

FINAL REPORT

PHASE 1 HERITAGE IMPACT ASSESSMENT REPORT: SCOPING AND ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED EXPANSION OF PIETERMARITZBURG AIRPORT, MSUNDUZI MUNICIPALITY, KWAZULU-NATAL

Prepared for

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MANAGEMENT SUMMARY

eThembeni Cultural Heritage was appointed by the Institute of Natural Resources to undertake a Phase 1 Heritage Impact Assessment of the proposed expansion of Pietermaritzburg Airport, as required by the National Environmental Management Act 107 of 1998 as amended (NEMA), in compliance with Section 38 of the National Heritage Resources Act 25 of 1999 (NHRA).

Description and significance assessment of heritage resources

Pietermaritzburg Aeroclub Clubhouse

The building is older than sixty years and located next to the modern airport terminal buildings. Its continued use for the same purpose over a period of more than sixty years, including its expansions, contribute to give it medium to high heritage significance at community-specific and local levels for its historic, social and cultural values. Its associational value could extend further if it proves that the nearby Italian POW church and the clubhouse were both constructed from Hlatshana shale, and that the construction of the former gave rise to the use of a locally novel material to build the latter. This significance extends as low to medium significance for its historic associations to the provincial and national level. In summary, it merits formal protection as a Grade IIB heritage resource.

The Oribi Village Precinct, adjacent to the proposed development, is older than sixty years. Any incursion on the material fabric of this precinct will require engagement with Amafa aKwaZulu-Natali.

Archaeological Sites

The Kwazulu-Natal Museum (KZN Museum) archaeology data base records the occurrence of three sets of Early and Later Stone Age artefacts at the southern end of the "aerodrome". These are considered to be part of colluvial wash along pre-existing drainage lines. The ubiquitous occurrence in the greater Pietermaritzburg area of these "out of primary context" classes of artefacts, render them of low to negligible scientific value.

Palaeontology

The palaeontological sensitivity of the basement Ecca, Dwyka and dolerite lithology is insignificant to very low.

Assessment of development impact

None. The Pietermaritzburg Aeroclub Clubhouse and the Oribi Village precinct will not be affected by the proposed developments.

The impact to all other classes of heritage resources is argued to be low to negligible.

Recommended mitigation measures

None.

Recommended monitoring

None.

Conclusion

We recommend that the development proceed and will submit the final version of this report to Amafa in fulfilment of the requirements of the National Heritage Resources Act. The client may contact Ms Weziwe Tshabalala at Amafa's Pietermaritzburg office in due course to enquire about the Council's decision. If permission is granted for the development to proceed, the client is reminded that the Act requires that a developer cease all work immediately and adhere to the protocol described in Section 10 of this report should any heritage resources, as defined in the Act, be discovered during the course of development activities.

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1 Introduction

eThembeni Cultural Heritage was appointed by the Institute of Natural Resources to undertake a Phase 1 Heritage Impact Assessment (HIA) of the proposed expansion of Pietermaritzburg Airport, as required by the National Environmental Management Act 107 of 1998 as amended (NEMA), in compliance with Section 38 of the National Heritage Resources Act 25 of 1999 (NHRA) (refer to Appendix A).

South Africa's heritage resources are both rich and widely diverse, encompassing sites from all periods of human history. Resources may be tangible, such as buildings and archaeological artefacts, or intangible, such as landscapes and living heritage. Their significance is based upon their aesthetic, architectural, historical, scientific, social, spiritual, linguistic, economic or technological values; their representivity of a particular time period; their rarity; and their sphere of influence.

The integrity and significance of heritage resources can be jeopardized by natural (e.g. erosion) and human (e.g. development) activities. In the case of human activities, a range of legislation exists to ensure the timeous identification and effective management of heritage resources for present and future generations.

This report represents compliance with a full Phase 1 HIA for the proposed development.

2 Terms of reference

A Phase 1 HIA must address the following key aspects:

- the identification and mapping of all heritage resources in the area affected;
- an assessment of the significance of such resources in terms of heritage assessment criteria set out in regulations;
- an assessment of the impact of the development on heritage resources;
- an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
- the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
- if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- plans for mitigation of any adverse effects during and after completion of the proposed development.

3 Project description¹

Msunduzi Local Municipality wishes to develop and expand the existing Pietermaritzburg Airport precinct in a phased development as follows:

- Airside Infrastructure
 - Runway - Continuous maintenance of existing runway
 - Taxiway - New taxi way of 15m width + shoulders, 256m long
 - Aprons - Construction of new apron area 14 000m² (200m wide and 700m deep), will be parallel to the runway.
 - Navigation Aids - To be upgraded to meet ICAO standards
- Landside Infrastructure
 - Roads - Main access off Oribi road; Direct link from Gladys Manzini; New access road to N3 via Market road; Destruction of existing General Aviation Area (GA) precinct to construct an access road linking the existing parking to the proposed road network; Road around the airport for patrolling
 - Parking areas - Public parking (12 800m²) along Pharazyn way towards Oribi road adjacent to the reservoir
 - Staff and VIP parking - Yet to be negotiated with Servest
 - Car Hire facilities - Will be allocated space in the new parking area
 - Terminal building - Requires 2360m²; Will be expanded in Phase 1 and relocated in phase 2
- Utilities
 - GA Precinct - 38 250m²
 - Cargo facility - Parallel to the apron in line with the TB
 - Fire and rescue facility - Current location and capacity is sufficient; Relocate in phase 2
 - Control tower - Sufficient for current ops
 - Water supply - Reticulation to the terminal should be upgraded; New supply will be required for the GA
 - Waste water - Existing supply to the terminal needs to be upgraded; Reticulation needed for the GA areas
 - Stormwater - Improvements to the current storm water needed; Passenger terminal and fire station often experience flooding due to the slopes (cut off drain required); New storm water management will; be required for GA area.

This proposed development triggers activities for which a Scoping and Environmental Impact Assessment is required in terms of NEMA, therefore this Phase 1 HIA is undertaken in terms of NHRA Section 38(6).

¹ Environmental Scoping Report for the Proposed Expansion of the Pietermaritzburg Airport. Institute of Natural Resources. Pietermaritzburg. September 2016.

4 Project location

Pietermaritzburg Airport is located within the Msunduzi Local and uMgungundlovu District Municipalities (Figures 1, 2 and 3). The approximate centre of the proposed development area is S29 38 57; E30 23 56. It is bordered by Oribi Road to the west and Gladys Manzi Road to the south-east. Residential suburbs are located on its northern, western and southern borders, with the industrial area of Mkondeni to the east and south-east. The Blackburrow Stream runs through the eastern portion of the property from south to north.



Figure 1 Locality of Pietermaritzburg Airport, Msunduzi Local Municipality.

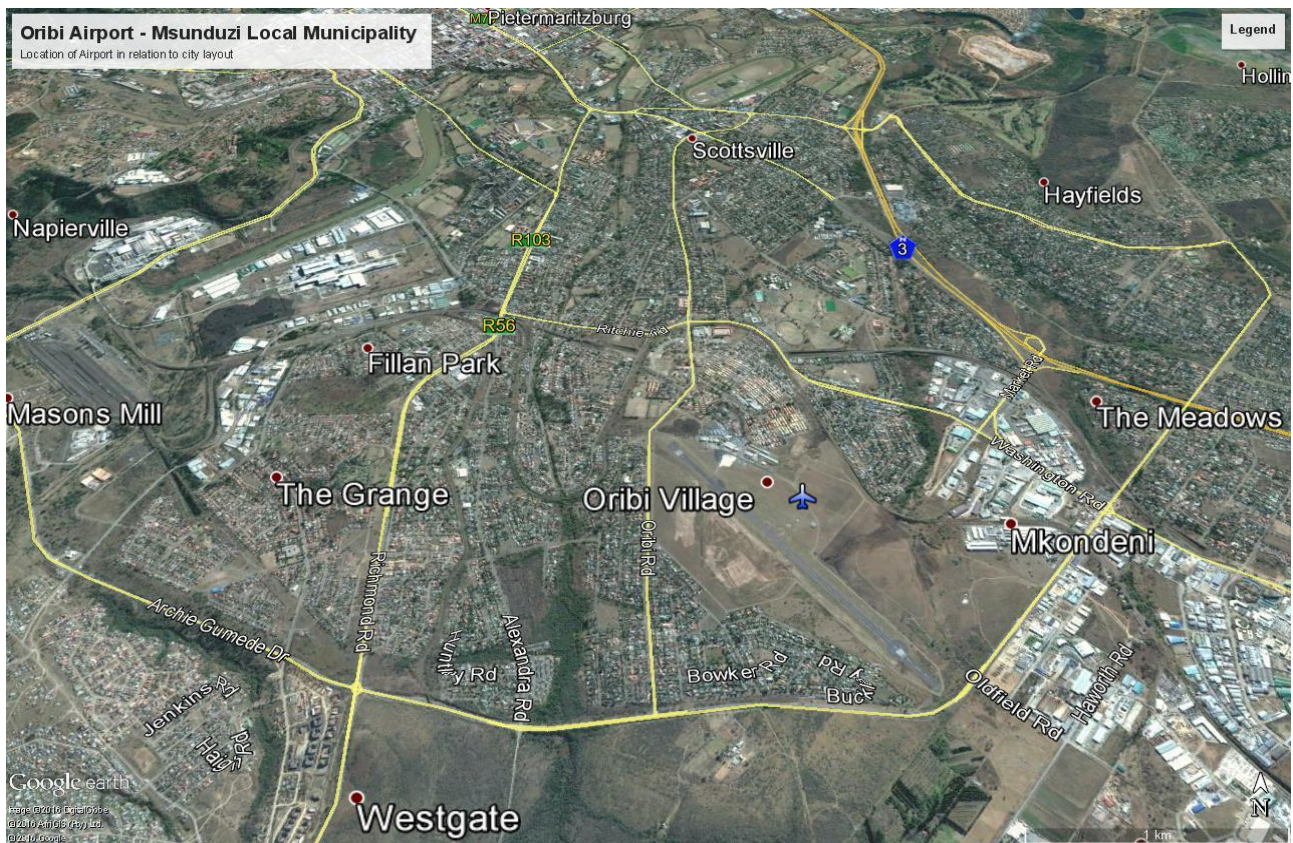


Figure 2 Google Earth image of Pietermaritzburg Airport and surrounds (date of image March 2016).

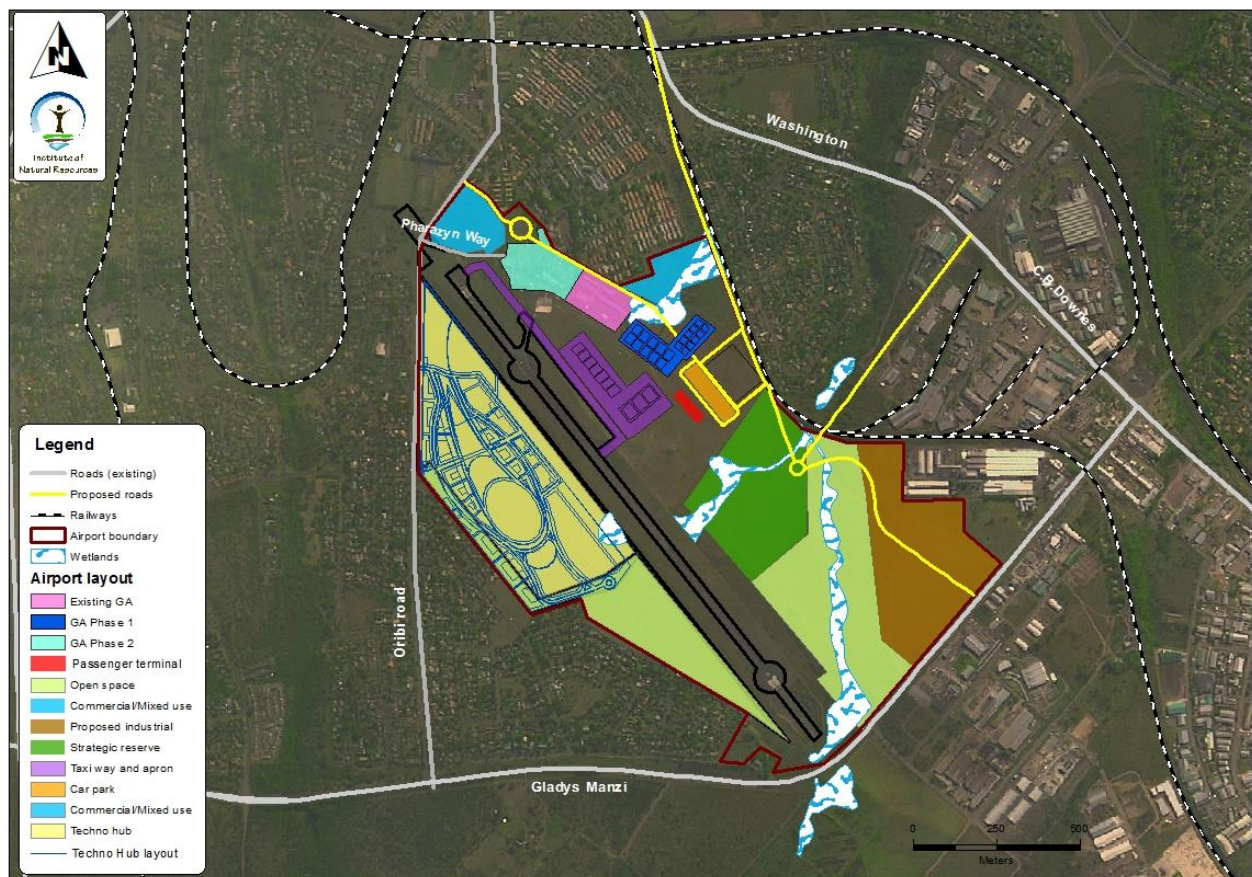


Figure 3 Project layout²

² Information provided by INR

5 Cultural context

Appendix B contains a summary of knowledge of the archaeological, historical and cultural aspects of the project area and its surrounds. This section is limited to a brief history of the airport itself. The following paragraphs are quoted from Meineke and Summers (1983:129; kindly provided by Mr Ian Parker):

'The city's [Pietermaritzburg's] introduction to flying occurred when Major Miller landed the first plane here on 23rd April 1918. He was recruiting for South Africa's infant Air Force. He landed and flew from the polo ground in the Fitzsimmons Road area.

'In 1930 the Council decided to establish an aerodrome near the Oribi Reservoir, but the site was declared unsuitable by the Civil Air Board because the land was far from level. The Corporation thereafter carried out certain rudimentary levelling works and in March 1931 a licence was secured for light and medium planes to land at Oribi.

'The Civil Air Board remained unhappy with Oribi and surveys were carried out for possible aerodrome sites on the farm Shortts Retreat and also on the farm Lamont's Vale (off the Richmond Road).

'Finally, however, the Oribi Aerodrome was accepted by the Civil Air Board in 1934 and licensed as a "second class aerodrome".

'The following year a waiting room and caretaker's quarters were built by contract at a cost of 196 pounds.

'The first hangar at the aerodrome was built by contractors Dorman Long and Company in 1938 when the Natal Aviation Company commenced operations at the aerodrome. This Company's operations included a Flying School and this school, together with the new hangar, was officially opened by no less a person than Mr. Oswald Pirow, the Minister of Railways, Harbours and Defence'.

Bizley (1987:34) writes as follows:

'Aeroplanes, of course, were at the apex of twentieth century technical mysteries, but in the twenties, and before Oribi was developed, Howick seems to have been the preferred place for landings. With a progressive conscience, busloads of schoolchildren were taken up to Howick to see Major Miller, the doyen of early South African flying, coming in to land, though a gruesome propeller accident on one occasion rather dampened enthusiasm. (Some memory-scratching here. Was it Major Miller who landed on the Pietermaritzburg Polo grounds in 1917, guided by bonfires, on a wartime recruiting exercise?) Flying was in its dangerous infancy: one block of children who lined up at Oribi to watch an early landing were told, after some hours, that the plane had crashed in the Drakensberg'.

Mr Ian Parker recalls:

'When I started flying in 1963, Oribi was just a large grass field. Two runways, 14/32 and 03/21, were marked out, but one could take off and land in any direction. The present runway 16/34 was built by the military in about 1965, to allow its use by transport aircraft (Dakotas and Hercules). It was tarmacadamed by Council a few years later and was also lengthened'.

6 Heritage resource observations and assessment of significance

No development activities associated with the proposed project had begun at the time of our visit, in accordance with heritage legislation. Table 1 summarises the heritage resources assessed, and our observations.

Table 1 Heritage resources and observations: Pietermaritzburg Airport.

Heritage resource type	Observation
Ecofacts	None were identified within the proposed development area.
Places, buildings, structures and equipment	See below.
Places to which oral traditions are attached or which are associated with living heritage	None were identified within the proposed development area.
Historical settlements and townscapes	None were identified within the proposed development area.
Landscapes and natural features	None were identified within the proposed development area.
Geological and Palaeontological sites of scientific or cultural importance	See below
Archaeological sites	See below
Graves and burial grounds	None were identified within the proposed development area.
Public monuments and memorials	None were identified within the proposed development area.
Movable objects excluding any object made by a living person	None were identified within the proposed development area.
Battlefields	None were identified within the proposed development area.

– Archaeology

Vegetation density is moderate to high on the undeveloped portions of the proposed development area, limiting soil surface visibility. However, it is highly unlikely that significant archaeological remains, or other heritage resources such as structures or ancestral graves, are present.

The KwaZulu-Natal Museum (KZN Museum) archaeology data base records the occurrence of three sets of Early and Middle Stone Age artefacts at the southern end of the “aerodrome”:

2930CB 008

Drain on the left of the road to Mkondeni near aerodrome, thus on the road parallel to the runway. No description of site.

Material: Fauresmith - 4 hand-axes, 4 side-scrapers, 1 point, 1 flake. Also one MSA blade. Mudstone, sandstone, lydianite. 8 pieces in Natal Museum

2930CB 050

An assiduous surface-collection found scattered over an area of about 25 acres at the southeast corner of Oribi aerodrome.

2930CB 131

See sketch map in site record file in Natal Museum.

NER 32: Townlands boundary above Crook's farm (what is now Murray Rd).

Inventoried, found and retained 1969: 1 miniature hand-axe, slightly broken at point.

Archaeologists currently explain artefacts in these contexts to be part of down-slope colluvial wash along pre-existing drainage lines and consequently out of primary context. The ubiquitous occurrence of these classes of artefacts identified in the greater Pietermaritzburg area, largely out primary context, render them of low to negligible scientific value.

– Palaeontology

The project area is underlain primarily by Pietermaritzburg and Vryheid Formation shales of the Permian Ecca Group and Dwyka tillites. The upper contact between these two formations is difficult to map as shales within these are almost indistinguishable. Whilst King (1948) reported *Glossopteris* flora within these deposits at isolated localities the presence of intrusive dolerite sills within the development footprint precludes the presence of any significant fossil remains (G. Botha *et. al.* 2002). Consequently no further palaeontological assessment is considered necessary.

– Buildings and structures

None will be affected by the proposed development.

It is unlikely that any of the modern terminal buildings, hangars and associated structures within the proposed development area has any heritage significance; however, if any of these buildings is older than sixty years, including those within the Oribi Village precinct, the developer will require a permit from Amafa aKwaZulu-Natali (the Provincial Heritage Resources Authority) for their alteration or destruction.

Neither the Pietermaritzburg Aeroclub clubhouse or the Oribi Village Precinct will be affected by this phase of the proposed developments.

7 Assessment of significance of development impact magnitude

	Type	Status	Extent	Duration	Intensity	Significance	Confidence
Proposed Expansion	None	negligible	local	None	negligible	negligible	high
With Mitigation	None	negligible	local	None	negligible	negligible	high
No Go Option	None	None	None	None	None	None	high

Table 2 Assessment of impact magnitude of development on heritage resources

8 Recommended mitigation measures

- Msunduzi Municipality, as the authority responsible for the management of local heritage resources in terms of NHRA Section 8, should apply to Amafa for the declaration of the clubhouse as a Grade IIB heritage resource. In terms of such grading, internal changes to a building are allowed, but external alterations require a permit from Amafa.
- The clubhouse will automatically be subject to zoning scheme controls as soon as its grading is confirmed by Amafa.

9 Recommended monitoring

None.

10 Protocol for the identification, protection and recovery of heritage resources during construction and operation

It is possible that sub-surface heritage resources could be encountered during the construction phase of this project. The Environmental Control Officer and all other persons responsible for site management and excavation should be aware that indicators of sub-surface sites could include:

- Ash deposits (unnaturally grey appearance of soil compared to the surrounding substrate);
- Bone concentrations, either animal or human;
- Ceramic fragments, including potsherds;
- Stone concentrations that appear to be formally arranged (may indicate the presence of an underlying burial, or represent building/structural remains); and
- Fossilised remains of fauna and flora, including trees.

In the event that such indicator(s) of heritage resources are identified, the following actions should be taken immediately:

- All construction within a radius of at least 20m of the indicator should cease. This distance should be increased at the discretion of supervisory staff if heavy machinery or explosives could cause further disturbance to the suspected heritage resource.
- This area must be marked using clearly visible means, such as barrier tape, and all personnel should be informed that it is a no-go area.
- A guard should be appointed to enforce this no-go area if there is any possibility that it could be violated, whether intentionally or inadvertently, by construction staff or members of the public.
- No measures should be taken to cover up the suspected heritage resource with soil, or to collect any remains such as bone or stone.
- If a heritage practitioner has been appointed to monitor the project, s/he should be contacted and a site inspection arranged as soon as possible.
- If no heritage practitioner has been appointed to monitor the project, the head of archaeology at Amafa's Pietermaritzburg office should be contacted; telephone 033 3946 543).
- The South African Police Services should be notified by an Amafa staff member or an independent heritage practitioner if human remains are identified. No SAPS official may disturb or exhume such remains, whether of recent origin or not.
- All parties concerned should respect the potentially sensitive and confidential nature of the heritage resources, particularly human remains, and refrain from making public statements until a mutually agreed time.
- Any extension of the project beyond its current footprint involving vegetation and/or earth clearance should be subject to prior assessment by a qualified heritage practitioner, taking into account all information gathered during this initial heritage impact assessment.

11 Conclusion

We recommend that the development proceed and will submit the final version of this report to Amafa in fulfilment of the requirements of the NHRA. According to Section 38(4) of the Act the report shall be considered timeously by the Council which shall, after consultation with the person proposing the development, decide –

- whether or not the development may proceed;
- any limitations or conditions are to be applied to the development;
- what general protections in terms of the NHRA apply, and what formal protections may be applied to such heritage resources;
- whether compensatory action shall be required in respect of any heritage resources damaged or destroyed as a result of the development; and
- whether the appointment of specialists is required as a condition of approval of the proposal.

The client may contact Ms Weziwe Tshabalala at Amafa's Pietermaritzburg office (telephone 033 3946 543) in due course to enquire about the Council's decision.

If permission is granted for development to proceed, the client is reminded that the NHRA requires that a developer cease all work immediately and adhere to the protocol described in Section 9 of this report should any heritage resources, as defined in the Act, be discovered during the course of development activities.

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APPENDIX A

STATUTORY REQUIREMENTS

GENERAL

The identification, evaluation and management of heritage resources in South Africa is required and governed by the following legislation:

- National Environmental Management Act 107 of 1998 (NEMA)
 - a. Basic Environmental Assessment – Section (23)(2)(d)
 - b. Environmental Scoping Report – Section (29)(1)(d)
 - c. Environmental Impacts Assessment – Section (32)(2)(d)
 - d. Environmental Management Plan – Section (34)(b)
- KwaZulu-Natal Heritage Act 4 of 2008
 - a. Protection of heritage resources – Chapters 8 and 9
 - b. Heritage Resources Management – Chapter 10
- National Heritage Resources Act 25 of 1999 (NHRA)
 - a. Definition and management of the national estate – Chapter I
 - b. Protection and management of heritage resources – Chapter II
 - c. Heritage Resources Management – Section 38
- Minerals and Petroleum Resources Development Act 28 of 2002 (MPRDA)
 - a. Section 39(3)
- Development Facilitation Act 67 of 1995 (DFA).
 - a. The GNR.1 of 7 January 2000: Regulations and rules in terms of the Development Facilitation Act, 1995 Section 31.

KWAZULU-NATAL HERITAGE ACT 4 OF 2008

This Act is implemented by Amafa aKwaZulu-Natali/Heritage KwaZulu-Natal, the provincial heritage resources authority charged to provide for the conservation, protection and administration of both the physical and the living or intangible heritage resources of the province; along with a statutory Council to administer heritage conservation in the Province.

NATIONAL HERITAGE RESOURCES ACT 25 OF 1999 (NHRA)

Heritage Impact Assessments

Section 38(1) of the NHRA may require a Heritage Impact Assessment in case of:

- the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- the construction of a bridge or similar structure exceeding 50m in length;
- any development or other activity which will change the character of a site—
 - (i) exceeding 5 000m² in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- the re-zoning of a site exceeding 10 000m² in extent; or

- any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.

Reports in fulfilment of NHRA Section 38(3) must include the following information:

- the identification and mapping of all heritage resources in the area affected;
- an assessment of the significance of such resources in terms of the heritage assessment criteria set out in regulations;
- an assessment of the impact of the development on such heritage resources;
- an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
- the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
- if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- plans for mitigation of any adverse effects during and after completion of the proposed development.

It is incumbent upon the developer or Environmental Practitioner to approach the South African Heritage Resources Agency (SAHRA) or Amafa to ascertain whether an HIA is required for a project; what categories of heritage resource must be assessed; and request a detailed motivation for such a study in terms of both the nature of the development and the nature of the environment. In this regard we draw your attention to Section 38(2) of the NHRA which states specifically that 'The responsible heritage resources authority must ... **if there is reason to believe that heritage resources will be affected by such development**, notify the person who intends to undertake the development to submit an impact assessment report'. In other words, the heritage authority must be able to justify a request for an Archaeological, Palaeontological or Heritage Impact Assessment. The Environmental Practitioner may also submit information to the heritage authority in substantiation of exemption from a specific assessment due to existing environmental disturbance, for example.

Definitions of heritage resources

The Act defines a heritage resource as any place or object of cultural significance i.e. of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This includes, but is not limited to, the following wide range of places and objects:

- living heritage as defined in the National Heritage Council Act 11 of 1999 (cultural tradition; oral history; performance; ritual; popular memory; skills and techniques; indigenous knowledge systems; and the holistic approach to nature, society and social relationships);
- ecofacts (non-artefactual organic or environmental remains that may reveal aspects of past human activity; definition used in KwaZulu-Natal Heritage Act 2008);
- places, buildings, structures and equipment;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds;

- public monuments and memorials;
- sites of significance relating to the history of slavery in South Africa;
- movable objects, but excluding any object made by a living person; and
- battlefields.

Furthermore, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of—

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

Archaeological means –

- material remains resulting from human activity which are in a state of disuse and are in or on land and are older than 100 years, including artefacts, human and hominid remains and artificial features and structures;
- 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 is older than 100 years including any area within 10m of such representation;
- 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 culture zone of the Republic, as defined respectively in sections 3, 4 and 6 of the Maritime Zones Act 15 of 1994, 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;
- features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found.

Palaeontological means 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.

A **place** is defined as:

- a site, area or region;
- a building or other structure which may include equipment, furniture, fittings and articles associated with or connected with such building or other structure;
- a group of buildings or other structures which may include equipment, furniture, fittings and articles associated with or connected with such group of buildings or other structures;

- an open space, including a public square, street or park; and
- in relation to the management of a place, includes the immediate surroundings of a place.

Public monuments and memorials means all monuments and memorials:

- erected on land belonging to any branch of central, provincial or local government, or on land belonging to any organisation funded by or established in terms of the legislation of such a branch of government; or
- which were paid for by public subscription, government funds, or a public-spirited or military organisation, and are on land belonging to any private individual.

Structures means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

MANAGEMENT OF GRAVES AND BURIAL GROUNDS

– Definitions

Grave

The NHRA defines a grave as a place of interment and includes the contents, headstone or other marker of such a place, and any other structure on or associated with such a place.

The KwaZulu-Natal Cemeteries and Crematoria Act 12 of 1996 defines a grave as an excavation in which human remains have been intentionally placed for the purposes of burial, but excludes any such excavation where all human remains have been removed.

Burial ground

The term 'burial ground' does not appear to have a legal definition. In common usage the term is used for management purposes to describe two or more graves that are grouped closely enough to be managed as a single entity.

Cemetery

The KwaZulu-Natal Cemeteries and Crematoria Act 1996 defines a cemetery as any place

- (a) where human remains are buried in an orderly, systematic and pre-planned manner in identifiable burial plots;
- (b) which is intended to be permanently set aside for and used only for the purposes of the burial of human remains.

– Protection of graves and cemeteries

No person may damage, alter, exhume, or remove from its original position any grave, as defined above, without permission from the relevant authority, as detailed in the following table.

Grave type	Relevant legislation	Administrative authority – disinterment	Administrative authority – reburial
Graves located within a formal cemetery administered by a local authority	KwaZulu-Natal Cemeteries and Crematoria Act 12 of 1996 Human Tissues Act 65 of 1983	National and / or Provincial Departments of Health	If relocated to formal cemetery – relevant local authority.
Graves younger than 60 years located outside a formal cemetery administered by a local authority and the graves of victims of conflict	KwaZulu-Natal Heritage Act 4 of 2008 Human Tissues Act 65 of 1983	Amafa aKwaZulu-Natali, the provincial heritage resources authority	If relocated to private or communal property – Amafa. If relocated to formal cemetery – Amafa and relevant local authority.
Graves older than 60 years located outside a formal cemetery administered by a local authority	NHRA Human Tissues Act 65 of 1983	South African Heritage Resources Agency (SAHRA), the national heritage resources authority	If relocated to private or communal property – SAHRA. If relocated to formal cemetery – SAHRA and relevant local authority.

– Procedures required for permission to disinter and rebury graves

The procedure for consultation regarding burial grounds and graves (Section 36 of the NHRA) is applicable to all graves located outside a formal cemetery administered by a local authority. The following extract from this legislation is applicable to this policy document:

SAHRA or Amafa may not issue a permit for any alteration to or disinterment or reburial of a grave unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority—

- (a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
- (b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.

Any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Services and in accordance with regulations of the responsible heritage resources authority—

- (a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
- (b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

APPENDIX B

ARCHAEOLOGICAL CONTEXT OF THE STUDY AREA

The Stone Age³

The earliest period of Pietermaritzburg history can be reconstructed only from the archaeological remains that have been found in and around the City. The story will always be incomplete, for time has destroyed many traces of earlier settlement and others have yet to be found or have been built over.

Even within the Pietermaritzburg area the evidence available to us is very patchy. Many of the ancient items recovered and placed in museum collections are chance finds by members of the public. None is from systematic archaeological research. Instead, modern archaeological excavations and reconstructions carried out in other parts of Natal and beyond that provide some historical 'flesh and blood' to the dry 'bones' of the local artefacts.

The patchy nature of our available data is evident from maps where the great majority of finds are located in and around Scottsville. This pattern results from the work of one ardent collector, F.H.M. French, who was working in the Borough Engineer's Department when the township of Scottsville was being laid out. He took much trouble to recover and record the location of stone implements that came to light during the development works. His collection was donated to the Natal Museum on his death in 1940. Other areas have not been searched nearly so thoroughly, but it is likely that where similar topography and vegetation are present, for example around Ashburton, similar concentrations of Stone Age material may be present.

Pietermaritzburg, the urban centre, was founded in 1838 but archaeological remains show that people have been living in the city area for a quarter or even half a million years, a period some 2 000 times longer than that of the city itself. But we must give some thought to the possibility that there were people here in the even more distant past. No such sites are known from KwaZulu-Natal, nor is there much chance of their being found. This is because the landscape in general, and in Pietermaritzburg as much as anywhere, reflects rapid geological denudation: rivers are rapidly cutting down into their beds and the predominantly sloping landscape is subject to hillwash.

Thus the landscape we see today is a relatively young one – no more than 100 000 years old. Consequently the oldest Stone Age artefacts are buried under or incorporated into soils that have been formed since that time. If there were people here a million or more years ago, any remains that they left behind would long ago have eroded away and washed down the Msunduzi into the Indian Ocean. The very land surface on which they would have walked, according to the estimates of geologists, was some 15 metres above today's ground surface.

The earliest surviving traces of human presence in the area belong to the Acheulian Stone Age industry. The hallmark of the Acheulian is the distinctive but poorly understood 'handaxe' – probably a multi-purpose tool – that is characteristic of sites dating to the period 600 000 to 150 000 years ago. The Acheulian industry was developed by our immediately ancestral

³ The Stone and Iron Age sections have been extracted from 'Pietermaritzburg – the first 2 000 000 years', by Tim Maggs, sourced from <http://www.pmbhistory.co.za>.

species *Homo erectus*, who spread throughout the habitable parts of Africa and was the first of our family to emigrate to other continents.

Like their Stone Age successors, the Acheulian population lived a hunting and gathering way of life relying entirely on wild plant and animal foods. They would have moved about from place to place, seldom staying for more than a few days at a time. They evidently preferred to live in the open, for their artefacts are seldom found in caves or rock shelters.

Although many of the modern large African mammals were already present, a number of others became extinct in this period. These include *Megantereon*, the last sabretoothed cat; *Hipparion*, a three-toed horse; *Sivatherium*, a short-necked but antlered relative of the giraffe; and *Hippopotamus gorgops*, a hippo with periscopic eyes.

Evidence from Central Africa and Europe shows that the Acheulians could hunt animals as large as elephants. From the abundance of their artefacts found along river valleys, we conclude that they spent much of their time in these areas. Locally such sites have been found on both sides of the Msunduzi in the Scottsville and central town areas. Note that the sites are not immediately beside the river but on the slightly higher ground on either side of the valley. This reflects the down cutting of the river and the sideways movements of its meanders during the last 150 000 years or so, which have erased the earlier evidence from the riverside itself.

Downstream, and particularly along the uMngeni River below Table Mountain, there exist 'terraces', now raised above the river, marking the position of ancient parts of the river-bed. These terraces are frequently covered by sheets of old river pebbles amongst which Acheulian artefacts can be found. Indeed these river pebbles were a major source of suitable stone for the artefact makers. Acheulian material has also been found further away from the Msunduzi valley. Here it is usually from relatively flat areas such as Scottsville-Pelham and the Ashburton ridge or beside smaller streams such as the Slangspruit, Foxhill Spruit and Mkhondeni. Some Acheulian occupation clearly took place on these flatter areas. However, with time, soil creep will have taken place down the steeper slopes carrying any artefacts with it into the small streams. Once into a stream, the artefacts are washed down relatively rapidly, becoming rounded in the process. Such artefacts, often barely recognizable, can be found in the river gravels downstream.

The hunter-gatherer way of life continued through the Middle Stone Age (MSA) which is characterized by a development in stone tool technology. Here the emphasis was on producing long, blade-like flakes of stone, some of which were then trimmed to produce spearheads and scrapers. MSA artefacts are very common over most of KwaZulu-Natal below an altitude of 1200 metres, and Pietermaritzburg is no exception. A strong concentration collected in the Scottsville area again reflects the intensive collecting of Mr French. But the absence of any sites on the higher ground north of the central city is representative of the situation in the province in general. For a considerable part of the MSA the climate would have been appreciably cooler than today – corresponding to the last glacial period of the northern hemisphere. This climate would probably have made the upland areas of KwaZulu-Natal from Hilton up to the Drakensberg relatively unattractive to hunter-gatherers and many of the game animals they hunted.

The MSA people were of our own species, *Homo sapiens*, though not of any racial type surviving today. Their contemporaries in Europe and parts of Asia – the Neanderthals – are

currently considered as an anatomically robust adaptation to the glacial conditions of northern climes, not the brutish primitives of cartoon mythology.

The dating of the MSA started between 200 000 and 130 000 years ago, and it was replaced at least 35 000 years ago (but possibly as early as 40 000 years ago) by the Late Stone Age (LSA). In Pietermaritzburg the evidence for the early part of the LSA consists of several small collections of stone artefacts including a distinctive type known as a naturally-backed knife. These have been dated to the period roughly 15 000 to 7 000 years ago, during which climates worldwide were recovering from the last glacial epoch and becoming similar to today's conditions.

An interesting point about the local spread of these artefacts is that, although far fewer sites have been recorded than for the earlier periods, some sites do occur on the highlands north of the city, and there is even one near the top of Swartkop, the highest local peak. This pattern has been noted elsewhere in the Midlands, and it therefore seems that people at this time were attracted to these cool, sourveld areas despite their being even colder then than now.

The final phase of the Stone Age began about 7 000 years ago and is the most familiar one to us, for its cultural heritage was passed down to the historic San hunter-gatherers whom the white colonists disparagingly referred to as 'Bushmen'. Their stone toolkit evolved gradually during this period, and consisted mainly of miniature implements scrapers, arrow points and woodworking tools that were attached to other materials by the use of adhesives. The bow and arrow was the main hunting weapon and towards the end of the period arrowheads of bone, then steel, used with poison, increasingly replaced stone. The bored stone, made to give more weight to digging sticks, was also a feature of this period.

An increasingly wide range of wild plant and animal foods was exploited during this period. Both marine and freshwater fish were caught, sometimes with delicate bone hooks, while shellfish were important along the coast. Among the bones of the occasional large animal we find numerous smaller ones: small buck, dassies, hares and even moles. Bored stones attest to a predilection for underground plant parts such as bulbs, corms and roots which are often highly nutritious. Fruit and berries were also much sought after.

This period has left relatively little trace in Pietermaritzburg itself, although rock shelters in the neighbourhood have produced evidence. Best known among the remains are rock paintings, most of which were done in this period. Drakensberg shelters in the cave sandstone contain the great majority of KwaZulu-Natal's rock art, though there are paintings closer afield, for example in the uMngeni valley above Table Mountain and near Shongweni. Indeed, wherever sandstone outcrops have formed suitable rock shelters, paintings may be found.

San hunter-gatherers continued to occupy the upland portions of the province, between Hilton and the Drakensberg, down to the coming of white settlers. The Voortrekkers named the escarpment which overlooks Pietermaritzburg 'Boesmansrand', and initially referred to the Msunduzi as the 'Boesmansrivier' and the Dorpspruit as the 'Klein Boesmansrivier'.

The Iron Age

The most important change in the pre-colonial past was the advent of a new way of life, labelled by archaeologists as the Iron Age. Of most significance was not so much knowledge of metals, but rather that of the farming of domestic plants and animals. Food was now produced rather than obtained from the wild. The nomadic hunter-gatherer way of life gave way to sedentary settlement with built homesteads comprising domestic accommodation, food storage structures and stock pens. Pottery, known in simple forms to the last of the Stone Age inhabitants, was now expertly fashioned and well decorated. Such distinctive pottery is a hallmark of this period. Current evidence indicates that this revolution in life style was introduced by new arrivals of Negro physical type indistinguishable from today's black population.

The Iron Age way of life developed in equatorial Africa, spreading rapidly southwards and reaching the KwaZulu-Natal coastal plain around AD250. By AD500 Iron Age villages were established throughout the coastal and savannah areas. Inland, the settlements clung to river valleys, for broad flat areas of good soil beside the rivers were preferred as village sites. These were often large in size and probably housed a few hundred people.

The Pietermaritzburg sites fit into this pattern with one slight exception, which is away from the rivers near the University. Although none has been excavated and dated, the styles of pottery indicate dates between AD500 and 800.

Since Pietermaritzburg is situated at the upper limit of savannah country in the Msunduzi valley, these Early Iron Age sites mark their furthest expansion up the valley during this period. In the same way contemporary sites in the Albert Falls area mark the furthest penetration up the uMngeni valley. However, the riverside village locations should not obscure the point that within a few hours' walk from such sites other desirable resources would be available to these communities. In particular the grasslands on the adjacent highlands, for example up towards the Hilton ridge and beyond, would have provided better spring and summer grazing than the sweeter but sparser lowland pastures which in turn have better autumn and winter grazing. Thus, although the permanent settlements remained in the valleys, the surrounding areas would also have been used for a variety of purposes such as grazing, firewood, hunting and collecting wild foods to supplement the products of farming. Each village was relatively self-sufficient, even to the smelting and production of its own iron and steel tools. We can therefore see the beginning of local industry at this time.

The lowland, village pattern of settlement gave way to a more dispersed and upland pattern around 1000 years ago. Reasons for this change are not yet well understood, but it seems that the emphasis was now on smaller and shorter term settlements. These were probably no more than the homestead of a single family group, as was the case with the Nguni-speaking peoples as far back as the earliest written records go, which is to the mid-sixteenth century accounts of shipwrecked Portuguese mariners. One such settlement was built on the shoulder of the spur overlooking the Dorpspruit in the Botanical Gardens. All that remains is a thin scatter of pottery sherds suggesting a family homestead of perhaps only a few years' duration.

The pottery of the last 900 years has relatively little decoration. Many vessels are plain, and what decoration there is usually consists of no more than a few rows of impressions on the rim or neck. An interesting find from Mountain Rise is part of a bowl carved out of soapstone, but

both in shape and decoration it is similar to pottery and even wooden vessels made by nineteenth century Zulu craftsmen. It probably dates to shortly before the arrival of white colonists.

Outside the city itself, but in the neighbourhood, are the remains of stone structures which were built during the past few centuries. Earliest of these may be the irregularly-walled areas in naturally defended sites such as one in the Umgeni Valley Nature Reserve. A similar structure at Moor Park near Estcourt, the only one yet excavated, dates to around AD1300. Later in the sequence are numerous circular stone cattle-pens which can be found in many of KwaZulu-Natal's grassland areas. Each was the centre of a homestead inhabited by ancestors of today's Nguni-speaking people. Also belonging to this late period are several collections of iron artefacts which have been dug up in recent years. These were no doubt buried by their owners for security but never reclaimed. One such batch of hoes was found at the SOMTA Factory, Plessislaer.

Thus down to the coming of the Voortrekkers, or at least to the *mfecane* of a few years earlier, the Pietermaritzburg area had been occupied for 1 300 years by settled black communities of agriculturalists. They evidently avoided the mistbelt sourveld areas from Hilton up country, but the savannah areas continued to be attractive throughout this time and from about AD1200 grassland areas with less acid soils also saw Iron Age settlement.

Local History – 18th and 19th Centuries⁴

The intrusion of Boer pastoralists into the region east of the Drakensberg in the late 1830s, the emergence of the Republic of Natalia, and the establishment of Pietermaritzburg as its capital have too often been seen as having occurred in a demographic and political vacuum. Conventional accounts see the Boers as penetrating into a region that had largely been depopulated by war in the 1820s. They describe the dealings from 1837 onward of the Boers with the Zulu kingdom to the north of the Thukela River, and with the British hunter-traders at Port Natal.

They pay very little attention to the interaction that took place between Boers and local African communities, or to the prior history of these communities. This section collates what evidence there is in recorded oral tradition on the history of the region between the upper uMngeni and upper uMkhomazi Rivers to the time of the Boer incursion. The establishment of a Boer-dominated community at Pietermaritzburg can then be set in the context of local history rather than simply in the context of Voortrekker history.

For an unknown period before about 1820 the region under discussion seems to have been dominated by the cluster of Wushe chiefdoms that occupied the uMngeni valley from what is now the Dargle area to beyond Otto's Bluff (kwaKhwela). The valley of the Msunduzi where Pietermaritzburg now stands, and the area to the west and south, was occupied by a group of Nqondo chiefdoms. According to some recorded traditions, the section of the Nqondo which lived on the site of the city and in its immediate environs was, circa 1820, under a woman chief named Machibise kaMlithwa or kaMlifa: her name survives today as the designation for part of Edendale.

⁴ This section is extracted from 'Before Mgungundlovu' by John Wright; sourced from Laband and Haswell (1988); <http://www.pmbhistory.co.za>.

Oribi during World War II⁵

From the earliest days of British rule until the departure of the last imperial troops in 1914, the military focus of Pietermaritzburg was Fort Napier, overlooking the City from rising ground to the south-west. But by 1901 the colonial government had bought the agricultural showground near the Commercial Road cemetery for use as a drill ground, and added a large brick drill hall. The site is still used today by the South African Defense Force. The Second World War saw the establishment of three large camps on the southern and southeastern outskirts of the City, about four kilometres from the centre. They were Oribi Military Hospital and Camp, the Durban Road Prisoner of War Camp and the Hay Paddock Transit Camp.

Though the City has spread outwards, and the open veld of the 1940s and 50s has been covered by residential suburbs and industrial estates, the general location of each of these camps is still easily discovered today. After the War the name Oribi was for a time synonymous with the men's residence of the University of Natal, for part of the hutted camp for some years housed a younger and more carefree population than the sick and wounded soldiers who had occupied it from 1941 to 1944. It also provided housing for returning servicemen and their families; and there were some who were both ex-servicemen and students. Today, known as Oribi Government Village, its buildings and subsequent additions are used for housing, a post office, a shop, a commando unit headquarters and a few light industries. Entrance to the village is still through the shale-built gateway where sentries stood in former days.

Not very far away, in the fairly new residential area of Epworth, an interesting landmark is the little Italian prisoners' church. This attractive stone building, with its modest tower and guardian stone lion, is a reminder that this area was once within the barbed-wire enclosure of the prison camp, and is a tribute to the craftsmanship of the prisoners of war who built it. Lastly, on the broad hill slope where Hay Paddock Camp used to be, is the suburb of Hayfields, with only a few road names such as Military Way to remind residents of the thousands of Commonwealth and Allied troops who passed through the transit camp during the five years of its existence.

Oribi Hospital

During the earlier part of 1940 elements of the Royal Natal Carbineers had been in training at a camp at Oribi, but this was a very small establishment compared to what it was to become within a year. The 1st South African Infantry Brigade had its first clash with Italian forces at El Wak, Abyssinia, on 16 December 1940, and British forces faced the imminent prospect of heavy fighting in the Middle East. The South African Government was requested to assist by establishing two 1200-bed hospitals and a convalescent depot for 2000 by the end of December 1940. Events, however, were moving fast, and 500 sick and wounded from the Middle East were expected to arrive in Durban in mid-November, with another 600 a couple of weeks later. Against this background a decision was taken to convert the Oribi infantry camp into a hospital for 2200 patients. Its situation right on the main Durban-Johannesburg railway line was no doubt a factor in the choice of the site. Carbineers who had left from Oribi for East Africa returned after a year or eighteen months to find the place almost unrecognizable, as an extensive hospital in brick hutments had been established in a very short time.

⁵ Extracted from 'Three camps of World War II' by John Deane; sourced from Laband and Haswell (1988); <http://www.pmbhistory.co.za>.

181 Military Hospital Oribi was essentially for imperial troops from various theatres of war, and was staffed by South African, British and Canadian medical personnel. The wards, mess-halls, staff accommodation, YMCA canteen (tea - a penny; dinner - one shilling and sixpence!) and recreation areas can still be seen today, converted to other uses. Even detention barracks were necessary, as illness and injury were not always guarantees of good behaviour.

The popular Officer Commanding, Colonel O.L. Shearer, of the South African Medical Corps (later to be Member of Parliament for Pietermaritzburg City from 1943 to 1961), wanted the physical surroundings at Oribi to be as pleasant as possible, and saw gardening as a useful activity for staff and a therapy for many of the patients. As a result of his encouragement and personal example, the spaces between the hutments were soon transformed into attractive lawns and gardens. The formation of the Oribi Military Hospital Association brought about co-ordination of all entertainments and sports for staff and patients and, together with the fortnightly Oribi News, contributed to the strong community feeling which developed.

Situated outside the perimeter of the hospital itself were the barracks of the Women's Auxiliary Army Service, the headquarters of the Officer Commanding, a Motor Transport Depot, Number 6 Provo Company of the Military Police, and a tented Convalescent Camp for those who had been discharged from the hospital but were not yet fit enough to resume active service. The military police were responsible for policing not only the City, with its various places of entertainment for servicemen, but also the railway as far as Germiston, and the military camp at Ladysmith. They also had to provide additional guards when large contingents of prisoners of war arrived at or left the nearby prison camp. Some Italian prisoners were released on parole, to work at Oribi as orderlies, artisans or in other specialized jobs. The military police, for example, tired of their food being ruined by incompetent cooks, obtained the services of two prisoners. One of them had been personal chef to General Graziani, the Governor of Italian Somaliland, and the other had worked in the kitchen of a large hotel in Rome. The improvement is not hard to imagine!

In April 1944 the British War Office decided to shut down Oribi Hospital, and by the middle of that year only a handful of patients and nurses remained.

Italian Prisoner of War Church, Oribi⁶

After being limited to a few families for so many decades, the Italian community in Pietermaritzburg increased enormously and unwillingly during the Second World War, when thousands of POWs and a smaller number of civilian internees were incarcerated in a camp in the Mkondeni area, close to the old Durban road. The first batch, captured in East Africa, arrived during 1941. They lived in tents, and were guarded by members of the Cape Coloured Corps. According to the authors of the *Annals of the Scottsville Area*, they were docile and well-behaved, unlike the German prisoners, who dug tunnels and tried to escape, until sent elsewhere. By 1943 the Italian inmates numbered about 5000.

The most impressive and lasting of the prisoners' achievements during their four years of captivity was the building of a church. The chaplain suggested the idea and construction started in 1943, after a ritual benediction of the first stone on 2 February. The shale blocks were quarried two kilometres away and hauled by human muscle power in makeshift carts to

⁶ Extract from Candy (1988: 72, 73, 75).

the building site. According to the report in the booklet *In Attesa*, the civilian population living in the area had no idea that this type of shale was suitable for building.

The project might have been stillborn had it not been for the provision of basic tools and other assistance authorized by a member of the camp staff, Major B.C. Knight. Even so, the difficulties were formidable. Cement was in short supply owing to the war, so the mortar was made of mud and the scanty supply of cement, financed in part by the sale of the prisoners' cigarette rations, was used only to 'point' the face of each wall. To quote the chaplain, the walls grew a few centimeters each day, 'cemented more by the sweat of the labourers than by the virtue of the mortar'.

The care with which the stone blocks were shaped and fitted together must be seen to be appreciated. After 13 months of dedicated toil, the church was completed. Built in a style all its own – *piu vicino al dorico ehe al eomposito romano* – it is 17.3 metres in length, 7.5 metres wide and has a tower 9.5 metres high. The cornice bears the inscription MATRI DIVINAE GRATIAE CAPTIVI ITALICI A.D. MCMXLIV. Two lions rampant, sculptured by the prisoners, were placed outside. The ceremony of inauguration and consecration was performed on Sunday, 19 March 1944 by the Apostolic Delegate, the Rt Revd Archbishop van Gijlswijk, and was followed by a Pontifical Mass. For the remaining months of the war, services were held regularly. There were no pews but music was provided by a small harmonium played by Fiasconaro.

'I never hear the quiet tolling of the bell at sunset and early in the morning,' wrote the Camp Commandant, Major Lowe, 'without thinking how grateful (the prisoners) must be for this link with their homes, many thousands of miles away.'

After the war, the camp was disbanded and the church stood alone by the roadside, forgotten and neglected. Vagrants, migrating between the Rand and the coast, used it as an over-night shelter. Fires were lit in the nave and rubbish accumulated. Vandals ripped off the doors and shattered the stained glass windows. One of the lions was smashed beyond repair. Father Anton Dovigo, holidaying in South Africa in 1962, was shocked by the church's condition and started collecting funds for its restoration. Ex-prisoners in Italy and South Africa contributed. A new bell was cast and sent free of charge to Durban. An ex-prisoner, Mr Salvatore Fardella, undertook the task of placing the new bell in the tower. At an impressive ceremony held in 1963, the bell was blessed by the Most Reverend Archbishop Denis Hurley and rung for the first time by the Mayoress, Mrs Eva Bulman.

After its restoration the church was looked after by an Italian immigrant, Mr Raffaele Dalmonte, now deceased. He kept the church clean, carried out routine repairs and provided flowers for the monthly Mass, continuing to do so until the building was declared a National Monument and the NM Commission took over responsibility for its upkeep. Apart from the absence of one of the lions, it has been fully restored, though today it stands in a street and is surrounded by suburban houses – an incongruous setting that accentuates its uniqueness. The building is enriched by the very poverty of its component parts, and the visitor can sense in its austere simplicity the depth of feeling that inspired the homesick prisoners to leave behind on South African soil such a beautiful monument to their faith.

APPENDIX C

SUMMARY OF HERITAGE SIGNIFICANCE: PIETERMARITZBURG AEROCLUB CLUBHOUSE

Erf number	Date built	Type of building			
	?1947/8	Social - clubhouse			
Style	Architectural period	Present NHRA protection			
		General – older than 60 years			
Street address	Alterations	Use			
Pharazyn Way Pietermaritzburg	Two extension phases	Clubhouse			
		Zoning			
Date of survey		?Industrial			
6 October 2011					
Name of the building	General evaluation	Suggested grading			
Pietermaritzburg Aeroclub Clubhouse	Significant	Grade IIB			
Description	History	Social history	Date of photograph(s):	6 October 2011	
Significance in terms of NHRA					
	Very significant	Significant	Some significance	No significance	Not assessed
Historic		√			
Rarity	√				
Aesthetic			√		
Technological			√		
Cultural		√			
Social history		√			
Representivity	√			√	

APPENDIX D

METHODOLOGY

Site survey

eThembeni staff members have inspected the areas surrounding the fenced runway and terminal buildings on numerous occasions, and contacted members of the Pietermaritzburg Aeroclub on 5 and 6 October 2011. Ms Wahl also visited the club premises on the latter date and interviewed club member Mr Dave Campbell. She interviewed Mrrs Martin Hellberg and Ian Parker telephonically.

We completed controlled-exclusive surface surveys of the undeveloped land surrounding the terminal buildings, hangars and landing strip, where 'sufficient information exists on an area to make solid and defensible assumptions and judgements about where [heritage resource] sites may and may not be' and 'an inspection of the surface of the ground, wherever this surface is visible, is made, with no substantial attempt to clear brush, turf, deadfall, leaves or other material that may cover the surface and with no attempt to look beneath the surface beyond the inspection of rodent burrows, cut banks and other exposures that are observed by accident' (King 1978; see bibliography for other references informing methodological approach).

The site surveys comprised unsystematic walks and drives along existing tracks and across fields, with the exception of areas with high vegetation density and wetlands. Photographs were taken with a Nikon Coolpix camera and a representative selection is included in Appendix E. Geographic coordinates were obtained using a handheld Garmin global positioning unit (WGS 84).

Database and literature review

No archaeological site data was available for the project area from the Natal Museum database. A concise account of the archaeology and history of the airport site and the broader study area was compiled from sources including those listed in the bibliography.

Assessment of heritage resource value and significance

Heritage resources are significant only to the extent that they have public value, as demonstrated by the following guidelines for determining site significance developed by Heritage Western Cape in 2007 and utilised during this assessment.

Grade I Sites (National Heritage Sites)

Regulation 43 Government Gazette no 6820. 8 No. 24893 30 May 2003, Notice No. 694 states that:

Grade I heritage resources are heritage resources with qualities so exceptional that they are of special national significance should be applied to any heritage resource which is

- a) Of outstanding significance in terms of one or more of the criteria set out in section 3(3) of the NHRA;
- b) Authentic in terms of design, materials, workmanship or setting; and is of such universal value and symbolic importance that it can promote human understanding and contribute to nation building, and its loss would significantly diminish the national heritage.

1. Is the site of outstanding national significance?
2. Is the site the best possible representative of a national issue, event or group or person of national historical importance?
3. Does it fall within the proposed themes that are to be represented by National Heritage Sites?
4. Does the site contribute to nation building and reconciliation?
5. Does the site illustrate an issue or theme, or the side of an issue already represented by an existing National Heritage Site – or would the issue be better represented by another site?
6. Is the site authentic and intact?
7. Should the declaration be part of a serial declaration?
8. Is it appropriate that this site be managed at a national level?
9. What are the implications of not managing the site at national level?

Grade II Sites (Provincial Heritage Sites)

Regulation 43 Government Gazette no 6820. 8 No. 24893 30 May 2003, Notice No. 694 states that:

Grade II heritage resources are those with special qualities which make them significant in the context of a province or region and should be applied to any heritage resource which -

- a) is of great significance in terms of one or more of the criteria set out in section 3(3) of the NHRA; and
- (b) enriches the understanding of cultural, historical, social and scientific development in the province or region in which it is situated, but that does not fulfil the criteria for Grade 1 status.

Grade II sites may include, but are not limited to –

- (a) places, buildings, structures and immovable equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites; and
- (g) graves and burial grounds.

The cultural significance or other special value that Grade II sites may have, could include, but are not limited to –

- (a) its importance in the community or pattern of the history of the province;
- (b) the uncommon, rare or endangered aspects that it possess reflecting the province's natural or cultural heritage
- (c) the potential that the site may yield information that will contribute to an understanding of the province's natural or cultural heritage;
- (d) its importance in demonstrating the principal characteristics of a particular class of the province's natural or cultural places or objects;
- (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group in the province;
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period in the development or history of the province;
- (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons; and

- (h) its strong or special association with the life or work of a person, group or organization of importance in the history of the province.

Grade III (Local Heritage Resources)

Regulation 43 Government Gazette no 6820. 8 No. 24893 30 May 2003, Notice No. 694 states that:

Grade III heritage status should be applied to any heritage resource which

- (a) fulfils one or more of the criteria set out in section 3(3) of the NHRA; or
- (b) in the case of a site contributes to the environmental quality or cultural significance of a larger area which fulfils one of the above criteria, but that does not fulfill the criteria for Grade 2 status.

Grade IIIA

This grading is applied to buildings and sites that have sufficient intrinsic significance to be regarded as local heritage resources; and are significant enough to warrant *any* alteration being regulated. The significances of these buildings and/or sites should include at least some of the following characteristics:

- Highly significant association with a
 - historic person
 - social grouping
 - historic events
 - historical activities or roles
 - public memory
- Historical and/or visual-spatial landmark within a place
- High architectural quality, well-constructed and of fine materials
- Historical fabric is mostly intact (this fabric may be layered historically and/or past damage should be easily reversible)
- Fabric dates to the early origins of a place
- Fabric clearly illustrates an historical period in the evolution of a place
- Fabric clearly illustrates the key uses and roles of a place over time
- Contributes significantly to the environmental quality of a Grade I or Grade II heritage resource or a conservation/heritage area

Such buildings and sites may be representative, being excellent examples of their kind, or may be rare: as such they should receive maximum protection at local level.

Grade IIIB

This grading is applied to buildings and/or sites of a marginally lesser significance than grade IIIA; and such marginally lesser significance argues against the regulation of internal alterations. Such buildings and sites may have similar significances to those of a grade IIIA building or site, but to a lesser degree. Like grade IIIA buildings and sites, such buildings and sites may be representative, being excellent examples of their kind, or may be rare, but less so than grade IIIA examples: as such they should receive less stringent protection than grade IIIA buildings and sites at local level and internal alterations should not be regulated (in this context).

Grade IIIC

This grading is applied to buildings and/or sites whose significance is, in large part, a significance that contributes to the character or significance of the environs. These buildings

and sites should, as a consequence, only be protected and regulated *if the significance of the environs is sufficient to warrant protective measures*. In other words, these buildings and/or sites will only be protected if they are within declared conservation or heritage areas.

Assessment of development impacts

A heritage resource impact may be defined broadly as the net change, either beneficial or adverse, between the integrity of a heritage site with and without the proposed development. Beneficial impacts occur wherever a proposed development actively protects, preserves or enhances a heritage resource, by minimising natural site erosion or facilitating non-destructive public use, for example. More commonly, development impacts are of an adverse nature and can include:

- destruction or alteration of all or part of a heritage site;
- isolation of a site from its natural setting; and / or
- introduction of physical, chemical or visual elements that are out of character with the heritage resource and its setting.

Beneficial and adverse impacts can be direct or indirect, as well as cumulative, as implied by the aforementioned examples. Although indirect impacts may be more difficult to foresee, assess and quantify, they must form part of the assessment process. The following assessment criteria have been used to assess the impacts of the proposed development on identified heritage resources:

Criteria	Rating Scales	Notes
Nature	Positive	An evaluation of the type of effect the construction, operation and management of the proposed development would have on the heritage resource.
	Negative	
	Neutral	
Extent	Low	Site-specific, affects only the development footprint.
	Medium	Local (limited to the site and its immediate surroundings, including the surrounding towns and settlements within a 10 km radius);
	High	Regional (beyond a 10 km radius) to national.
Duration	Low	0-4 years (i.e. duration of construction phase).
	Medium	5-10 years.
	High	More than 10 years to permanent.
Intensity	Low	Where the impact affects the heritage resource in such a way that its significance and value are minimally affected.
	Medium	Where the heritage resource is altered and its significance and value are measurably reduced.
	High	Where the heritage resource is altered or destroyed to the extent that its significance and value cease to exist.
Potential for impact on irreplaceable resources	Low	No irreplaceable resources will be impacted.
	Medium	Resources that will be impacted can be replaced, with effort.
	High	There is no potential for replacing a particular vulnerable resource that will be impacted.
Consequence (a combination of extent, duration, intensity and the potential for impact on irreplaceable resources).	Low	A combination of any of the following: - Intensity, duration, extent and impact on irreplaceable resources are all rated low. - Intensity is low and up to two of the other criteria are rated medium. - Intensity is medium and all three other criteria are rated low.
	Medium	Intensity is medium and at least two of the other criteria are rated medium.
	High	Intensity and impact on irreplaceable resources are rated high, with any combination of extent and duration. Intensity is rated high, with all of the other criteria being rated medium or higher.
Probability (the likelihood of the	Low	It is highly unlikely or less than 50 % likely that an impact will occur.

Criteria	Rating Scales	Notes
impact occurring)	Medium	It is between 50 and 70 % certain that the impact will occur.
	High	It is more than 75 % certain that the impact will occur or it is definite that the impact will occur.
Significance (all impacts including potential cumulative impacts)	Low	Low consequence and low probability. Low consequence and medium probability. Low consequence and high probability.
	Medium	Medium consequence and low probability. Medium consequence and medium probability. Medium consequence and high probability. High consequence and low probability.
	High	High consequence and medium probability. High consequence and high probability.

Assumptions and limitations of this HIA

- The description of the proposed project, provided by the client, is assumed to be accurate.
- The public consultation process undertaken as part of the Environmental Impact Assessment is sufficient and adequate and does not require repetition as part of the heritage impact assessment. However, eThembeni interviewed various Pietermaritzburg Aeroclub members as part of the process of establishing the clubhouse's significance.
- Soil surface visibility was moderate. Heritage resources might be present below the surface or in areas of dense vegetation and we remind the client that the NHRA requires that a developer cease all work immediately and observe the protocol in Section any heritage resources, as defined in the Act, be discovered during the course of development activities.
- No subsurface investigation (including excavations or sampling) were undertaken, since a permit from Amafa is required to disturb a heritage resource.
- eThembeni is not able to provide a specialist palaeontological assessment for this project and informed the client as much at the time of quotation.
- A key concept in the management of heritage resources is that of non-renewability: damage to or destruction of most resources, including that caused by bona fide research endeavours, cannot be reversed or undone. Accordingly, management recommendations for heritage resources in the context of development are as conservative as possible.
- Human sciences are necessarily both subjective and objective in nature. eThembeni staff members strive to manage heritage resources to the highest standards in accordance with national and international best practice, but recognise that their opinions might differ from those of other heritage practitioners.
- Staff members involved in this project have no vested interest in it; are qualified to undertake the tasks as described in the terms of reference (refer to Appendix F); and comply at all times with the Codes of Ethics and Conduct of the Association of Southern African Professional Archaeologists.
- eThembeni staff members take no personal or professional responsibility for the misuse of the information contained in this report, although they will take all reasonable precautions against such misuse.

APPENDIX E

PHOTOGRAPHS



Plate 1 The north-western side of the original rounded rectangular stone clubhouse building.



Plate 2 The north-western side of the original clubhouse building with extensions to the west.



Plate 3 An original external wall, enclosed by later extensions.



Plate 4 An original painted metal sliding door.



Plate 5 An original external stone chimney.



Plate 6 Mr Dave Campbell viewing an original stone exterior wall, now enclosed.

APPENDIX F**SPECIALIST COMPETENCY AND DECLARATION OF INDEPENDENCE****Specialist competency**

Len van Schalkwyk is accredited by the Cultural Resources Management section of the Association of South African Professional Archaeologists (ASAPA) and the Association of Professional Heritage Practitioners (APHP) to undertake HIAs in South Africa. Mr van Schalkwyk has a master's degree in archaeology (specialising in the history of early farmers in southern Africa) from the University of Cape Town and 25 years' experience in heritage management. He has worked on projects as diverse as the establishment of the Ondini Cultural Museum in Ulundi, the cultural management of Chobe National Park in Botswana and various archaeological excavations and oral history recording projects. He was part of the writing team that produced the KwaZulu-Natal Heritage Act 1997. He has worked with many rural communities to establish integrated heritage and land use plans and speaks good Zulu.

In 2001 Mr van Schalkwyk left his position as assistant director of Amafa aKwaZulu-Natali, the provincial heritage management authority, to start eThembeni in partnership with Elizabeth Wahl, who was head of archaeology at Amafa at the time. Over the past decade and a half they have undertaken almost 1500 HIAs throughout South Africa, as well as in Mozambique.

Declaration of independence

I declare that I, Len van Schalkwyk, and eThembeni Cultural Heritage have no financial or personal interest in the proposed development, nor its developers or any of its subsidiaries, apart from in the provision of HIA and management consulting services.



Principal Investigator.

Curriculum Vitae

Position:	Director / Heritage Consultant
Name of Firm:	eThembeni Cultural Heritage Management
Name:	Leonard Outram van Schalkwyk
Profession:	Archaeologist; Heritage Practitioner
Date of birth:	7 July 1959
Position in firm:	Director
Years with Firm:	15
Professional Membership and Association:	Association of Professional Heritage Practitioners – Accredited Member: 2016 South African Association of Archaeologists: 1984 – 1998. Association of Southern African Professional Archaeologists (ASAPA): 1998 – present. ASAPA Council Member - Cultural Resources Management Portfolio (CRM): 2011 – 2017. ASAPA CRM Section - listed as Principal Investigator since 1998. Amafa aKwaZulu-Natali accredited heritage practitioner since 2001. SAHRA Archaeological Permit Advisory Committee (2004/5). South African member of International Scientific Committee for Archaeological Management, elected by ICOMOS-SA Executive (1999 - 2000). Provincial Representative: South African World Heritage Convention Committee (1998 - 2000). Southern African Museums Association (1984 -1999).
Specialisation :	CRM Accreditation: Principal Investigator: Later Stone Age and Iron Age archaeology; Ancestral Graves Management.
Academic qualifications :	BA Hons. Archaeology(Stell) 1982; MA Archaeology (UCT) 1992
Specified Skills:	Cultural Heritage Impact Assessment. * * [as required by the National Environmental Management Act 107 of 1998 as amended (NEMA), in compliance with Section 38 of the National Heritage Resources Act 25 of 1999 as amended (NHRA), other relevant SADEC national heritage legislations and UNESCO/ICOMOS and IMF/WB/IFC standards and guidelines for international best practice.]

Key Qualifications and Relevant Experience

I have 30 years of professional experience as a practising archaeologist and heritage resource practitioner in South Africa, Lesotho, Namibia, Botswana and Mozambique. My research interests have focussed on the Iron Age of southern Africa, while my management specialisations are heritage impact assessments, community liaison and ancestral grave management. I have successfully run a heritage management consultancy as a going business concern for the past 15 years. My key heritage management, tourist guide training and research initiatives include:

- Principal Investigator - survey and excavation of heritage resources in Richards Bay Minerals' concession areas, KwaZulu-Natal, including oral history recording programme with traditional wisdom keepers to ensure appropriate mitigation. Procedures regarding discovery, retrieval and re-interment of human remains were satisfactorily negotiated.
- Member of the Ministerial Monuments Task Group committee to formulate the KwaZulu-Natal Heritage Act No 10 of 1997.
- Implementation of the cultural resources management plan for the uKhahlamba Drakensberg Park (CURE), focussing on rock art management.
- ICOMOS (SA) observer for uKhahlamba Drakensberg Park World Heritage Site assessment.
- Maloti / Drakensberg Transfrontier Conservation and Development Area project feasibility assessment for the Global Environment Facility of the World Bank (GEF). Worked both in Lesotho and South Africa.
- Mnweni Valley cultural landscape management, northern uKhahlamba / Drakensberg - cultural tourist guide training, development of integrated land use and cultural heritage management plan, co-ordination of displays for interpretive centre.

- Reichenau Mission, southern uKhahlamba/Drakensberg - cultural tourist guide training; permaculture design workshop, compilation of infrastructural development plan with local community, including establishment of a community Trust, upgrade of access roads, building restoration, skills training and empowerment. SA Catholic Bishops Conference.
 - Specialist report on coastal zone management of KwaZulu-Natal for Environmental Evaluation Unit of the University of Cape Town.
- Lead consultant - cultural resources assessment of uThukela Water Scheme for Department of Water Affairs and Forestry and Institute of Natural Resources.
- Fencing and stabilisation of excavated deposits at Border Cave, Ingwavuma district, KZN.
- Excavation of middens at King Shaka's KwaBulawayo iKhanda in collaboration with Gavin Whitelaw (Natal Museum).
- Co-Director, Isandlwana Archaeological Project, with Glasgow University Archaeology Research Division
- Cultural heritage management of greater Chobe Conservation area in Botswana – Department of Parks and Wildlife. Production of policy document for submission to World Wildlife Fund.
- Archaeological Impact Assessment Riversdale Coal, Tete, Mozambique for Golder and Associates.
- Heritage Practitioner – DAC Legacy Project - Oliver Tambo Homestead and Memorial Site development at Inkantolo, and
 - Khananda Hill Memorial Site, Bizana, Eastern Cape – for the Independent Development Trust and National Department of Arts and Culture
 - DAC Legacy Project – JL Dube Homestead and Ohlange Institute Heritage Site development - for the Independent Development Trust and National Department of Arts and Culture.

I have completed more than 1000 heritage impact assessments and specialist studies throughout southern Africa including the Republic, Lesotho, Namibia, Botswana and Mozambique. My most current heritage management projects are all listed on SAHRIS (<http://www.sahra.org.za>).

Dams, Water and Sewerage Supply Projects	
Kingsburgh sewer	Environmental Planning and Design
Veary/Jacaranda Road sewer	WSP Environment & Planning
Ozwathini bulk water supply	Ibhongo Consulting cc
Richmond Water Pipeline, Pure Water Rising Main from Mtubatuba Water Treatment Works to Mtubatuba Heights Reservoir. Construction of New Water Mains on the Western Shores and a Water Reservoir near St Lucia, Eastern Shores, Isimangaliso Wetland Park, KZN	ACER (Africa)
Pholela Dam, Himeville, KZN	Pholela Irrigation Board
Sikoto Dam, Appelsbosch / Noodsberg, KZN	Alletson Ecologicals
King Williamstown Bulk Regional Sewage Scheme: Phases 2 - 7, and Ugie dam sites, Eastern Cape	Terreco (Pty) Ltd
Assagay Trunk Water Pipeline and Umdloti Waste Water Pipeline, La Mercy, KZN and Mount Ayliff - Ntsizwa Weirs Water Supply Scheme, Eastern Cape	Arcus GIBB
Eshowe Bulk Water Supply Project, KZN	WSP Environment & Energy
Mvutshane Dam, Mapumulo, KZN. Exhumation and reinterment of 54 graves within FSL. 2013-2014. Amafa approved.	Umgeni Water
River sand mining on a Portion 10 of the Farm Rensburg No 797, Estcourt; Street Spirit Trading 54 (Pty) Ltd Colliery, Glencoe, KZN and DR08473, DR08111 and Ntinga borrow pit upgrades, Mbizana, Eastern Cape	Terratest (Pty) Ltd
River sand mining, Portion of Inanda Location No 4675, Pinetown Magisterial District, KZN	Inhlabathi Quarrying and Trading cc
Ludeke Dam, Bizana, Eastern Cape. Exhumation and reinterment of 24 graves within FSL. 2012–2014. SAHRA approved.	Umgeni Water.
Transnet pipeline river crossing, uMvoti River, KZN	BKS (Pty) Ltd
Thukela Hydro Electric Power Scheme, KZN	ACER (Africa)
Ludeke Dam borrow pit and ancestral graves exhumation (n=24), Bizana, Eastern Cape	MBB Consulting Engineers for Umgeni Water
Mvutshane Dam – HIA and ancestral graves management	Umgeni Water
Mzimvubu Water Project EIA: Proposed dams on the Tsintsa River, Eastern Cape	Iliso Consulting (Pty) Ltd for DWAF
Communities affected by Paris Dam: negotiation of appropriate mitigation for exhumation and reinterment of 48 ancestral graves.	DWAF/Polela Water Board

Residential, commercial and mixed-use projects	
Expansion of Aluminor Facility, Pietermaritzburg	WSP Environment & Energy
Amber Lakes housing development	Terratest (Pty) Ltd
Felixton petrol filling station	SiVEST Environmental Division
Umgeni Business Park	Guy Nicolson Consulting cc
Gates residential development, Hilton Estate, KZN	Environmental Planning and Design
Umlazi Uganda housing development, KZN	EThekweni Metropolitan Municipality
Tulele housing development, Shakaskraal, KZN	Indiflora cc
Glenwood North-East Sector Phase 2 housing development, Pietermaritzburg, KZN	JEC Environmental Services
Hull Valley housing development, Craigieburn; Ekwandeni housing development, Hammarsdale; Emapheleni housing development, Clermont, KZN	NDG-Africa
Msunduzi Waterfront Development, Pietermaritzburg, KZN	Ocean Spray Investments (Pty) Ltd
Izinga Phase 3 residential development and Lungisisa Indlela Village, Umhlanga; and Zimbali Lakes residential development, Ballito, KZN	SiVEST Environmental Division
Mpola Phase 3 housing development, Pinetown, KZN	SRK Consulting
Driefontein Gardens Estate development, Shakas Rock, KZN	Dewanig Investments cc
Groutville Priority 1 Phase 2 and Chris Hani residential developments, Darnall, KZN	KwaDukuza Municipality
Bhanoyi Country Estate, Rietvlei, KZN	Bhanoyi Property Holdings (Pty) Ltd
Amaotana housing development, Verulam, KZN	2G Environmental Management
Housing, commercial and industrial development, Ixopo, KZN	The Craigie Burn Land Trust
Ashburton housing development, Pietermaritzburg, KZN	Oro Management cc
Compensation Flats Industrial and Business Park Development, Compensation; Inyaninga Mixed Use Development, Tongaat; and uShukela Highway Business and Office Park Development.	Tongaat Hulett Developments

Roads and bridges	
Mkhambathi road upgrade, Eastern Cape	Arcus GIBB
N3TC Route Location Initiative: Warden to Keeversfontein – De Beers Pass Section, Free State Province	Cave Klapwijk and Associates for SANRAL
N2 Pondoland Toll Route	CCA Environmental Consultants for SANRAL
Proposed N2–Mvezo Village link road and bridge, Eastern Cape	SSI for Chris Hani DM
National Road 2 Section 26 from Mt Edgecombe Interchange to Tongaat Toll Plaza; Improvements to Umgeni Road Interchange on National Route 2, Section 25, KZN	Terratest (Pty) Ltd for SANRAL
Road Upgrade and Borrow Pits, Rehabilitation of N2 between Ngcweleni River and Brookes Nek, Umzimvubu Local Municipality, Eastern Cape	Terreco (Pty) Ltd for SANRAL
Construction and Upgrading of Ingquza Hill to Mangwanini; Mpophomeni; and Matheko River to Msikaba AA Access Roads; Vialiti road upgrades, Mthatha, Eastern Cape	WSP Environment & Energy for Alfred Nzo DM
Mnini (Bonnyrigg) Interchange on National Route 2 Section 24 (Km 1.8), Ethekeeni Metropolitan Municipality, KZN	Afzelia Environmental Consultants
Trade Zone Watson Highway Link Road, La Mercy, KZN	Arcus GIBB for eThekweni Municipality
Power lines and substations	
Patensie-Kareedouw, Idutywa-Gatyana, Mafini-Tombo, Melkspruit-Riebeek, Ruigtevallei-Dreunberg 132kV transmission infrastructure, Eastern Cape	Arcus GIBB for Eskom Transmission
Rosedale-Libode 132kV infrastructure	Indwe Environmental Consulting
Mbongolwane-Sitilo 132kV Line, Kranskop-Sitilo 132kV Line Loop Loop Out at Madungela Substation and Madungela Substation 132kV & Sitilo Substation 132kV Line Bay Establishment. Pomeroy-Ezakheni 132kV Kingbird Line	iSineke Developments for Eskom Reticulation
Grassridge(Coega)-Victoria West 765kV Transmission Line	ACER (Africa) for Eskom
Majuba-Nhlazatshe-Richards Bay 400kV Transmission Line	Iliso Consulting (Pty) Ltd for Eskom
Majuba-Nhlazatshe-Richards Bay 400kV Transmission Line	Stemele Bosch Africa (Pty) Ltd for Eskom
Majuba-Ingula-Venus 400kV Transmission Line	Cave Klapwijk and Associates for Eskom
Msinga Pomeroy 132kV Power line and Substation, KZN	Stemele Bosch Africa (Pty) Ltd for Eskom
Venus-Sigma-Hector-(Ariadne) 765kV Transmission Isundu S/S	ACER (Africa) for Eskom Transmission

Mining and Borrow Pits		
Aggregate mining on unregistered state land, AA 17 (Goso), Ngcobo Local Municipality, Eastern Cape		JP Mbete and Sons Trading and Projects cc
River sand mining on a Portion 10 of the Farm Rensburg No 797, Estcourt; Street Spirit Trading 54 (Pty) Ltd Colliery, Glencoe, KZN and DR08473, DR08111 and Ntinga borrow pit upgrades, Mbizana, Eastern Cape		Terratest (Pty) Ltd
River sand mining, Portion of Inanda Location No 4675, Pinetown Magisterial District, KZN		Inhlabathi Quarrying and Trading cc
Two borrow pits, Ugie, Eastern Cape		Terreco (Pty) Ltd
Zonderwater Coal Mine – heritage baseline studies		EcoInfo for Exxaro Mining
Ludeke Dam borrow pit and ancestral graves exhumation (n=24), Bizana, Eastern Cape		MBB Consulting Engineers for Umgeni Water
Residential, commercial and mixed-use projects		
Expansion of Aluminor Facility, Pietermaritzburg		WSP Environment & Energy
Amber Lakes housing development		Terratest (Pty) Ltd
Felixton petrol filling station		SiVEST Environmental Division
Umgeni Business Park		Guy Nicolson Consulting cc
Gates residential development, Hilton Estate, KZN		Environmental Planning and Design
Umlazi Uganda housing development, KZN		EThekweni Metropolitan Municipality
Tulele housing development, Shakaskraal, KZN		Indiflora cc
Glenwood North-East Sector Phase 2 housing development, Pietermaritzburg, KZN		JEC Environmental Services
Hull Valley housing development, Craigieburn; Ekwandeni housing development, Hammarsdale; Emapheleni housing development, Clermont, KZN		NDG-Africa
Msunduzi Waterfront Development, Pietermaritzburg, KZN		Ocean Spray Investments (Pty) Ltd
Izinga Phase 3 residential development and Lungisisa Indlela Village, Umhlanga; and Zimbali Lakes residential development, Ballito, KZN		SiVEST Environmental Division
Mpola Phase 3 housing development, Pinetown, KZN		SRK Consulting
Driefontein Gardens Estate development, Shakas Rock, KZN		Dewanig Investments cc
Groutville Priority 1 Phase 2 and Chris Hani residential developments, Darnall, KZN		KwaDukuza Municipality
Bhanoyi Country Estate, Rietvlei, KZN		Bhanoyi Property Holdings (Pty) Ltd
Amaotana housing development, Verulam, KZN		2G Environmental Management
Housing, commercial and industrial development, Ixopo, KZN		The Craigie Burn Land Trust
Ashburton housing development, Pietermaritzburg, KZN		Oro Management cc
Compensation Flats Industrial and Business Park Development, Compensation; Inyaninga Mixed Use Development, Tongaat; and uShukela Highway Business and Office Park Development.		Tongaat Hulett Developments
Other		
Heritage resource monitoring, Zulti South Mineral Lease Area		Richards Bay Mining
Richmond Cemetery Site		Arcus GIBB
Edendale Private Hospital, Pietermaritzburg, KZN		Edenvision Medical Holdings (Pty) Ltd
Estcourt and Nkandla Correctional Facilities, KZN		Vuka Planning Africa Inc
Rocky Brae broiler farm, Baynesfield, KZN		Ludloko Developments cc
SAPS shooting range, Ulundi, KZN		NDG-Africa
Makhathini Sugar Cane Project, KZN		Phatisa Equity (Pty) Ltd
Long-Haul Fibre Infrastructure Network, Gauteng, Mpumalanga, Free State and KZN		Netronix
Forensic science laboratory, Pinetown, KZN		SiVEST Environmental Division
Raymond's Airfield, Darnall, KZN		Robanting Services cc
Amajuba District Municipality cemetery sites; and Public cemetery, Newcastle, KZN		Udidi Project Development Company
Maphumulo Prison, KZN		Department of Public Works Pretoria
Strategic Environmental Assessments (SEA's) and Local Development Plans (LDP's)		
Newcastle SEA		Izibuko se Afrika
Ilembe DM EMF		SSI
Ugu EMF		Mott MacDonald International
Regional Cultural Tourism Route Identification R66/R68, KZN		COGTA, KZN
Transfrontier SEA Thermal Coal Mines – Botswana/RSA		Mott MacDonald International

Mkhambati Nature Reserve and local communities LDP	Eastern Cape Parks
Sodwana Bay Tourism Node and Beach Rehabilitation LDP	Acer(Africa) and Isimangaliso Wetland Park Authority
St Lucia town precinct, boardwalks and beach access LDP	Acer(Africa) and Isimangaliso Wetland Park Authority

Ancestral graves management

- Communities affected by Paris Dam – DWAF/Polela Water Board: negotiation of appropriate mitigation for exhumation and reinterment of 48 ancestral graves. 1996-7.
- Inyaninga Hindu Cemetery. Dube Trade Port. Institute of Natural Resources (UKZN) for ACCSA. 2010.
- Graves and Burial Grounds Policy for Tongaat Hulett Developments, KZN. 2012.
- Embo Community Trust - Cotswold Downs Grave Mediation for Keith Wakefield / Luke Bales Developments. 2010-2014. LRDA.
- Grave Mediation Process: Eagles Eyre Estate, Camperdown, KZN for Intense Heat Investments (Pty) Ltd. 2011-2012. Amafa approved.
- Kwandengezi residential development. Aurecon for eThekweni Municipality. 2012–2013.
- Mbonambi family graves - negotiation of appropriate mitigation for exhumation and reinterment of two ancestral graves at Dlambula School, Umgababa/Mnini. Department of Public Works and Ithala Bank. 2014.
- Identification of 550 graves in Zulti South Mineral Lease Area and community negotiations for graves management. Richards Bay Mining (Rio Tinto). 2011-2016. Amafa approved. Ongoing.
- Ludeke Dam, Bizana, Eastern Cape for Umgeni Water. Exhumation and reinterment of 24 graves within FSL. 2012–2014. SAHRA approved.
- Mvutshane Dam, Mapumulo, KZN for Umgeni Water. Exhumation and reinterment of 54 graves within FSL. 2013-2014. Amafa approved. Completed. December 2014.
- Proposed Fuleni Coal Mine for Jacana Environmental / Ibutho Coal. Terminated due to community resistance. 2014.
- Grave mediation. Mlaba Traditional Authority. Ukhuko Mine. For Zululand Anthracite Collieries. 2015.

Community liaison

- Nxamalala and Bhengu Traditional Authorities - investigated declaration of archaeological conservancy in lower uThukela River Basin.
- Mpungose Traditional Authority - negotiated extended boundaries of Ondini Historical Reserve.
- Mngomezulu Traditional Authority - negotiated management of Border Cave archaeological site.
- Bhekeshowe Traditional Authority - investigated feasibility of developing King Shaka's KwaBulawayo site as a tourist destination.
- Mangwebuthanani Traditional Authority - negotiated establishment of Isandlwana Historical Reserve.
- Mbonambi and Sokhulu communities - negotiated mitigation and future practice regarding exposure of human remains by Richards Bay Minerals' mining activities on ancestral lands.
- Khovokeni and Mvutshane communities at Kosi Bay - investigated feasibility of declaring Tsonga fish traps as significant cultural landscape;
- Amangwane and Amazizi Traditional Authorities - Mweni Valley cultural landscape management plan for inclusion into the uKhahlamba / Drakensberg World Heritage Site.
- Amangwane and AmaZizi Traditional Authorities – establishment of Cultural Centres and Cultural Guide training / Rock Art Custodians in the Mweni Area of the Okhahlamba/Drakensberg World Heritage Site.
- KwaNdengezi *in situ* housing and infrastructure upgrade - negotiation of appropriate mitigation for exhumation and reinterment of 30 ancestral graves. eThekweni Metropolitan Municipality.
- Dube and Mkhwanazi communities – management of 550 graves in Zulti South Mineral Lease Area for Richards Bay Mining.
- Dodoma Avenue/Kennedy Road Hindu Burial Site. Clare Estate Development Forum and eThekweni Metro (2013 - 2015).

Collaborative Research and Archaeological Site Management

- University of Manitoba, Canada – Ndondondwane Early Iron Age research Project 1994 – 2004 with Professor Haskel Greenfield.
- University of Calgary, Canada – Cattle Transhumance and Isotope Study 2005 -2008 with Dr Elizabeth Arnold.
- University of Manitoba, Canada – Zulu Ethnographic and Ethnoarchaeology Ceramic Project. 2009 – 2013 with Professor Kent Fowler.
- University of Manitoba, Canada – Ceramics and Geochemistry Study of the eMakhosini Basin 2014 – 2015 with Professor Kent Fowler (ongoing).
- University of Manitoba, Canada – Cattle Transhumance and Isotope Study of the eMakhosini Basin 2015 – 2016 with Professor Kent Fowler (ongoing).

- University of Witwatersrand – Acacia Project – Site Management and Stabilisation of Sibudu Cave, Tongaat. 2007 – 2013 with Professor Lyn Wadley.
- University of Toronto, Canada – Grassridge MSA Site reconnaissance 2014. with Dr. Ben Collins.
- University of Cape Town – Indigenous Small Livestock Project 2013 – 2015 with Professor Judy Sealey and Louisa Hutton.
- University of Witwatersrand – Border Cave in the 21st C - Site Management and Stabilisation of Border Cave MSA Project Excavations with Dr. Lucinda Backwell and Professor Lyn Wadley 20014 – 2016 (ongoing).
- Evolutionary Studies Institute, University of the Witwatersrand - MSA Site Reconnaissance, lower Mtamvuna, Izotsha and Umzimkulu Valleys, 2016 with Drs. Paloma de la Peña and Aurore Val.
- University of Cape Town – 500 Year Project – Dingane's Capital, Mgungungdlovu with Professor Carolyn Hamilton. 2014 – 2016. Ongoing.
- Isimangaliso Wetland Park Authority - Cultural Heritage Resources Management Plan for the Isimangaliso Wetland Park 1916. Current.
- University of Witwatersrand - Klasies River Mouth Cave MSA Excavations: Cave lighting and logistics for Prof. Sarah Wurz.

Employment Record

December 2000 to present

Director at eThembeni Cultural Heritage, an independent consultancy specialising in heritage impact assessments, ancestral grave management and integrated environmental management.

November 1996 to December 2000

Assistant Director (Research, Professional Services and Compliance) of Amafa aKwaZulu-Natali, in charge of ten professional and administrative staff, including archaeologists, anthropologists, architects, compliance and database managers.

November 1992 to October 1996

Archaeologist with the KwaZulu Monuments Council; Principal Professional Officer-(Research Division), in charge of six professional and administrative staff. Responsible for Museum and Interpretive Centre co-ordination in the previous KwaZulu Homeland.

February 1986 to October 1992

Professional Officer and officer-in-charge at Ondini Museum in Ulundi with KwaZulu Monuments Council, responsible for supervising archaeological excavations and reconstruction of King Cetshwayo's Ondini Royal Residence; management of the Historical Reserve and Nguni cattle herd; development of the Ondini Museum and its tourist facility, and regional site interpretation. Responsible for 30 General-Assistant and administrative staff members.

July 1983 to January 1986

Field Director of an Early Iron Age archaeological research project in the lower uThukela Valley under the aegis of the KwaZulu Bureau of Natural Resources. Solely responsible for 15 General-Assistants, all excavations and curation/reporting; procurement, logistics, wage payments and balance sheets/stock returns.

December 1978 to June 1983

Deployed as a Ranger/Naturalist in the Kruger National Park under Messrs. Piet van Wyk, Johan Vehoeft, Irene Grobelaar, and Richard Garstang..

December 1977 to February 1978

Field Research Assistant in Hluhluwe/iMfolozi Game Reserve under Regional Ecologist, Roger Porter.

LANGUAGES

	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Good	Excellent	Good
Zulu	Good	Poor	Basic

Conference papers

- 2015 'Grief, at what cost ? Ancestral land displacement and alienation – What about our graves?'
(African Heritage Challenges Conference. University of Cambridge, United Kingdom).
- 2014 'Graves and Ancestors – Managing for the Intangibles of Tangible Cultural Heritage'.
(Society of Petroleum Engineers International – HSE Conference, Maputo, Mozambique).
- *2004 'Rescue excavation of an Iron Age Shell midden, Shrimp Lane, Salt Rock, KwaZulu-Natal'.
(Southern African Association of Archaeologists biennial conference, Kimberley).

- 1996' The Early Iron Age site of Ndondondwane, KwaZulu-Natal, South Africa. Preliminary report on the 1995 excavations'.
(Southern African Association of Archaeologists biennial conference, Bloemfontein).
- *1995 'Archaeology, amasiko, and cultural resource management: a dialogical approach. A case-study from Richards Bay Minerals' mining concession areas in northern KwaZulu-Natal'.
(South African Museums Association regional conference, Hermannsburg).
- 1994 Settlement shifts and socio-economic transformations in early farming communities in the lower Thukela Basin, Zululand. A Revisionist Model.
(Conference on the growth of farming-communities from the Equator southwards, Newnham College, University of Cambridge, United Kingdom).
- 1994 'Border Cave: who really cares? The site management of a priceless cultural resource' and 'People, pots and pits: women's space in the Early Iron Age'.
(Southern African Association of Archaeologists biennial conference, Pietermaritzburg).

Publications

- 2008 co-author with Haskel J. Greenfield Early Iron Age Regional Settlement and Demographic Patterns along the Eastern seaboard of South Africa: a view from the lower Thukela Valley. In. Animals and People: Archaeozoological Papers in Honour of Ina Plug. **BAR International Series** 1849: 131-151. Oxford.
- 2004 co-author with Kent D. Fowler and Haskel J. Greenfield The effects of burrowing activity on archaeological sites: Ndondondwane, South Africa. **Geoarchaeology** 19(5): 441-470.
- *2003 co-author with Haskel J. Greenfield. Intra-settlement social and economic organisation of Early Iron Age farming communities in southern Africa: a view from Ndondondwane. **Azania** 38: 121-137.
- *2000 co-author with Haskel J. Greenfield and Tina L. Jongsma. Surface and subsurface reconnaissance at Ndondondwane: preliminary results of the 1995-97 field seasons. **Southern African Field Archaeology** 9: 5-16.
- 2000 co-author with Kent D. Fowler and Haskel J. Greenfield. The identification and significance of ceramic ecofacts from Early Iron Age Ndondondwane, South Africa. **Southern African Field Archaeology** 9: 32-42.
- 1999 The archaeological excavations of Ondini, the Royal Capital of King Cetshwayo ka Mpande: 1873-1879. **One World Archaeology Series**. The Constructed Past: Experimental Archaeology, Education and the Public (15). UNESCO.
- *1997 Mining Yields Up Ancient Past. **Titania**. Richards Bay Minerals.
co-author with Haskel J. Greenfield and Tina L. Jongsma. Preliminary results of the 1995 research at the Early Iron Age site of Ndondondwane, KwaZulu-Natal, South Africa. **Nyame Akuma** 47: 42-52.
- * co-author with Haskel J. Greenfield and Tina L. Jongsma. The Early Iron Age site of Ndondondwane, KwaZulu-Natal Province, South Africa. **Southern African Field Archaeology** (6)2.
- *1996 Settlement Shifts and Socio-Economic Transformations in Early Farming Communities in the lower Thukela Basin, Zululand. A Revisionist Model. Proceedings of the conference on the growth of farming communities from the Equator southwards. **Azania** (XXVIII).
- 1996 A new relevance for old monuments: the Isandlwana model. **Southern African Museums Association Bulletin** (21).
- 1996 co-author with Jo Walker. Monuments and cultural heritage conservation in KwaZulu-Natal. **Restorica** (29).
- *1994 Rediscovering the Iron Age. **Titania**. Richards Bay Minerals.
- *1994 Wosi - an Early Iron Age village in the lower Thukela Basin, Zululand. **Natal Museum Journal of Humanities** (6): 65-117.
- 1994 Mamba Confluence - a preliminary report on an Early Iron Age industrial centre in the lower Thukela Basin, Zululand. **Natal Museum Journal of Humanities** (6): 119-152.
- *1994 Tracking down old miners and beachcombers - Brown mussels and iron working long, long ago. **Titania**. Richards Bay Minerals.
- 1993 Fort Ivuna and the Battle of Ndunu Hill. **Journal of the Natal Institute of Architects** (18): 8-9.
- *1989 Exploding a Myth - Natal's First Farmers. **Condenser**. Hulett-Tonga Corporation, Durban.
- * *indicate archaeological retrieval and curation of human remains*

The Following Persons May Be Contacted To Attest To My Professional Standing:

Prof.Haskel Greenfield	University of Manitoba, Canada	greenf@cc.umanitoba.ca
Prof.Kent Fowler	University of Manitoba, Canada	fowlerk@cc.umanitoba.ca
Prof.Judith Sealy	University of Cape Town	Judith.Sealy@uct.ac.za
Prof.Tim Maggs (retd.)	University of Cape Town	Tim.Maggs@telkomsa.net
Mr Sicelo Bhengu	Community Affairs Richards Bay Minerals	Sicelo.Bhengu@rbm.co.za
Mr Leslie Mpanza	International Cultural Affairs,Rio Tinto Mining	lesley.mpanza@riotinto.com
Mr Garth Seneque	Independant International TRP Consultant	gsequeque@gmail.com
Mr Adrian Moore	Attorney at Law	mail@moore-attorneys.co.za
Mr Andrew Zaloumis	CEO Isimangaliso World Heritage Site	apz@worldonline.co.za
Dr Johan Binneman	Archaeologist Albany Museum (retired)	nfbinneman@gmail.com
Mr Kobus Reichert	Legal Adviser Gamtkwa Khoisan Council	kobusreichert@yahoo.com
Dr Gavin Whitelaw	Archaeologist KwaZulu-Natal Museum	gwhitelaw@nmsa.org.za
Mr Jaco van de Walt	Independent Heritage Practitioner	jaco.heritage@gmail.com
Mr Lebo Mokoatsi	Independant Social Facilitator	lebo.mokoatsi@yahoo.com
Adv.Estienne Pretorius	Legal Advisor to the Ministry	Estienne.Pretorius@westerncape.gov.za

Certification

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.



Leonard Outram van Schalkwyk.

December 2016.

See <https://za.linkedin.com/in/lenvanschalkwyk>



Institute of
Natural Resources

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

Application for authorisation in terms of the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment (EIA) Regulations, 2014

Project Title:	Proposed expansion of the Pietermaritzburg Airport
Specialist:	Heritage Practitioner
Contact person:	Leonard. O van Schalkwyk
Postal address:	PO Box 20057 ASHBURTON
Postal code:	3213
Telephone:	033 3261815
E-mail:	thembeni@iafrica.com
Professional affiliation(s) (if any):	Association of Southern African Professional Archaeologists (ASAPA) Association of Professional Heritage Practitioners (APHP)
Project Consultant:	Institute of Natural Resources NPC
Contact person:	David Cox
Postal address:	P O Box 100396, Scottsville, Pietermaritzburg
Postal code:	3209
Telephone:	033 346 0796
E-mail:	dcox@inr.org.za

The specialist appointed in terms of the Regulations_

I, Leonard Outram van Schalkwyk, declare that -

General declaration:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;

