Phase 1 Heritage Impact Assessment Report:

Nkandla Smart Growth Development,
Nkandla Local Municipality,
Uthungulu District,
KwaZulu-Natal

Prepared for

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Management Summary

eThembeni Cultural Heritage was appointed by SSI to undertake a Phase 1 Heritage Impact Assessment of the proposed Nkandla Smart Growth Development site, as required by the National Environmental Management Act 107 of 1998 as amended, in compliance with Section 38 of the National Heritage Resources Act 25 of 1999 as amended.

Heritage Resources Description and Significance

- **Traditional burial places**

Extant homesteads on and around the proposed development site almost invariably include traditional burial places within their precincts. However, some homesteads have been abandoned in the recent past. One such homestead includes 12 graves of the Sithole family who have moved to Durban. A further single grave of the Mdunge family is located in a 11kV power line servitude immediately outside their homestead. All human remains have high heritage significance at all levels for their spiritual, social and cultural values.

Assessment of Development Impact

- **Traditional burial places**

Graves could be affected by construction activities unless identified and protected.

Recommended Mitigation Measures

- **Traditional burial places**

Management requirements are included in this report, including minimum distances between graves and construction activities.

Recommended Monitoring

None.

Conclusion

We recommend that the development proceed with the proposed heritage mitigation and have submitted this report to Amafa in fulfilment of the requirements of the National Heritage Resources Act. The client may contact Ms Bernadet Pawandiwa 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 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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1 Introduction

eThembeni Cultural Heritage was appointed by SSI to undertake a Phase 1 Heritage Impact Assessment of the proposed Nkandla Smart Growth Development site, 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 (excluding a specialist palaeontological study) 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.

In addition, the HIA should comply with the requirements of NEMA, including providing the assumptions and limitations associated with the study; the details, qualifications and expertise of the person who prepared the report; and a statement of independence.

3 Project Description[1]

The Masibambisane Rural Development Initiative (MRDI) is the composite body or organisation made up residents of Nkandla and Umlalazi Municipality jurisdiction. Masibambisane has identified an opportunity for the development of a Smart Growth Centre (Mixed Use Development) in the area of Lindela under the chieftainship of *inkosi* Shange. This initiative is intended to realize the establishment and access to structured precincts for community services, public facilities including government service departments, health and safety, education facilities, retail and commercial structure developments and also to stimulate agricultural activities.

The proposed growth centre will form part of developments around the official Msholozi presidential residence (Figure 1).

Figure 1 Msholozi presidential residence.

[1] Information obtained from the client.

4 Project Location[2]

The proposed development site is located in Nkandla Local Municipality (KZN286) in Uthungulu District (DC28), at S28 49 50.9; E31 07 15.8. The relevant Surveyor General 1:50 000 map sheet is 2831CC Mbongolwane (Figure 2). The site is located south of Nkandla town, between Kranskop and Eshowe (Figure 3). The area is governed by the Shange Traditional Authority within the *isigodi* of *induna* Zondi.

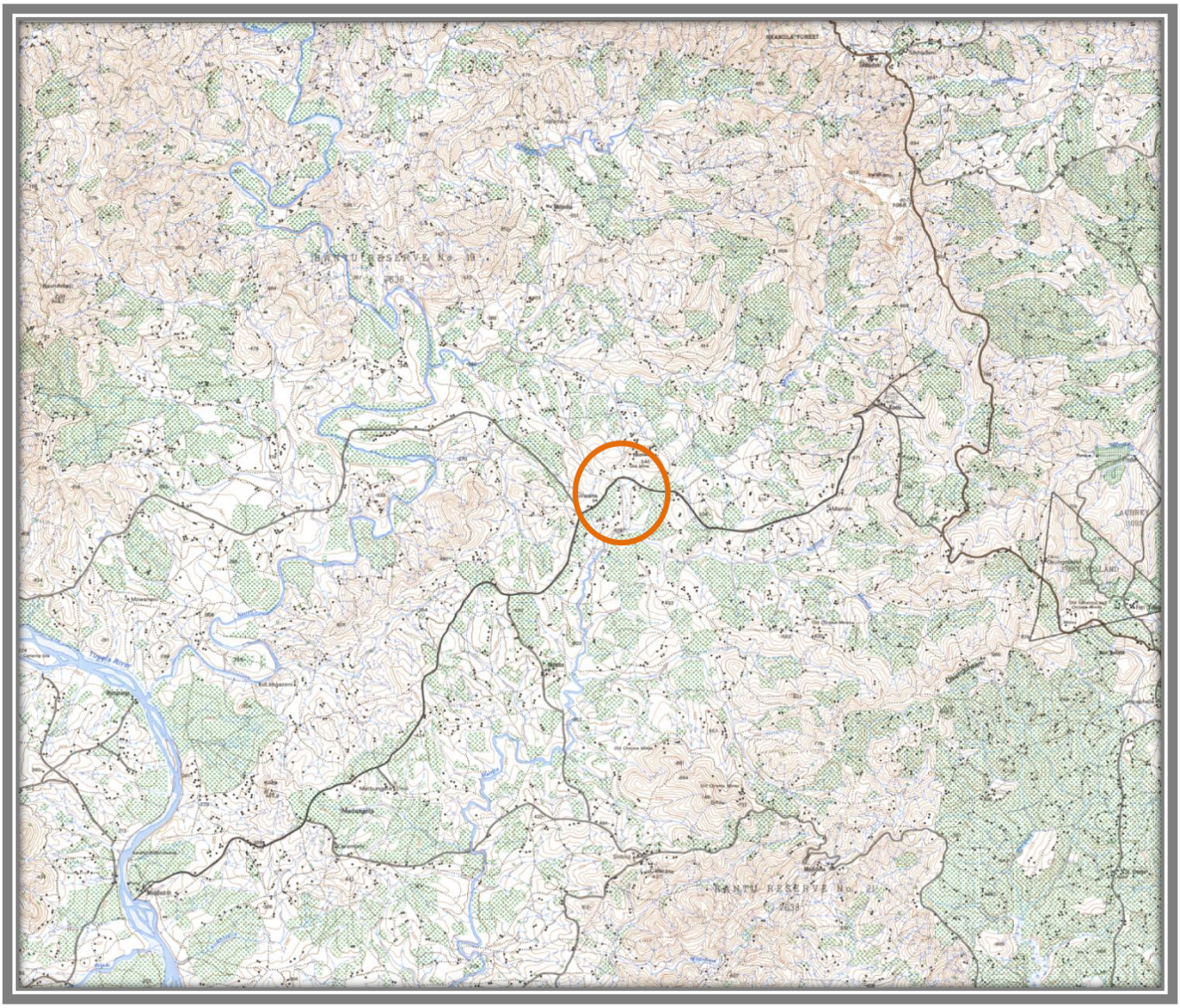

Figure 2 Extract from relevant 1:50 000 map sheet.

[2] Information obtained from the client.

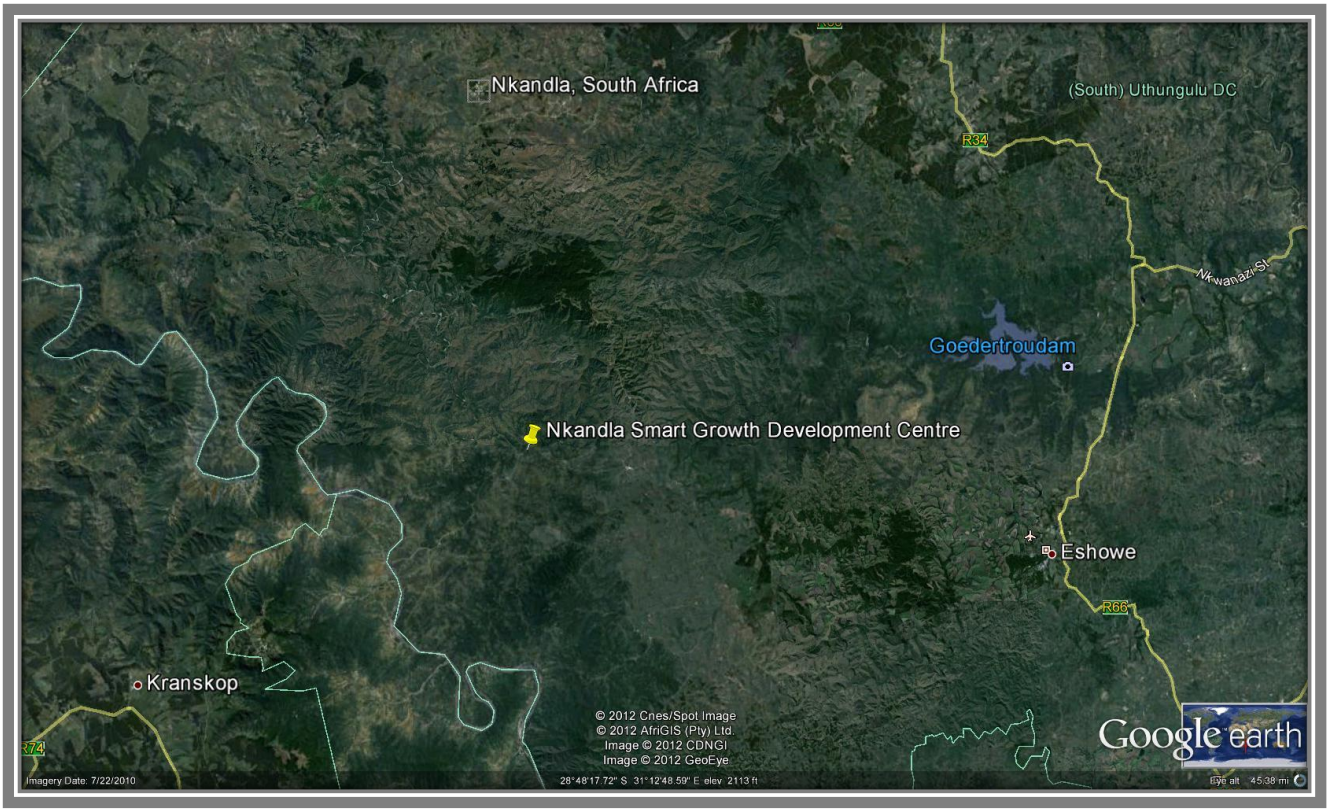

Figure 3 Location of the proposed development site in regional context.

5 Heritage Resources and Significance

No development activities associated with the proposed project had begun at the time of our visit, in accordance with heritage legislation. The general area comprises medium to high density rural/peri-urban human settlement, with extensive existing infrastructure, as illustrated by Figures 4 to 9.

Figures 4-9 Existing infrastructure in and around the proposed development site.

The following table summarises the heritage resources assessed, and our observations.

Heritage resource type	Observation
Places, buildings, structures and equipment	None were identified within the proposed development area.
Places associated with oral traditions or living heritage	None were identified within the proposed development area.
Landscapes	None were identified within the proposed development area.
Natural features	None were identified within the proposed development area.
Traditional burial places	See below.
Ecofacts	None were identified within the proposed development area.
Geological sites of scientific or cultural importance	None were identified within the proposed development area.
Archaeological sites	None were identified within the proposed development area.
Historical settlements and townscapes	None were identified within the proposed development area.
Public monuments and memorials	None were identified within the proposed development area.
Battlefields	None were identified within the proposed development area.

- **Traditional burial places**

Extant homesteads on and around the proposed development site almost invariably include traditional burial places within their precincts. However, some homesteads have been abandoned in the recent past. We identified such a homestead at S28 49 54.0; E31 07 23.0, which includes 12 graves of the Sithole family who have moved to Durban, according to a resident of a neighbouring *umuzi,* Ma Mkhize. A further single grave of her husband, Mr Mdunge's first wife, is located in a 11kV power line servitude immediately outside their homestead at S28 49 53.0; E31 07 23.5 (Figure 10). All human remains have high heritage significance at all levels for their spiritual, social and cultural values.

Figure 10Grave of Mdunge family.

6 Assessment of Development Impact

- **Traditional burial places**

Graves could be affected by construction activities unless identified and protected.

7 Recommended Mitigation Measures

- **Traditional burial places**

When the final locations of project infrastructure have been determined the Project Liaison Officer should confirm with residents that no burial places will be affected. Appropriate management measures for graves are as follows:

a. Ideally, a minimum distance of 10-15 metres should be maintained between construction areas and any ancestral graves. If the distance between a grave and a construction area is 10-15 metres, the grave requires clear demarcation with barrier tape or similar material for the duration of construction.

b. If the distance between a grave and a construction area is 5-10 metres, the grave requires permanent fencing as described below, at the cost of the developer, prior to the start of any construction activities.
   - Preferred fencing materials are metal corner and straining posts and fencing wire, to a minimum height of 1.2 metres.
   - The fence must be located at a minimum distance of 2 metres from the nearest grave and have an access gate.
   - No construction may occur within a minimum distance of 3 metres from the edge of the fence.
   - If graves are located close to one another, they should be fenced as a group rather than individually.

c. If a grave is located within 5 metres of construction activities consideration should first be given to alteration of the site layout plan to allow the grave to remain *in situ*, at a distance of 5-15 metres from any construction areas, and fenced as described above. A heritage practitioner should consult with the project manager and engineers in this regard.

d. If the site layout plan cannot be amended and physical impact on a grave is unavoidable, it should be exhumed and reinterred, with permission from the next-of-kin and a permit from Amafa.

8 Recommended Monitoring

None.

9 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.

10 Conclusion

We recommend that the development proceed with the proposed heritage mitigation and have submitted 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 Bernadet Pawandiwa 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 Constitution of the Republic of South Africa Act 108 of 1996 is the source of all legislation. Within the Constitution the Bill of Rights is fundamental, with the principle that the environment should be protected for present and future generations by preventing pollution, promoting conservation and practising ecologically sustainable development. With regard to spatial planning and related legislation at national and provincial levels the following legislation may be relevant:

- Physical Planning Act 125 of 1991
- Municipal Structures Act 117 of 1998
- Municipal Systems Act 32 of 2000
- Development Facilitation Act 67 of 1995 (DFA)
- KwaZulu-Natal Planning and Development Act 6 of 2008.

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)
- KwaZulu-Natal Heritage Act 4 of 2008 (KZNHA)
- National Heritage Resources Act 25 of 1999 (NHRA)
- Minerals and Petroleum Resources Development Act 28 of 2002 (MPRDA)

KwaZulu-Natal Heritage Act 4 of 2008 (KZNHA)

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)

The NHRA established the South African Heritage Resources Agency (SAHRA) together with its Council to fulfill the following functions:

- co-ordinate and promote the management of heritage resources at national level;
- set norms and maintain essential national standards for the management of heritage resources in the Republic and to protect heritage resources of national significance;
- control the export of nationally significant heritage objects and the import into the Republic of cultural property illegally exported from foreign countries;
- enable the provinces to establish heritage authorities which must adopt powers to protect and manage certain categories of heritage resources; and
- provide for the protection and management of conservation-worthy places and areas by local authorities.

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	National and / or Provincial Departments of Health	If relocated to formal cemetery – relevant local authority.
Graves younger than 100 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 KwaZulu-Natal Cemeteries and Crematoria Amendment Act 2 of 2005	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.

– **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 administrated 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.

The Vermillion Accord on Human Remains[3]

Adopted in 1989 at WAC Inter-Congress, South Dakota, USA

1. Respect for the mortal remains of the dead shall be accorded to all, irrespective of origin, race, religion, nationality, custom and tradition.

2. Respect for the wishes of the dead concerning disposition shall be accorded whenever possible, reasonable and lawful, when they are known or can be reasonably inferred.

3. Respect for the wishes of the local community and of relatives or guardians of the dead shall be accorded whenever possible, reasonable and lawful.

4. Respect for the scientific research value of skeletal, mummified and other human remains (including fossil hominids) shall be accorded when such value is demonstrated to exist.

5. Agreement on the disposition of fossil, skeletal, mummified and other remains shall be reached by negotiation on the basis of mutual respect for the legitimate concerns of communities for the proper disposition of their ancestors, as well as the legitimate concerns of science and education.

6. The express recognition that the concerns of various ethnic groups, as well as those of science are legitimate and to be respected, will permit acceptable agreements to be reached and honoured.

[3] http://www.worldarchaeologicalcongress.org/

Appendix B

Archaeological Context of the Study Area

Early and Middle Stone Ages

No systematic research concerning the Early and Middle Stone Ages of the lower Thukela Basin has been undertaken, although dozens of open air scatters of stone artefacts dating to this period have been recorded there. Most Early Stone Age sites in South Africa can probably be connected with the hominin species known as *Homo erectus*. Simply modified stones, hand axes, scraping tools, and other bifacial artifacts had a wide variety of purposes, including butchering animal carcasses, scraping hides, and digging for plant foods. Most South African archaeological sites from this period are the remains of open camps, often by the sides of rivers and lakes, although some are rock shelters, such as Montagu Cave in the Cape region.

Change occurred slowly in the Early Stone Age; for more than a million years and over a wide geographic area, only slight differences existed in the forms of stone tools. The slow alterations in hominins' physical appearance that took place over the same time period, however, have allowed physical anthropologists to recognize new species in the genus Homo. An archaic form of *H. sapiens* appeared about 500 000 years ago; important specimens belonging to this physical type have been found at Hopefield in Western Cape province and at the Cave of Hearths in Mpumalanga province.

The long episode of cultural and physical evolution gave way to a period of more rapid change about 200 000 years ago. Hand axes and large bifacial stone tools were replaced by stone flakes and blades that were fashioned into scrapers, spear points, and parts for hafted, composite implements. This technological stage, now known as the Middle Stone Age, is represented by numerous sites in South Africa.

Open camps and rock overhangs were used for shelter. Day-to-day debris has survived to provide some evidence of early ways of life, although plant foods have rarely been preserved. Middle Stone Age bands hunted medium-sized and large prey, including antelope and zebra, although they tended to avoid the largest and most dangerous animals, such as the elephant and the rhinoceros. They also ate seabirds and marine mammals that could be found along the shore and sometimes collected tortoises and ostrich eggs in large quantities. The rich archaeological deposits of Klasies River Mouth on the Cape coast west of Port Elizabeth have preserved the first known instance of shellfish being used as a food source.

Klasies River Mouth has also provided important evidence for the emergence of anatomically modern humans. Some of the human skeletons from the lower levels of this site, possibly 115 000 years old, are decidedly modern in form. Fossils of comparable age have been excavated at Border Cave, in the mountainous region between KwaZulu-Natal province and Swaziland.

Later Stone Age

Basic tool making techniques began to undergo additional change about 40 000 years ago. Small finely worked stone implements known as microliths became more common, while the heavier scrapers and points of the Middle Stone Age appeared less frequently. Archaeologists refer to this technological stage as the Late Stone Age. The numerous collections of stone tools from South African archaeological sites show a great degree of variation through time and across the subcontinent.

The remains of plant foods have been well preserved at such sites as Melkhoutboom Cave, De Hangen, and Diepkloof in the Cape region. Animals were trapped and hunted with spears and arrows on which were mounted well-crafted stone blades. Bands moved with the seasons as they followed game into higher lands in the spring and early summer months, when plant foods could also be found. When available, rock

overhangs became shelters; otherwise, windbreaks were built. Shellfish, crayfish, seals, and seabirds were also important sources of food, as were fish caught on lines, with spears, in traps, and possibly with nets.

Dating from this period are numerous engravings on rock surfaces, mostly on the interior plateau, and paintings on the walls of rock shelters in the mountainous regions, such as the Maloti Drakensberg and Cederberg ranges. The images were made over a period of at least 25 000 years.

Dr Aron Mazel undertook a major study of Later Stone Age hunter-gathering societies living in the Thukela Basin through systematic archaeological excavations during the 1980s. This research provided important information concerning changing social conditions and diet in this part of South Africa during the Later Stone Age.

Dr Mazel excavated seventeen rock shelters within the upper Thukela Basin that were occupied between 7500 and 650 years ago. The locations of some of these archaeological sites relative to the proposed THEPS project infrastructure are illustrated in Figure 3.

One of the early sites, Maqonqo, used until 4000 years ago, produced unusually high quantities of ostrich eggshell beads and broken pieces of eggshell, which indicate that the shelter was an important site for bead manufacture. This is somewhat surprising, since the area is too wet for ostrich breeding today. If the environment has not changed significantly over the past 4000 years, and there is no evidence that it has, the closest source of eggshell would have been about 150 kilometres away. Marine shell beads were also recovered here, indicating that the hunters were in contact with the coast.

As other shelters dating from this period do not show the same intensity of bead manufacture, it is possible that Maqonqo was a special activity site. Support for this idea comes from the number of ochre-stained artefacts, as well as rock paintings on the shelter walls.

Maqonqo was no longer used after 4000 years ago, but other sites nearby were. Mzinyashana Rock Shelter is only four kilometres from Maqonqo. It was first occupied around 4000 years ago, so overlaps with the end of the Maqonqo period of use. While there are similarities with the Maqonqo material, and some beads were probably made there as well, there is no evidence of marine shell.

As far as diet is concerned, the dominant animal bones from the sites are those of the smaller antelope, such as klipspringer, grey rhebok and duiker. Few eland bones were found. There was also a small quantity of fish bones.

Around 1900 years ago pottery was introduced to the Thukela Basin; farmers followed some 300 years later. The rock shelters where the hunters continued to live show evidence of interaction between the two groups. Mazel believes that relations were amicable, and that once the farmers were established the hunters obtained their pottery from them. This may indicate a close relationship, with the hunters performing important tasks for the farmers, including rainmaking rituals. It is also a time when many more fish bones were found, showing an increased reliance on fish and an improvement in fishing techniques.

Dr Simon Hall, who has studied the fish bones, suggests that these people employed hand-held baskets or even valve traps to catch the smaller fish. A greater dependence on fish may have been the result of pressures on other food resources, which began when farmers entered the landscape, and occupied a great deal of the space with their settlements and grazing needs, space that was previously available to the hunters.

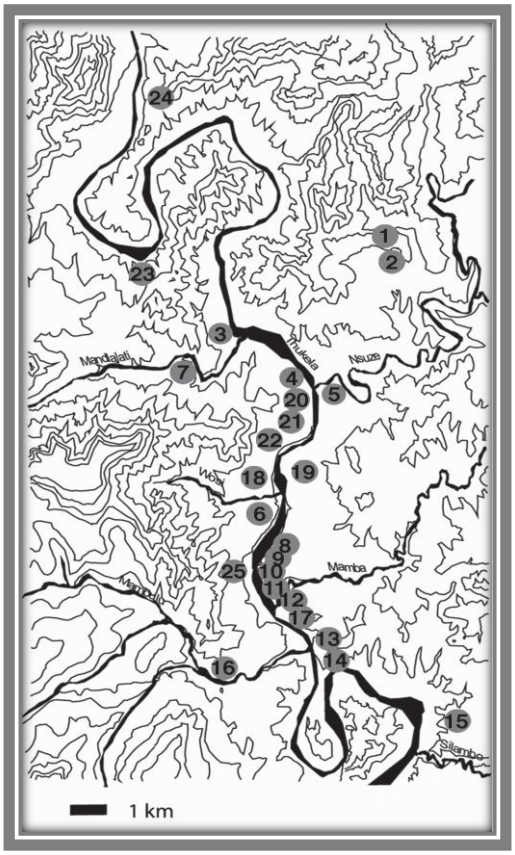
Numerous Later Stone Age archaeological sites, including rock shelters with deposits and / or paintings, and open scatters of artefacts, are located within the study area.

Iron Age

The first farming cultures in the Thukela basin appear with the Early Iron Age (*c.* AD 420–1050 uncalibrated). While the basin has some distinctive stylistic elements, it is clearly part of the general cultural pattern defined throughout much of the region. The relationship between the radiocarbon dates and artefact typological and stylistic changes through time have been extensively described, with four main phases or sub-periods (also known as traditions) defined from the EIA throughout the province. However, only the latter three are present in the valley. The earliest, Matola or Mzonjani, phase is not found at any great distance from the coast and the people of this archaeological culture clearly did not penetrate into the lower Thukela basin (or did not leave any archaeological evidence of their presence).

The second regional phase, Msuluzi, is the earliest and longest tradition to appear in the basin (c. 5th /6th to 8th centuries AD). This phase represents tentative exploration and colonization of the inland basins. It is followed by the Ndondondwane phase, which is taken to represent the zenith of the EIA cultures in the region (8th to 9th centuries AD), and is marked by a great expansion of EIA populations inland. The last phase, Ntshekane, is the most poorly known tradition (latter half of the 9th to 11th century AD). It marks the end of the EIA sequence.

Early Iron Age farmers in southeastern South Africa typically established small, permanent villages on the rich alluvial soils beside lakes and rivers. Most EIA sites were occupied for a relatively long duration of time, often several hundred years, with the reoccupation of the same places creating a palimpsest of flat, expansive settlements. Ndondondwane is the type site of the Ndondondwane phase in the cultural historical sequence of eastern South Africa. It is located on a relatively flat expanse of the northern bank of the lower Thukela River at Middledrift, on the deep well-drained red soils that predominate along the riverbanks and foot-slopes where other EIA sites are found.



Map of Ndondondwane phase archaeological sites in the lower Thukela River valley (contour interval 100 m; ex Greenfield and Van Schalkwyk 2008).

Research at Ndondondwane has established that the site contains well-preserved architectural and artefactual remains including substantive samples of both fauna and flora. During the late 1970s, excavations defined the Ndondondwane ceramics as composing a new stylistic phase in the regional Iron Age ceramic sequence. Calibrated radiocarbon dates from the site indicate an occupation in the range of A.D. 879–892. The ceramic typochronology, secured by the radiocarbon dates, suggests the EIA occupation of Ndondondwane covered the late 9th and early 10th centuries A.D. Further excavations in the early 1980s uncovered a livestock enclosure, iron smelting, and ivory working areas near the river, and a contemporary midden to the east.

The most recent excavations from 1995 until 1997 expanded work in previously excavated areas and investigated new areas of the site, followed by extensive analysis of the recovered artefacts and ecofacts. Research results indicate the existence of a well-ordered community. At the center of the community lay structures and activity areas associated with a variety of what are considered to be male-associated in traditional eastern Bantu culture (a large men's hut, a stock kraal, iron furnaces, and iron and ivory working areas). Around this core area, moving away from the river, was a large open-air plaza, with very little debris and no evident features. It probably was an area where the whole community could gather.

At the north end of the site, relatively isolated still from domestic complexes, lay a charcoal preparation (presmelting) area. It was also probably associated with male activities, given its isolation and the ethnographic association of males with iron production. At least three domestic household complexes were found in a large semi-circle around the plaza. They are equidistant from the activity areas at the centre of the site.

The three domestic midden areas are areas where household activities were carried out (such as food processing and storage, sleeping, tool repair, ceramic production, etc.). Such domestic complexes are the traditional domain of women in eastern Bantu ethnographic contexts. This spatial distribution of activity areas appears to tentatively support Huffman's Central Cattle Pattern model for the Early Iron Age in its broad outlines - with a central area dominated by male activities (cattle keeping, iron production), surrounded by a plethora of domestic (female focused) compounds.

Since the early 1980s, archaeologists in the region have widely accepted as more or less accurate a general ecological and site-location model proposed by Maggs. Generally, the model predicts that inland EIA sites (within the dry valley woodlands of east flowing river basins in the region, of which the lower Thukela is a good example) will be found in locations:

- limited to below an altitude of 1000 m asl,
- situated on riverside or streamside locations,
- on deep alkaline colluvial soils, and
- in areas appropriate for dry-farming (with sufficient summer rainfall).

Settlements are located at nodes in the landscapes with access to good arable land for dry farming, good year-round grazing, and timber for building and fuel. They are generally not far from iron sources and iron working is prevalent on most sites. Contemporary villages will be separated by a distance of several kilometres, suggesting the need to space villages for economic and/or political reasons.

Their settlements are relatively large (c. 10 ha in extent), with thick deposits of cultural discard, suggesting that these were large villages that were inhabited by possibly several hundred people. It would appear as if the villages were densely occupied for prolonged periods of time. This suggests a low level of specialised production and a high degree of both economic and political self-sufficiency.

However, the results of over 20 years of research in the lower Thukela Basin and data from a host of sites below the eastern plateau slopes invite revision of aspects of this model. While settlements are consistently

found in the flat open areas in or near valley bottoms, they may also be found beyond the narrow limitations of the valley bottoms (e.g., in the foot slopes of the escarpment). In fact, they are found wherever there are nodes of productive colluvial soils, both close to and distant from the water courses. This reflects the need to produce adequate supplies of cereal staples and a variety of pulses for domestic consumption. Such nodes of favoured soil tend to be mostly, but not entirely, confined to tributary junctions and colluvial slip-off slopes along the major drainage courses. While they are a limited resource within the landscape, they are found in a number of locations. In any case, they can be used as a predictor for site location.

The view that sites are located on soils that are amenable to traditional hoe-based agriculture appears to hold up under scrutiny. The soils that dominate the sides of the river and foot slopes where EIA sites tend to be found tend to be deep and well-drained red soils. The iron-rich clayey loam soils on which most sites are found are particularly well-suited to dry-land agricultural practices, especially for the commonly used cereals (sorghum and the millets *Pennisetum* and *Eleusine*) preferred by first millennium farmers. These cereals are drought resistant and require at least 500 mm of rainfall a year and night-time temperatures that do not fall below 15°C. These conditions are met in the lower Thukela River basin today and temperature and rainfall conditions were not substantially different in this area during the EIA.

Following the EIA, there is a total absence of Middle and Late Iron Age material in the valley. The later settlements are found above the 1000 m asl contour, atop the escarpment that surrounds the river valleys. The abandonment of the valley at the conclusion of the EIA is a situation common to all of the basins along the eastern seaboard—from KwaZulu-Natal into the Eastern Cape. It may be that the environmental conditions in these basins at the beginning of the second millennium became untenable for farmers, and that they moved away—into the escarpment, where their remains are commonly found.

Certain researchers have long argued that the Late Iron Age (LIA) represents the arrival of a new ethnolinguistic group, one that is more directly ancestral to the modern Nguni inhabitants of the region. In this view, the changes in settlement are possibly a by-product of new subsistence preferences, where there is an increased reliance upon the pastoralism of domestic livestock with a concomitant decrease in importance of gardening activities. The appearance of this new ethnolinguistic group with different subsistence orientations coincided with the onset of the new climatic regime. But, the appearance of a new ethnolinguistic group with a different subsistence orientation does not explain the collapse in the valley bottoms. The source for this must come from the dynamics in the valley bottoms.

During the last three decades, research in South Africa on the nature of the earliest agricultural communities has improved dramatically. On the basis of large-scale excavations, the socio-economic organisation of these communities is much better understood. Studies of EIA lifeways in the semi-dry river valleys along the eastern seaboard often assume that little changed (other than ceramic motifs) during the course of this lengthy period.

In particular, it has been contended that cultural and economic lifeways seem to have remained essentially the same during both the Msuluzi and Ndondondwane phases of occupation of the Lower Thukela Basin. In the past, the view was that early farming populations sought out highly productive locales in the savanna woodland along in river valley bottoms that provided rich, unleached soils for cultivation, year-round sweet veld (grass) for grazing, abundant woody vegetation to provide for building and fuel, and nearby ore sources to exploit for iron production. EIA sites averaging 7 hectares in size are consistently located on the most productive nodes of soils confined to confluences and colluvial slip-off slopes along the major drainage courses.

However, the survey and excavation data from the Lower Thukela River valley presented thus far indicate that the nature of settlement is not static and changes over time. The valley bottom was extensively colonised during the 7–8th century Msuluzi phase, with the presence of a few large settlements. During the

ensuing Ndondondwane phase, the pattern of settlement intensified, with the entire valley bottom being occupied. During this period, settlement spread to the surrounding hill country, but not to the escarpment.

The number of settlements dramatically increased (four or fivefold), even though there was only a modest increase in population (twofold). Settlement was characterised by the appearance of many smaller sites and the supposed dominance by large sites is a result of survey procedures which did not distinguish phases within the EIA. The population buildup during the Ndondondwane phase is followed by a population collapse in the Ntshekane phase during the 11th century. Few Ntshekane occupations can be documented and none from the succeeding LIA. Following the Ntshekane phase, the valley was abandoned.

The available settlement pattern data imply that there was limited access to the larger colluvial soil nodes in the study area, and that the inherent productive potential of these soil nodes reached levels of saturation around the middle of the 9th century. The larger, dispersed villages of the 7th and early 8th centuries appear to have been succeeded in the 9th and 10th centuries by an increasing number of smaller, less intensively settled residential locales which were satellite to a few larger function (including specialist) village centres. Many of these smaller sites have produced no evidence of iron-smelting, suggesting that they were reliant on an outside source for their iron requirements.

The arrival of the first food producing communities laid the foundation for the evolution of complex societies in the region during the following 1500 years. Their colonization and transformation of the environment for food production and ultimate population collapse at the end of the EIA, if it can be demonstrated to be a region-wide pattern, may have telling implications for the relationship between EIA and LIA cultures. By collecting data in order to reconstruct the internal social and economic organisation of the first farming communities, we can better understand the origins and evolution of not only the earliest farming cultures in the region, but also the LIA, pre-colonial indigenous societies, and those recorded in the ethnographic present.

Appendix C

Methodology

Site survey
eThembeni staff members inspected the proposed activity area on 17 and 20 July 2012 and completed a controlled-exclusive surface survey, 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 survey comprised unsystematic drives and walks across and around the proposed activity area, mainly confined to numerous existing tracks and roads. 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 of 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 (HWC 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 impact occurring)	Low	It is highly unlikely or less than 50 % likely that an impact will occur.
	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.
- Soil surface visibility varied from good to non-existent. 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 9 of this report should 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 E); 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 D

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) 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.

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 they have undertaken almost 1000 HIAs throughout South Africa, as well as in Mozambique.

Elizabeth Wahl has a BA Honours in African Studies from the University of Cape Town, majoring in archaeology, and has completed various Masters courses in Heritage and Tourism at the University of KwaZulu-Natal. She is currently studying for an MPhil in the Conservation of the Built Environment at the University of Cape Town. She is also a member of ASAPA.

Ms Wahl was an excavator and logistical coordinator for Glasgow University Archaeological Research Division's heritage programme at Isandlwana Battlefield; has undertaken numerous rock painting surveys in the uKhahlamba/Drakensberg Mountains, northern KwaZulu-Natal, the Cederberg and the Koue Bokkeveld in the Cape Province; and was the principal excavator of Scorpion Shelter in the Cape Province, and Lenjane and Crystal Shelters in KwaZulu-Natal. Ms Wahl compiled the first cultural landscape management plan for the Mnweni Valley, northern uKhahlamba/Drakensberg, and undertook an assessment of and made recommendations for cultural heritage databases and organisational capacity in parts of Lesotho and South Africa for the Global Environment Facility of the World Bank for the Maloti Drakensberg Transfrontier Conservation and Development Area. She developed the first cultural heritage management plan for the uKhahlamba Drakensberg Park World Heritage Site, following UNESCO recommendations for rock art management in southern Africa.

Declaration of independence

We declare that Len van Schalkwyk, Elizabeth Wahl 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.