accommodating an existing dwelling house and outbuilding ((Residential Zone 2)
- A portion to accommodate a mix of uses including: Nursery, farmstall, services, refuse, roadway, restaurant and tea garden (Special Zone)
- A portion accommodating a gatehouse, reception, parking, roadway and access control. (Special Zone)
- A private roadway (Special Zone)
- 40 portions to accommodate dwelling houses. (Residential Zone 2)
- A portion accommodating the water reservoir. (Special Zone)
- A nature reserve portion (Open Space Zone 3)
- Two new dams and associated cut-off drains.

1.2 Site location

The project site is situated 25 kilometres west of Port Elizabeth on the R102 at the foot of the Vanstadensberge. The site boundary covers an area of approximately 240 hectares of which the north western section (75 hectares) of the property has been earmarked for development as part of the subdivision of the property (**Figure 1**).

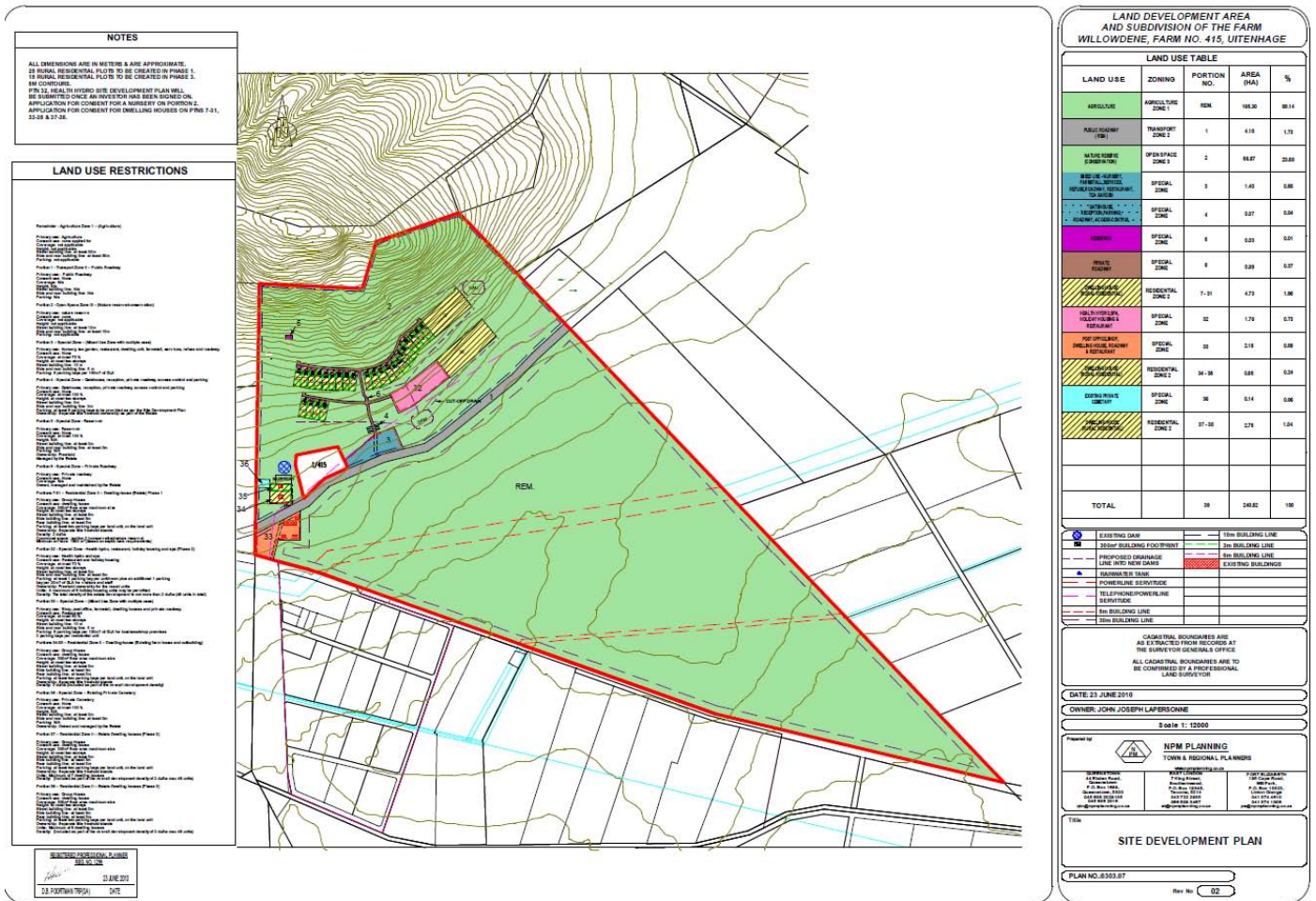


Figure 1 – Locality Map of the Study Area

1.3 Legislative Framework

The identification, evaluation and assessment of any cultural heritage site, artefact or find in the South African context is required and governed by the following legislation:

- i. National Environmental Management Act (NEMA) Act 107 of 1998
- ii. National Heritage Resources Act (NHRA) Act 25 of 1999
- iii. Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
- iv. Development Facilitation Act (DFA) Act 67 of 1995

The following sections in each Act refer directly to the identification, evaluation and assessment of cultural heritage resources.

- i. National Environmental Management Act (NEMA) Act 107 of 1998 as promulgated in the Regulations.
 - a. Basic Environmental Assessment (BEA) – Section (23)(2)(d)
 - b. Environmental Scoping Report (ESR) – Section (29)(1)(d)
 - c. Environmental Impacts Assessment (EIA) – Section (32)(2)(d)

- d. Environmental Management Plan (EMP) – Section (34)(b)
- ii. National Heritage Resources Act (NHRA) Act 25 of 1999
 - a. Protection of Heritage resources – Sections 34 to 36; and
 - b. Heritage Resources Management – Section 38
- i. Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
 - a. Section 39(3)
- ii. Development Facilitation Act (DFA) Act 67 of 1995
 - a. The GNR.1 of 7 January 2000: Regulations and rules in terms of the Development Facilitation Act, 1995. Section 31.

The NHRA stipulates that cultural heritage resources may not be disturbed without authorization from the relevant heritage authority. Section 34 (1) of the NHRA states that “no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority...”. The NEMA (No 107 of 1998) states that an integrated environmental management plan should (23:2 (b)) “...identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage”. In accordance with legislative requirements and EIA rating criteria, the regulations of SAHRA and Association of Southern African Professional Archaeologists (ASAPA) have also been incorporated to ensure that a comprehensive legally compatible AIA report is compiled. The heritage impact assessment criteria are described in more detail in **Appendix A**.

1.4 TERMINOLOGY

Abbreviations	Description
AIA	Archaeological Impact Assessment
ASAPA	Association of South African Professional Archaeologists
CRM	Cultural Resource Management
DEA	Department of Environmental Affairs
DWA	Department of Water Affairs
EIA practitioner	Environmental Impact Assessment Practitioner
EIA	Environmental Impact Assessment
ESA	Early Stone Age
GPS	Global Positioning System
HIA	Heritage Impact Assessment
I&AP	Interested & Affected Party

LSA	Late Stone Age
LIA	Late Iron Age
MSA	Middle Stone Age
MIA	Middle Iron Age
NEMA	National Environmental Management Act
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Agency
PSSA	Palaeontological Society of South Africa
ROD	Record of Decision
SADC	Southern African Development Community
SAHRA	South African Heritage Resources Agency

Archaeological resources

This includes:

- i. material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years including artefacts, human and hominid remains and artificial features and structures;
- ii. rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation;
- iii. wrecks, being any vessel or aircraft, or any part thereof which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the republic as defined in the Maritimes Zones Act, and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation;
- iv. features, structures and artefacts associated with military history which are older than 75 years and the site on which they are found.

Cultural significance

This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance

Development

This means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in the change to the nature, appearance or physical nature of a place or influence its stability and future well-being, including:

- i. construction, alteration, demolition, removal or change in use of a place or a structure at a place;
- ii. carrying out any works on or over or under a place;
- iii. subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
- iv. constructing or putting up for display signs or boards;
- v. any change to the natural or existing condition or topography of land; and
- vi. any removal or destruction of trees, or removal of vegetation or topsoil

Early Stone Age

The archaeology of the Stone Age between 700 000 and 2500 000 years ago.

Fossil

Mineralised bones of animals, shellfish, plants and marine animals. A trace fossil is the track or footprint of a fossil animal that is preserved in stone or consolidated sediment.

Heritage

That which is inherited and forms part of the National Estate (Historical places, objects, fossils as defined by the National Heritage Resources Act 25 of 1999).

Heritage resources

This means any place or object of cultural significance

Holocene

The most recent geological time period which commenced 10 000 years ago.

Late Stone Age

The archaeology of the last 20 000 years associated with fully modern people.

Late Iron Age (Early Farming Communities)

The archaeology of the last 1000 years up to the 1800's, associated with iron working and farming activities such as herding and agriculture.

Middle Stone Age

The archaeology of the Stone Age between 20-300 000 years ago associated with early modern humans.

Palaeontology

Any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace.

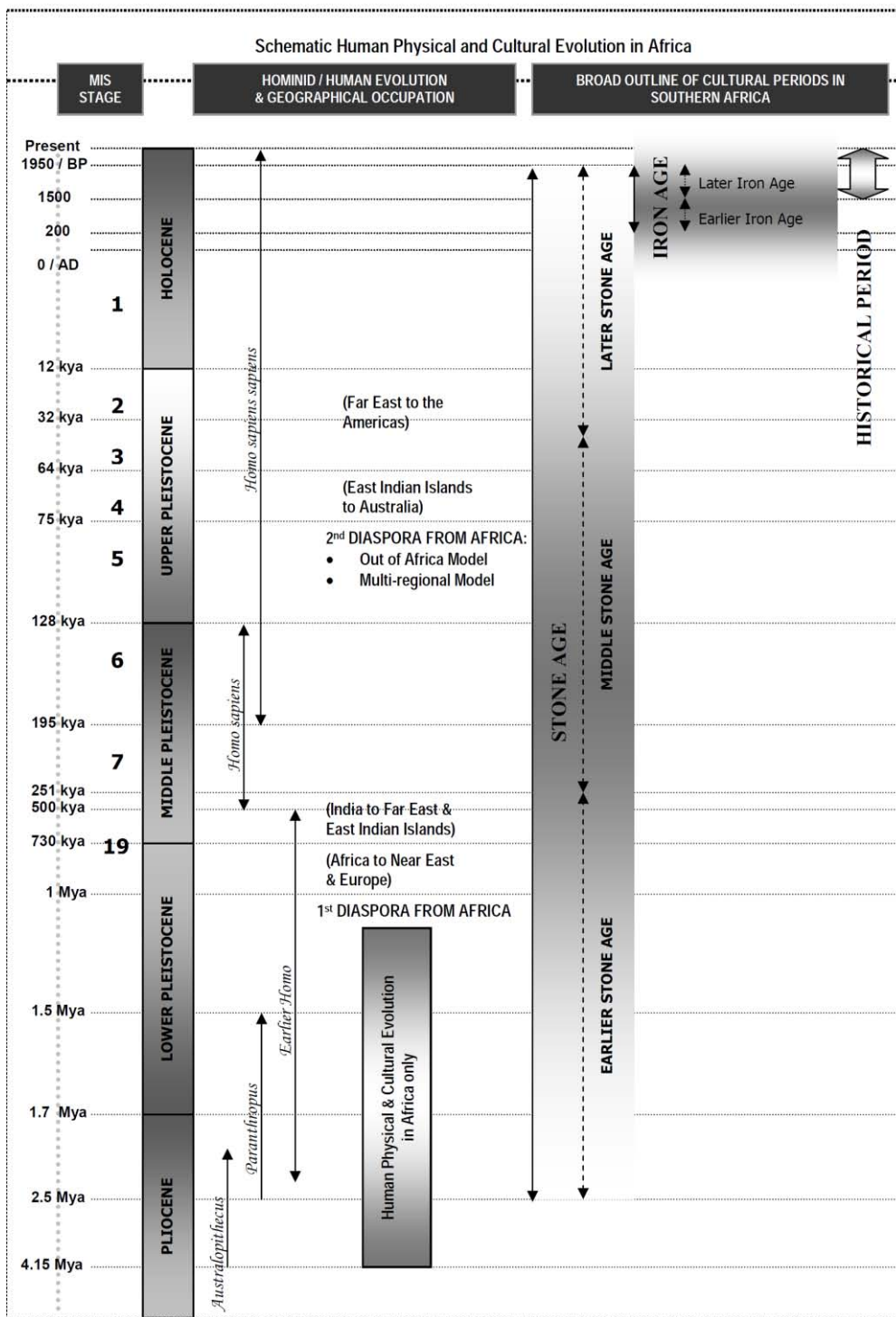


Figure 2 – Human and Cultural Time line in Africa (Morris, 2008)

1.5 Assumptions and Limitations

Not subtracting in any way from the comprehensiveness of the fieldwork undertaken, it is necessary to realise that the heritage resources located during the fieldwork do not necessarily represent all the possible heritage resources present within the area. Various factors account for this, including the subterranean nature of some archaeological sites and the current dense vegetation cover in some areas. As such, should any heritage features and/or objects not included in the present inventory be located or observed, an archaeologists must immediately be contacted.

Such observed or located heritage features and/or objects may not be disturbed or removed in any way until such time as the archaeologist has been able to make an assessment as to the significance of the site (or material) in question. This applies to graves and cemeteries as well. In the event that any graves or burial places are located during the development the procedures and requirements pertaining to graves and burials will apply.

The proposed development area of 75 hectares was heavily over grown with impenetrably thick tree cover that severely restricted access and the identification of possible heritage resources.

2. DESCRIPTION OF AFFECTED ENVIRONMENT

The property is divided in to two distinctive sections:

- The lower southern section (Remainder of Willowdene 415 south of the R334) that will be utilised for farming as is the status quo of this section of the property (Figure 5). This section is currently being utilised for farming activities and large sections have been cleared of bush vegetation.
- The northern section of the property earmarked for development as stated in Section 1.1 (Figure 3 and Figure 4). This section is largely undisturbed and over grown with thick bush sections.



Figure 3 – General view of site with dense tree cover towards mountain (© PGS, 2011)



Figure 4 – Thick vegetation growth on site (© PGS, 2011)



Figure 5 – Transformed farm land where bush clearing took place on lower section of property (© PGS, 2011)

3. ASSESSMEN METHODOLOGY & APPROACH

3.1 General Approach

This chapter describes the evaluation criteria to be used for the sites listed below and to be identified during the ground thruthing.

The significance of archaeological sites was based on four main criteria:

- site integrity (i.e. primary vs. secondary context),
- amount of deposit, range of features (e.g., stonewalling, stone tools and enclosures),
- Density of scatter (dispersed scatter)
 - Low - <10/50m²
 - Medium - 10-50/50m²
 - High - >50/50m²
- uniqueness; and
- potential to answer present research questions.

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

A - No further action necessary;

- B - Mapping of the site and controlled sampling required;
- C – Extensive mapping before destruction and preserve section where possible
- D - Preserve site, or extensive data collection and mapping of the site; and
- E - Preserve site

Impacts on these sites by the development will be evaluated as follows

Impact

The potential environmental impacts that may result from the proposed development activities.

Nature and existing mitigation

Natural conditions and conditions inherent in the project design that alleviate (control, moderate, curb) impacts. All management actions, which are presently implemented, are considered part of the project design and therefore mitigate impacts.

3.2 Evaluation Methods

Site Significance

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

Table 2: Site significance classification standards as prescribed by SAHRA

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

Generally Protected C (GP.A)	-	Low Significance	Destruction
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Impact Rating

VERY HIGH

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

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

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

HIGH

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

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

Example: The change to soil conditions will impact the natural system, and the impact on affected parties (in this case people growing crops on the soil) would be HIGH.

MODERATE

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

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

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

LOW

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

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

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

NO SIGNIFICANCE

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

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

Certainty

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

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

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

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

Duration

SHORT TERM: 0 to 5 years

MEDIUM: 6 to 20 years

LONG TERM: more than 20 years

DEMOLISHED: site will be demolished or is already demolished

Example

Evaluation

Impact	Impact Significance	Heritage Significance	Certainty	Duration	Mitigation
Negative	Moderate	Grade GP.B	Possible	Short term	B

3.3 Findings of Fieldwork and research

3.3.1 Field work

The site has been walked through and surveyed by an archaeologist from PGS. The site is characterised by densely wooded areas with some open areas where bush clearing took place. Contact was also made with the local farm owners and workers and discussions around possible heritage resources on the property indicated that they were aware of one cemetery and one ruin.

The archaeologist also travelled with a farmworker on the property who indicated the positions of the structures.

During the survey two site of heritage significance were identified

LS001

Coordinates: S33 53 57.3 E25 16 34.4

A small informal, well maintained, fenced cemetery with 3 graves (Figure 6) was identified at this location. The site is situated on the western boundary of the development.

Site size: Approximately 30m x 30m.



Figure 6 - General view of cemetery

Impact	Impact Significance	Heritage Significance	Certainty	Duration	Mitigation
Positive	Moderate	Grade GP.A	Definite	Long Term	D

Mitigation: The site has been identified during planning and will be zoned as Portion 36 (Special Zone), Existing Private cemetery. General up keep management measures must be included in the Estates management guidelines.

LS002

Coordinates: S33 53 49.4 E25 16 49.1

The site consists of a single dilapidated ruin (Figure 7). The structure was most probably utilized as farm workers housing and was constructed with brick, mortar and wooden frames or window and door frames. The structure consisted of two rooms. The larger living/kitchen space has a hearth with outside bricked chimney built into the outside wall.

No midden or other deposits was identified outside the structure.

Site size: Approximately 30m x 30m.



Figure 7 – View of structure on site



Figure 8 – View from back of house

Impact	Impact Significance	Heritage Significance	Certainty	Duration	Mitigation
Negative	Moderate	Grade GP.B	Possible	Permanent	B

Mitigation:

1. The site is situated close to the proposed access road into the estate and might be impacted by construction. If it is possible to move the access route not to impact the site, this must be considered as first prize.
2. In the event that the structure will be impacted on a destruction permit in terms of Section 34 of the NHRA will be required before it can be demolished. Such a destruction permit must be accompanied by a plan sketch and document containing photos documenting the current state of the structure and major design elements.

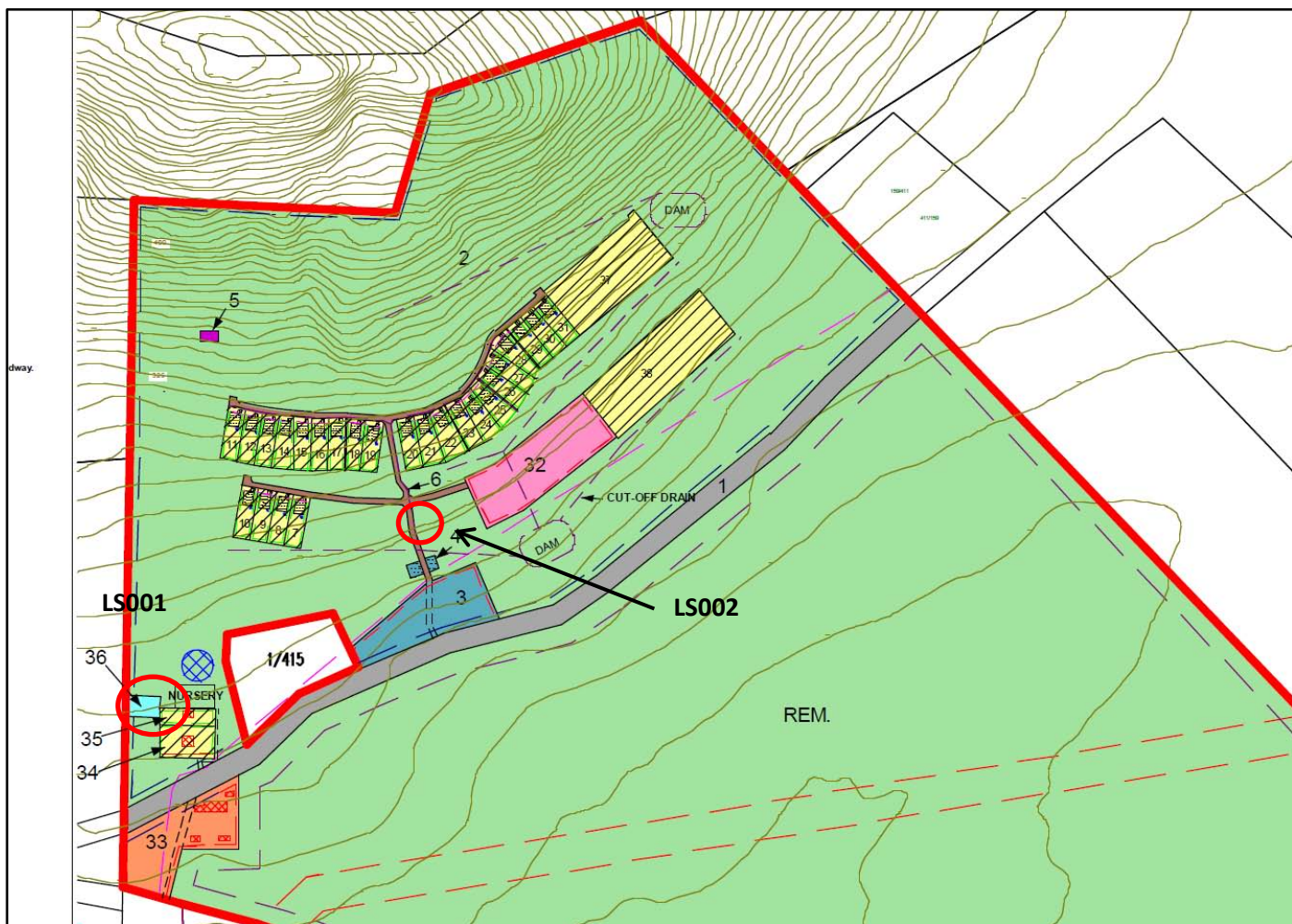


Figure 9 – Position of two sites on property (Circled in red)

3.3.2 Palaeontological Analysis

The palaeontological sensitivity of all rock units represented within the study area is considered to be LOW (Almond et al. 2008), and the proposed development will therefore not compromise local fossil heritage. It is therefore recommended that exemption from further specialist palaeontological studies is granted for the Lady Slipper Country Estate Project. Refer to **Appendix B** for full Palaeontological Analysis)

3.3.3 Historical Background

Three Heritage Impact Assessment reports for the general region identified mainly historic sites, cemeteries and Stone Age sites.

The Phase 1 Archaeological Impact Assessment: The Hopewell Conservation Project report, for the Greenbushes area of Port Elizabeth, recorded seven heritage resources located within the greater development site. These included one Middle Stone Age site (a low density stone artefact occurrence), four historic farmsteads and two historic period stone features.

The Heritage Impact Assessment for the Eskom Thyspunt Transmission Lines Integration Project 400kv Electricity Transmission Lines, Grassridge to Thysspunt, Port Elizabeth Region, assessed several areas around the Van Stadensberg (Lady Slipper) mountains, which coincide with the current study area, including the area of Fitches Corner. In addition, one of the alternative locations for the development of the proposed Port Elizabeth substation is on the farms Gedults River and Willowdene. The Eskom Thyspunt HIA report identified the following types of heritage resources: pre-colonial archaeological sites dating to all phases of the Stone Age, various historical farmsteads which had been surveyed as early as the 1820s, as well as a number of cemeteries, some quite informal, i.e. without fencing.

Archaeological Background

The known archaeological sites in this area predominantly date to the Stone Age, although some Early Iron Age Sites have been identified in the region. The majority of archaeological sites found in the area date from the past 10 000 years (Later Stone Age) and are associated with the campsites of San hunter-gatherers and Khoi pastoralists. These sites are difficult to find because they are in the open veld and often covered by vegetation and sand [Binneman, 2008].

Stone Age

Some sites dating to the Early Stone Age (ESA) have been identified in the general area. These are usually concentrations of stone tools found close to watercourses [van Schalkwyk, 2010]. One of the more important ESA sites occurs at Ananzi Springs, near Uitenhage. This is the only ESA site in the Eastern Cape which has been excavated [Webley and Hall, 1998]. Ananzi Springs was excavated by the late HJ Deacon in the 1970s and wood and seed material as well as a large number of stone artefacts was found in situ in the spring deposits [Binneman *et al*, 2011]. Scatters of ESA tools are also often found in hollows between sand dunes like the site of Geelhoutboom near Humansdorp [Webley and Hall, *ibid*].

A number of Late Stone Age (LSA) sites are known to occur in the region, located to the west and north of the study area. Research by Binneman has shown that a number of very important Later Stone Age sites occur in the Kabeljousrivier area (inland of Jeffreys Bay). These sites include artefacts other than stone tools, like ostrich eggshell beads, bone arrowheads, small bored stones and occasionally wood fragments with incised markings [van Schalkwyk, 2010]. Archaeologists believe that LSA people moved between the coast and the inland areas according to a seasonal pattern. Rock art sites are also associated with the LSA. These rock art sites are found mostly in the sandstone caves and shelters around Uitenhage, Grahamstown and Alicedale [Webley and Hall, 1998].

Iron Age

In the Eastern Cape, Early Iron Sites dating to around the eighth century AD (700s) have been identified at Kulubele on the Kei River and Canasta Place near East London. Excavations at Kulubele have identified evidence of iron-working, ceramic sculptures, grain pits and sheep bones, and highly decorated potsherds have been found at Canasta Place [http://v1.sahistory.org.za/pages/library-resources/articles_papers/forts_of_ec/preface.htm]. However, Canasta Place probably represents the most southerly evidence of early farmers in the Eastern Cape. [Webley and Hall, 1998]

Historical Background

From about 1700, emaXhoseni, the place of the Xhosa or Xhosaland, stretched roughly along the seaboard of South Africa between the Mbashe River and the Sundays River, from the slopes of the Khahlamba, Amathole and Winterberg mountains down the coast.

[\[http://v1.sahistory.org.za/pages/library-resources/articles_papers/forts_of_ec/preface.htm\]](http://v1.sahistory.org.za/pages/library-resources/articles_papers/forts_of_ec/preface.htm)

Port Elizabeth Town

The first Europeans to visit the area were the Portuguese explorers Bartholomew Dias, who landed on St Croix Island in Algoa Bay in 1488, and Vasco da Gama who noted the nearby Bird Island in 1497. For centuries, the area was simply marked on navigation charts as "a landing place with fresh water".

In 1799, during the first British occupation of the Colony during the Napoleonic Wars, a stone Fort was built, named Fort Frederick after the Duke of York. This fort, built to protect against a possible landing of French troops, overlooked the site of what later became Port Elizabeth and is now a monument.

1820 saw the arrival of 4,000 British settlers by sea, encouraged by the government of the Cape Colony as a settlement would strengthen the border region between the Cape Colony and the Xhosa people. At this time the seaport town was founded by Sir Rufane Shaw Donkin, the Acting Governor of the Cape Colony, who named it after his late wife, Elizabeth. The town expanded, building a diverse community comprising European, Cape Malay and other immigrants, and particularly rapidly so after 1873 when the railway to Kimberley was built. In 1861 the town was granted the status of autonomous municipality. During the Second Boer War, the port was an important transit point for soldiers, horses and materials headed to the front by railway. While the city itself did not see any conflict, many refugees from the war moved into the city. These included Boer women and children interned by the British in a concentration camp. Following that war, the Horse Memorial was erected to honour the tens of thousands of horses and mules that died during the conflict.

The effects of the apartheid regime were not lost on Port Elizabeth. Forced relocation of the non-white population under the Group Areas Act began in 1962, causing various townships to be built. The whole of the South End district,

being a prime real estate location, was forcibly depopulated and flattened in 1965; relocations continued until 1975. In 1977 Steve Biko, the black anti-apartheid activist, was interrogated and tortured by the security police in PE, before being transported to Pretoria where he died. Other notable deaths in the city during this time included the Cradock Four. [<http://www.port-elizabeth.org.za/history.html>]

Uitenhage Town

In 1804, J A Uitenhage de Mist, Commissioner-General of the Batavian Republic, instructed Captain Alberti to select a site for the new Drostdy. Alberti chose a site on the banks of the Zwartkops River Valley, because of a favourable climate and abundant water supply. [<http://www.port-elizabeth.org.za/history.html>]

In 1811 Uitenhage became the focus for military operations against the amaXhosa in the frontier war of 1811-12, and in 1815 its garrison played a leading role in the suppression of the Slachter's Nek rebellion. Following devastating floods, which hit the Eastern Cape in 1823, many English settlers who had arrived in the country in 1820 began to drift into the towns and some came to Uitenhage. They brought with them English customs as well as ideas about architecture which differed markedly from those of the local Dutch community, and after a while their Georgian tastes began to find expression in the town's buildings, often producing an interesting fusion of aesthetics. Another important development took place in 1829 when the springs on the farm Sandfontein, situated 8km above Uitenhage, were purchased by the government and added to its commonage. The town was now assured of a reliable and abundant source of water [<http://www.sahistory.org.za/places/uitenhage>]

4. RECOMMENDATIONS

During the survey two sites of heritage significance were found.

LS001

Is a cemetery consisting of 3 well maintained graves. This site is incorporated as Portion 36 of the development and will be preserved on site.

LS002

Is a historic ruin possible older than 60 years.

1. The site is situated close to the proposed access road into the estate and might be impacted by construction. If it is possible to move the access route not to impact the site, this must be considered as first prize.
2. In the event that the structure will be impacted on a destruction permit in terms of Section 34 of the NHRA will be required before it can be demolished. Such a destruction permit must be accompanied by a

plan sketch an document containing photos documenting the current state of the structure and major design elements.

Palaeontological analysis of the available data and geotechnical work conducted on the site has recommended an exemption from any further palaeontological studies.

General recommendations

- If during construction any possible finds are made, the operations must be stopped and a qualified archaeologist be contacted for an assessment of the find.
- Any substantial fossil remains (e.g. vertebrates, petrified wood) encountered during excavation should be reported to SAHRA for possible mitigation by a professional palaeontologist.

5. LIST OF PREPARES

PGS Heritage and Grave Relocation Consultants have seconded the following specialist to this project:

Team Leader: Wouter Fourie (BA (Hon) Archaeology), Accredited Professional Archaeologist (ASAPA) – CRM Accredited Principal Investigator.

Field Archaeologist: Henk Steyn (BA (Hon) Archaeology), Accredited Professional Archaeologist (ASAPA) – CRM Accredited Principal Investigator.

Palaeontologist: Dr John Almond, PhD in Palaeontology. Accredited member of PSSA and APHAP

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LEGISLATIVE PRINCIPLES

LEGISLATIVE REQUIREMENTS – TERMINOLOGY AND ASSESSMENT CRITERIA

3.1 General principles

In areas where there has not yet been a systematic survey to identify conservation worthy places, a permit is required to alter or demolish any structure older than 60 years. This will apply until a survey has been done and identified heritage resources are formally protected.

Archaeological and palaeontological sites, materials, and meteorites are the source of our understanding of the evolution of the earth, life on earth and the history of people. In the new legislation, permits are required to damage, destroy, alter, or disturb them. People who already possess material are required to register it. The management of heritage resources are integrated with environmental resources and this means that before development takes place heritage resources are assessed and, if necessary, rescued.

In addition to the formal protection of culturally significant graves, all graves, which are older than 60 years and are not in a cemetery (such as ancestral graves in rural areas), are protected. The legislation protects the interests of communities that have interest in the graves: they may be consulted before any disturbance takes place. The graves of victims of conflict and those associated with the liberation struggle will be identified, cared for, protected and memorials erected in their honour.

Anyone who intends to undertake a development must notify the heritage resource authority and if there is reason to believe that heritage resources will be affected, an impact assessment report must be compiled at the construction company's cost. Thus, the construction company will be able to proceed without uncertainty about whether work will have to be stopped if an archaeological or heritage resource is discovered.

According to the National Heritage Act (Act 25 of 1999 section 32) it is stated that:

An object or collection of objects, or a type of object or a list of objects, whether specific or generic, that is part of the national estate and the export of which SAHRA deems it necessary to control, may be declared a heritage object, including –

- objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, meteorites and rare geological specimens;
- visual art objects;
- military objects;
- numismatic objects;

- objects of cultural and historical significance;
- objects to which oral traditions are attached and which are associated with living heritage;
- objects of scientific or technological interest;
- books, records, documents, photographic positives and negatives, graphic material, film or video 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), or in a provincial law pertaining to records or archives; and
- any other prescribed category.

Under the National Heritage Resources Act (Act No. 25 of 1999), provisions are made that deal with, and offer protection, to all historic and pre-historic cultural remains, including graves and human remains.

3.2 Graves and cemeteries

Graves younger than 60 years fall under Section 2(1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925) as well as the Human Tissues Act (Act 65 of 1983) and are the jurisdiction of the National Department of Health and the relevant Provincial Department of Health and must be submitted for final approval to the Office of the relevant Provincial Premier. This function is usually delegated to the Provincial MEC for Local Government and Planning, or in some cases the MEC for Housing and Welfare. Authorisation for exhumation and reinterment must also be obtained from the relevant local or regional council where the grave is situated, as well as the relevant local or regional council to where the grave is being relocated. All local and regional provisions, laws and by-laws must also be adhered to. In order to handle and transport human remains the institution conducting the relocation should be authorised under Section 24 of Act 65 of 1983 (Human Tissues Act).

Graves older than 60 years, but younger than 100 years fall under Section 36 of Act 25 of 1999 (National Heritage Resources Act) as well as the Human Tissues Act (Act 65 of 1983) and are the jurisdiction of the South African Heritage Resource Agency (SAHRA). The procedure for Consultation Regarding Burial Grounds and Graves (Section 36(5) of Act 25 of 1999) is applicable to graves older than 60 years that are situated outside a formal cemetery administrated by a local authority. Graves in the category located inside a formal cemetery administrated by a local authority will also require the same authorisation as set out for graves younger than 60 years over and above SAHRA authorisation.

If the grave is not situated inside a formal cemetery but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws set by the cemetery authority must be adhered to.

APPENDIX B
PALAEONTOLOGICAL LETTER OF EXEMPTION

RECOMMENDED EXEMPTION FROM FURTHER PALAEOLOGICAL STUDIES:**Proposed Lady Slipper Country Estate, Farm 415, Uitenhage, Eastern Cape**

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November 2011

A Phase 1 Heritage Investigation has been requested by SAHRA as part of the Basic Assessment for the proposed Lady Slipper Country Estate located on Farm 415 Willowdene, some 15 km WNW of Port Elizabeth, Uitenhage, Eastern Cape. The proposed development is for a low density mixed land use estate which will include the following components:

- An agricultural portion on the part of the site to the south of the R334 (Agriculture Zone 1)
- A public roadway portion to accommodate the existing R334 road (Transport Zone 2)
- A portion to accommodate a Post Office, Shop, Dwelling House, road and restaurant – on the site of the existing Die Hoek Winkel (Special Zone)
- A portion to accommodate an existing private cemetery (Special Zone)
- Two portions accommodating an existing dwelling house and outbuilding (Residential Zone 2)
- A portion to accommodate a mix of uses including: nursery, farmstall, services, refuse, roadway, restaurant and tea garden (Special Zone)
- A portion accommodating a gatehouse, reception, parking, roadway and access control (Special Zone)
- A private roadway (Special Zone)
- 40 portions to accommodate dwelling houses (Residential Zone 2)
- A portion accommodating the water reservoir (Special Zone)
- A nature reserve portion (Open Space Zone 3)
- Two new dams and associated cut-off drains.

1. Geological background

The study area is located north of the N2 trunk road on the southeastern margins of the Vanstadensberge between the R102 and R334 (Fig. 1). The geology of the area has been outlined by Toerien and Hill (1989) and Le Roux (2000) and is shown in map Fig. 2 below. The entire area is underlain by quartzitic bedrocks of the **Peninsula Formation** (Ope, Table Mountain Group) of Ordovician age. This Ordovician succession was laid down by braided streams and comprises cross-bedded sandstones and quartzites with occasional mudrock intervals and pebbly conglomerates. In the central portion of the study area the Peninsula Formation bedrocks are overlain by a mantle of Pliocene to Pleistocene wind-blown sands of the **Nanaga Formation** (T-Qn; Algoa Group). These partially- to well-consolidated calcareous sandstones often display large-scale dune cross-bedding.

2. Palaeontological heritage

The palaeontological record of the rock units represented in the study area has been reviewed by Almond (2010; see numerous references therein). Fossils in the Peninsula Formation consist only of a small range of trace fossils (burrows, trackways *etc*) and organic-walled microfossils associated with the occasional marine-influenced mudrock intervals, which are usually very poorly exposed at surface. The Nanaga aeolianites commonly contain a small variety of land snails (*e.g. Trigonephrus*), calcretised root casts, and possible fossil termitaria.

3. Conclusions

The palaeontological sensitivity of all rock units represented within the study area is considered to be LOW (Almond *et al.* 2008), and the proposed development will therefore not compromise local fossil heritage. **It is therefore recommended that exemption from further specialist palaeontological studies is granted for the Lady Slipper Country Estate Project.**

Should substantial fossil remains (*e.g.* dense concentrations of shells or trace fossils) be encountered or exposed during construction, however, the Environmental Control Officer (ECO) should safeguard these, preferably *in situ*, and alert SAHRA as soon as possible so that appropriate action (*e.g.* recording, sampling or collection) can be taken by a professional palaeontologist.



Dr John E. Almond

Palaeontologist

Natura Viva cc, CAPE TOWN

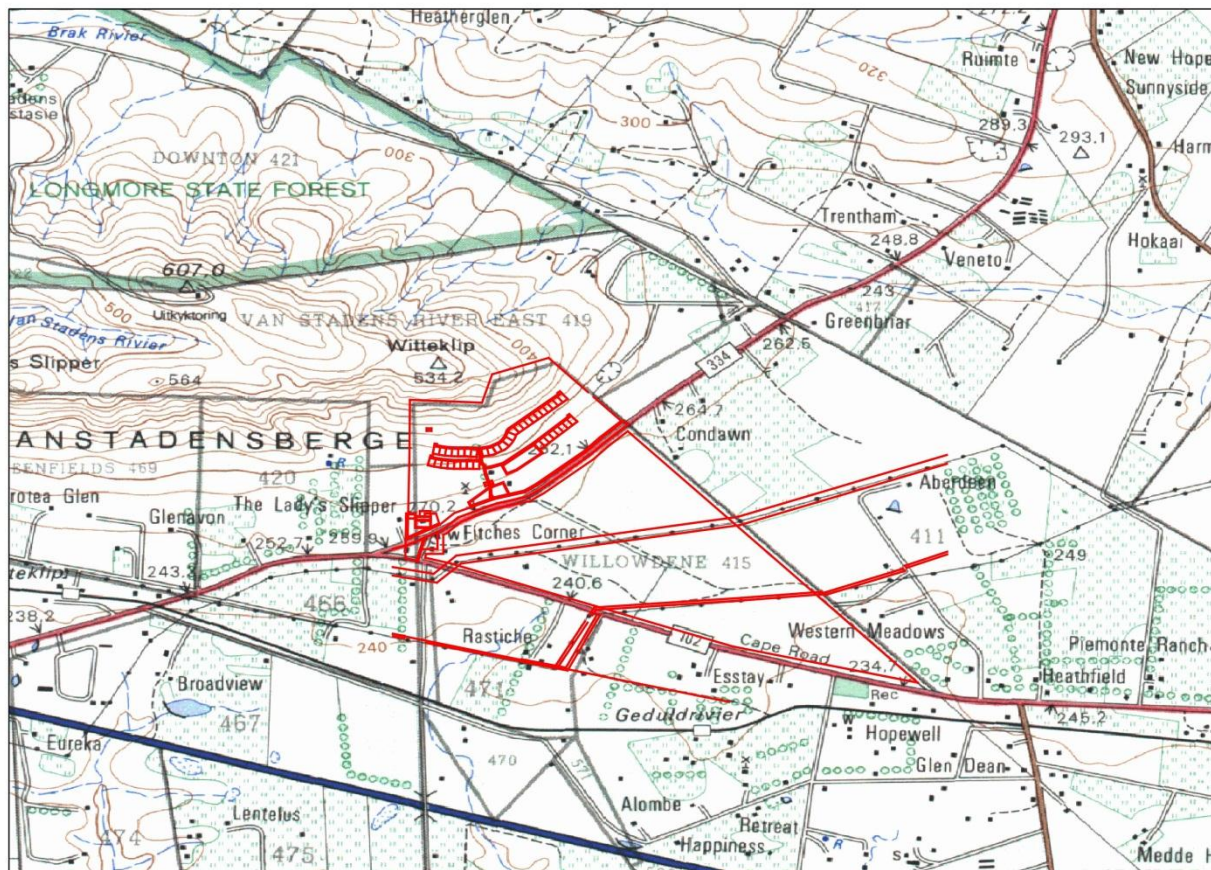


Fig. 1. Topographic map of the study region some 15 km WNW of Port Elizabeth, Eastern Cape showing the boundaries of the Lady Slipper Country Estate development area (red polygon) (Image kindly provided by PGS).

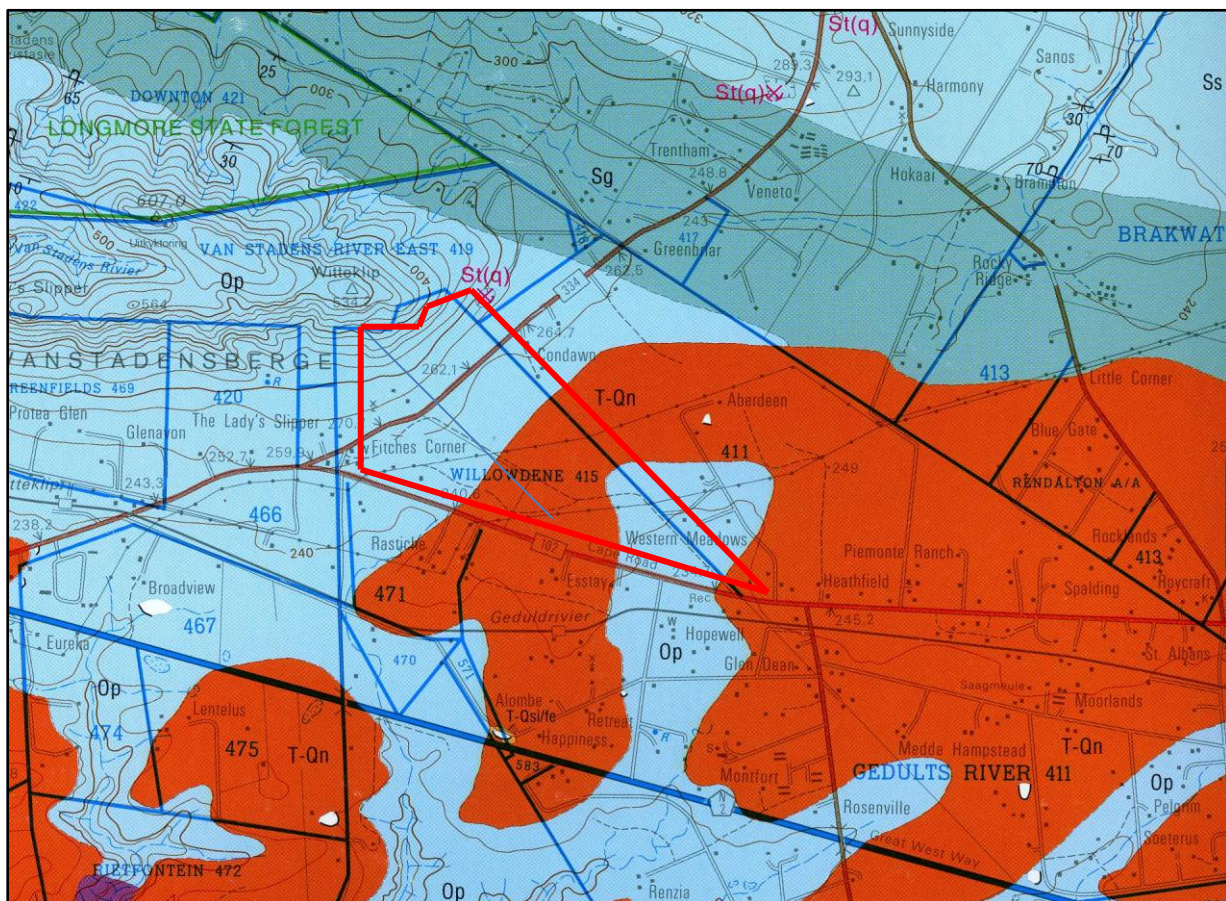


Fig. 2. Extract from 1: 1 50 000 geological map 3325CD Uitenhage (Council for Geoscience, Pretoria) showing the geology of the Lady Slipper Country Estate study area (red polygon) some 15 km WNW of Port Elizabeth, Eastern Cape. Geological units represented here include the quartzite-dominated Peninsula Formation of Ordovician age (Op, blue; Table Mountain Group) which is overlain in the central portion of the study area by Pliocene to Early Pleistocene dune sands of the Nanaga Formation (T-Qn, brick red; Algoa Group).

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QUALIFICATIONS & EXPERIENCE OF THE AUTHOR

Dr John Almond has an Honours Degree in Natural Sciences (Zoology) as well as a PhD in Palaeontology from the University of Cambridge, UK. He has been awarded post-doctoral research fellowships at Cambridge University and in Germany, and has carried out palaeontological research in Europe, North America, the Middle East as well as North and South Africa. For eight years he was a scientific officer (palaeontologist) for the Geological Survey / Council for Geoscience in the RSA. His current palaeontological research focuses on fossil record of the Precambrian - Cambrian boundary and the Cape Supergroup of South Africa. He has recently written palaeontological reviews for several 1: 250 000 geological maps published by the Council for Geoscience and has contributed educational material on fossils and evolution for new school textbooks in the RSA.

Since 2002 Dr Almond has also carried out palaeontological impact assessments for developments and conservation areas in the Western, Eastern and Northern Cape under the aegis of his Cape Town-based company *Natura Viva* cc. He is a long-standing member of the Archaeology, Palaeontology and Meteorites Committee for Heritage Western Cape (HWC) and an advisor on palaeontological conservation and management issues for the Palaeontological Society of South Africa (PSSA), HWC and SAHRA. He is currently compiling technical reports on the provincial palaeontological heritage of Western, Northern and Eastern Cape as well as Limpopo, Free State and Gauteng for SAHRA and HWC. Dr Almond is an accredited member of PSSA and APHAP (Association of Professional Heritage Assessment Practitioners – Western Cape).

Declaration of Independence

I, John E. Almond, declare that I am an independent consultant and have no business, financial, personal or other interest in the proposed development project, application or appeal in respect of which I was appointed other than fair remuneration for work performed in connection with the activity, application or appeal. There are no circumstances that compromise the objectivity of my performing such work.



Dr John E. Almond
Palaeontologist
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