

**HERITAGE IMPACT ASSESSMENT OF DUBE TRADEPORT,
LA MERCY,
KWAZULU-NATAL, SOUTH AFRICA**



Assessment and report by



For

**Institute of Natural
Resources**

Telephone Jenny Mitchell 033 346 0796

Box 20057 Ashburton 3213
PIETERMARITZBURG South Africa
Telephone 033 326 1136
Facsimile 086 672 8557
082 655 9077 / 072 725 1763
thembeni@iafrica.com

22 January 2007

Management summary

eThembeni Cultural Heritage was appointed by the Institute of Natural Resources to undertake a heritage impact assessment of the proposed Dube TradePort near Durban, in terms of the KwaZulu-Natal Heritage Act No 10 of 1997. Two eThembeni staff members inspected the area on 20 and 21 October and 28 and 29 November 2006 and completed a controlled-exclusive surface survey, as well as a database and literature search.

We identified ten surface heritage resources, comprising three places with structures and seven archaeological sites. All of the heritage resources have low heritage significance and may be altered or demolished with a permit from Amafa aKwaZulu-Natali. The Nidd residence has been noted as a site which may require recording prior to destruction. Sites 8 and 9 which are remains of Late Iron Age settlements may be affected during the construction phase by the construction of an access road. None of these resources falls within the Special Zone 10 footprint and will not be affected during the first phase of development. No further development may occur outside this footprint without application to the environmental authorities.

The settlements of Mount Moreland and Herrwood will be affected by the proposed development in many ways, including visual effects, noise pollution and reduced property values. All of these issues are the subject of specialist studies to determine impact levels and mitigation measures. The Mount Moreland settlement as laid out for the Byrne settlement scheme is of interest historically although most development in the settlement has occurred post 1970. Residents of Mount Moreland have expressed an interest in applying for Heritage Status for the settlement.

The Herrwood settlement is titled land holdings of the Naicker and Govender families that dates back to the late ninetieth century. Their properties have been farmed for over a hundred years. They have expressed strong opposition to being moved from Herrwood.

The landscape consists of typical near-coastal undulating dunelands, transformed by agriculture (predominantly sugar cane), residential areas (including the villages of Mount Moreland and Herrwood and the towns of Verulam, Tongaat, Umdloti, La Mercy and Westbrook Beach) and light industry. Inter-regional infrastructure includes a railway line, the N2 freeway, R102 regional road and power lines. The proposed development is in keeping with this cultural landscape.

We recommend that the proposed development proceed with the aforementioned mitigation measures and have submitted this report to Amafa aKwaZulu-Natali in fulfilment of the requirements of the KwaZulu-Natal Heritage Act.

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 notify Amafa aKwaZulu-Natali should any heritage resources, as defined in the Act, be discovered during the course of development activities.

TABLE OF CONTENTS

	Page
Introduction and legislation	4
Nature and description of proposed activities	6
Site access, description and environmental issues	8
Methodology	8
Observations and recommendations	9
Summary of findings in terms of the KwaZulu-Natal Heritage Act 1997 Section 27(3)	12
Conclusion	13
References	13
Appendix A – Background and literature review	14
Appendix B – Significance and value of heritage resources	17
Appendix C – Criteria for the identification and management of cultural landscapes	20
Appendix D – Assessment criteria for the evaluation of impacts; and definitions of significance ratings, probability ratings, confidence ratings and reversibility ratings	21
Appendix E – Table of identified heritage resources	23
Appendix F – Map indicating the location of heritage resources within the Special Zone 10 footprint	24
Appendix G – Map indicating the location of heritage resources within the Construction Phase footprint	25
Appendix H – Statement of independence and ability	26
Appendix I – Historical background of Mount Moreland and Herrwood	29

Introduction and legislation

eThembeni Cultural Heritage was appointed by the Institute of Natural Resources to undertake a heritage impact assessment of the proposed Dube TradePort near Durban, in terms of the KwaZulu-Natal Heritage Act No 10 of 1997. Section 27(1) of the Act requires such an assessment in case of:

- (a) construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- (b) construction of a bridge or similar structure exceeding 50 m in length; and
- (c) any development, or other activity which will change the character of an area of land, or water –
 - (i) exceeding 10 000 m² in extent;
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven, or subdivisions thereof, which have been consolidated within the past five years; or
- (d) the costs of which will exceed a sum set in terms of regulations; or
- (e) any other category of development provided for in regulations.

A heritage impact assessment is not limited to archaeological artefacts, historical buildings and graves. It is far more encompassing and includes intangible and invisible resources such as places, oral traditions and rituals. In the KwaZulu-Natal Heritage Act 1997 a heritage resource is defined 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 the following wide range of places and objects:

- (a) places, buildings, structures and equipment;
- (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;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including -
 - (i) ancestral graves,
 - (ii) royal graves and graves of traditional leaders,
 - (iii) graves of victims of conflict,
 - (iv) graves of important individuals,
 - (v) historical graves and cemeteries older than 60 years, and
 - (vi) other human remains which are not covered under the Human Tissues Act, 1983 (Act No.65 of 1983 as amended);
- (h) movable objects, including -
 - (i) objects recovered from the soil or waters of South Africa including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - (ii) ethnographic art and objects;
 - (iii) military objects;
 - (iv) objects of decorative art;
 - (v) objects of fine art;
 - (vi) objects of scientific or technological interest;
 - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings; and
 - (viii) any other prescribed categories, but excluding any object made by a living person;
- (i) battlefields;
- (j) traditional building techniques.

A 'place' is defined as:

- (a) a site, area or region;
- (b) a building or other structure (which may include equipment, furniture, fittings and articles associated with or connected with such building or other structure);

- (c) 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); and
- (d) 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.

'Structures' means any building, works, device, or other facility made by people and which is fixed to land and any fixtures, fittings and equipment associated therewith older than 60 years.

'Archaeological' means -

- (a) 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;
- (b) rock art, being a 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 10 m of such representation; and
- (c) wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land or in the maritime cultural zone referred to in section 5 of the Maritime Zones Act 1994 (Act 15 of 1994), and any cargo, debris or artefacts found or associated therewith, which are older than 60 years or which in terms of national legislation are considered to be worthy of conservation;
- (d) 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.

'Grave' means a place of interment and includes the contents, headstone or other marker of and any other structures on or associated with such place. Amafa aKwaZulu-Natali will only issue a permit for the alteration of a grave if it is satisfied that every reasonable effort has been made to contact and obtain permission from the families concerned. Since Amafa has not yet formulated guidelines or regulations for the removal of human remains, eThembeni adheres to the following procedures, compiled in discussion with the South African Heritage Resources Agency and used by professional colleagues:

- Notification of the impending removals (using English and Zulu language media and notices at the grave site);
- Consultation with individuals or communities related or known to the deceased;
- Satisfactory arrangements for the curation of human remains and / or headstones in a museum, where applicable;
- Procurement of a permit from Amafa aKwaZulu-Natali;
- Appropriate arrangements for the exhumation (preferably by a suitably trained archaeologist) and re-interment (sometimes by a registered undertaker, in a formally proclaimed cemetery);
- Observation of rituals or ceremonies required by the families.

Nature and description of proposed activities

❖ Background

In the 1970s a need was identified for a new airport for metropolitan Durban and KwaZulu-Natal, given the projected constraints of the current Durban International Airport site. Some 2000 hectares of former agricultural land was thus expropriated at La Mercy and set aside for the development of an expanded international airport. In 1973 construction of an international airport was initiated and by 1975 earthworks and a storm water drainage system to the value of R320 million were completed. However, in 1982 construction was suspended as a result of slow economic growth.

The Durban International Airport relocation was re-prioritised by national and provincial government in the 1990s and detailed work was undertaken by various entities, including the Airports Company South Africa (ACSA). The Dube TradePort concept built off this work and included extensive further local and international research and policy development. The final trade port concept was approved by National Cabinet in 2002.

Accordingly, the Dube TradePort Company (on behalf of the Provincial Government of KwaZulu-Natal) and ACSA are planning to construct the Dube TradePort at La Mercy. The site for the development is located to the east of the R102 linking Verulam and Tongaat, and to the west of the N2 freeway between the uMdloti and the uThongathi Rivers.

❖ Rationale for the proposed development

Durban International Airport, operated by ACSA, currently serves the eThekweni Municipal Area and broader region. The airport caters mainly for domestic traffic but also serves as the feeder to Johannesburg International Airport for international traffic. The airport facility, which is located 18 kilometres south of Durban City centre, currently handles approximately 3.6 million passengers a year. The cargo export from Durban International Airport is limited by available belly capacity in passenger aircraft.

The South African government has identified the cost and efficiency of transporting people and freight as a key constraint on the expansion of the South African economy. The Dube TradePort is intended to act as a catalyst for economic growth through improved air transport infrastructure. Accordingly, it is a Provincial Flagship Project that has been identified and prioritised by the National Government's Accelerated and Shared Growth Initiative for South Africa.

The eThekweni Municipality has also identified the development of the King Shaka International Airport and Dube TradePort, together with its proposed Trade Zone, as the most important economic project for the region. The proposed development of the trade port should be seen as a long term strategy for the optimum provision of air services for eThekweni and surrounding region.

Collectively, the growth momentum stimulated by the establishment of the Dube TradePort has the potential to double KwaZulu-Natal's economic growth rate and create hundreds of thousands of new jobs in line with National Government targets, and possibly beyond. It is the only government-initiated programme in this Province that could achieve this level of growth impact.

At an elementary and local level, the immediate reasons for the development of the trade port are:

- Expanding the airline passenger capacity of Durban to cater for increasing domestic and international demand for travel.
- Enhancement of international tourism in the Province by allowing direct flights to KwaZulu-Natal from international destinations.
- Expanding the export industry by providing world-class airfreight facilities that will enable faster and more efficient export of high value goods.
- Providing a supportive environment for new entrants into the export market.

❖ Core elements

- The *King Shaka International Airport (KSIA)* will have the capacity to handle 7.5 million passengers per annum in 2015, with a 3 700m runway that will accommodate the latest new generation large aircraft that have recently been introduced for international travel. By 2060 the airport will be capable of handling in excess of the projected 25 million passengers.
- A *Trade Zone* will include a cargo terminal and associated dry and perishable cargo processing, and storage facilities that will enable faster export and import of time sensitive products by air. This zone will provide an export environment where tenants, operators and service industries can achieve high levels of productivity, logistics efficiencies and competitiveness. The Trade Zone Cargo Terminal will be capable of handling 100 000 tonnes of cargo per annum on opening in 2010. The available land and airport layout will be able to expand facility to handle four times that volume should the demand materialise.
- A *Support Zone* will consist of several nodes where land will be released for the development of offices, business parks, commerce and hotels by the private sector. This use will comprise mainly of the types of services found near international airports elsewhere in the world. The Support Zone will comprise an area of hotels, business parks, a trade centre, offices, retail facilities and related services.
- An *Agri Zone* of approximately 115 hectares will include land for the cultivation of high value farming products and facilities to promote agricultural production and export. The planned facilities include a wholesale fresh produce market, pack-houses, a training centre and buildings for administration, research and associated activities.

❖ Principal benefits of the proposed project

- Producers will benefit from access to an international airport that has been designed specifically to handle airfreight. For producers this will result in improved market access, lower total logistical costs, better-landed product quality and reduced delivery times. The trade port will mainly benefit producers from KwaZulu-Natal, but other producers close to the trade port will also make use of the facility. In South Africa these include the Eastern Cape, Mpumalanga, Free State and Gauteng. Mozambique, Swaziland and Lesotho will also benefit.
- Domestic and international travellers, visiting for either leisure or business, will benefit from access to an international airport near Durban that has been constructed to meet the latest world-class travel standards. Travellers will experience greater efficiency and quality of passenger experience.
- Tourism service providers throughout South Africa will benefit from increased international visitor numbers, resulting in increased business opportunities.
- The subcontinent will benefit from increased economic activity in the region and access to new export opportunities, resulting in employment and entrepreneurial opportunities.

The Dube TradePort project is planned to be implemented by 2010. During construction thousands of jobs will be created, in line with normal projections for projects of this scale. This constitutes a critical new area of spending and job creation in the local construction economy. More importantly however, in terms of long term sustainability, the expected level of benefits of the project by 2035 will be as follows:

	LOW SCENARIO	HIGH SCENARIO
Total number of new sustainable jobs	164,838 jobs	269,203 jobs
Increased contribution to National GDP	R12.3 Billion	R20.5 Billion
Increased fixed investment	R4.0 Billion	R6.9 Billion
Increased government revenues from taxes	R2.2 Billion	R4.3 Billion

Site access, description and environmental issues

The Application Site is described as Farm La Mercy 15124 and measures 2060 hectares in extent. The site was acquired by the South African Transport Services in 1972 for the purposes of relocating the Durban International Airport. The property was tied cadastrally in terms of 74 independent properties and their 60 Title Deeds. The site was then consolidated and transferred to ACSA from the South African Transport Services.

The site is situated in the northern sector of the eThekweni Municipality in KwaZulu-Natal. It is immediately bounded by Provincial Road R102 and agricultural land to the east, the N2 freeway to the west, agricultural land to the north (including the small settlement of Herrwood), and the settlement of Mount Moreland and agricultural land to the south. The towns of Verulam and Tongaat are located to the east of the site, the uMdloti River to the south, the Watson Highway and the uThongathi River to the north and agricultural land and the settlements of Umdloti, La Mercy and Westbrook Beach to the east of the N2. The agricultural land is under sugar cane.

Major levelling and drainage work was undertaken on the site between 1972 and 1975, with the remainder of the site characterised by gently rolling hills. The majority of the site is currently cultivated for sugar cane under lease by Tongaat Hulett. A small portion of the site is leased for the purposes of running a small plane and micro-light business.

Methodology

Two eThembeni staff members inspected the area on 20 and 21 October and 28 and 29 November 2006. We 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).

No excavations or sampling were undertaken, since a permit from Amafa aKwaZulu-Natali is required to disturb a heritage resource. We consulted various provincial databases, including historical, archaeological and geological sources and undertook a limited literature review, included as Appendix A.

We assessed the value and significance of heritage resources, as defined in the KwaZulu-Natal Heritage Act 1997 and the criteria contained in Appendix B. Culturally significant landscapes were assessed according to the criteria in Appendix C. Appendix D comprises five tables concerning assessment criteria for the evaluation of impacts; and definitions of significance ratings, probability ratings, confidence ratings and reversibility ratings. Appendix E is a table of heritage resources identified within the proposed development area.

The client has provided a map of the area, submitted to Amafa separately. Appendix F includes a map indicating the location of the heritage resources identified relative to the entire development area and the Special Zone 10 footprint. Appendix G includes a map indicating the location of the heritage resources identified relative to the construction phase layout. Geographic coordinates were obtained with a handheld Garmin GPS72 global positioning unit. Photographs were taken with a Hulett Packard digital camera and submitted to Amafa on compact disc. Appendix H contains a statement of independence and a summary of our ability to undertake this heritage impact assessment.

The following assumptions, limitations and uncertainties and gaps in information apply to this project:

- Soil surface visibility was poor to moderate overall, although it was good in recently harvested sugar cane plantations.
- There is no extant labourers' accommodation within the proposed development area, since such accommodation appears to have been demolished in the early 1970s. Accordingly, we have assumed that all ancestral graves were relocated at the time; we observed no physical evidence of human burials.
- Our survey of the area levelled for construction of the runway was cursory, given the extensive nature of the disturbance to the vegetation and upper soil layers.

Observations and recommendations

No development activities associated with the proposed project had begun prior to our visit, in accordance with provincial heritage legislation.

We found ten heritage resource sites within the proposed development area. Their details are summarised in Appendix E, with the following section focussing on management recommendations. However, the map indicating the location of these resources (Appendix F) indicates clearly that none fall within the Special Zone 10 footprint. Appendix G indicates that two heritage resources may be affected by the construction of a road necessary for the first construction phase. No development may occur outside this footprint without further applications to the environmental authorities.

⇒ Places, buildings, structures and equipment

Site 1 comprises structures possibly older than sixty years, constituting a farmstead noticeable for its Norfolk Island pine and flamboyant trees. The ruins were constructed from concrete blocks and coronation brick and are pictured below. They have low heritage significance and may be demolished with a permit from Amafa aKwaZulu-Natali.

The extent of impacts will be site-specific, with very low magnitude in the long term. These impacts might occur in subsequent development phases.



Site 2 comprises a structure possibly older than sixty years. It appears that an old compound was demolished and the remains piled up, creating a ruin that has low heritage significance. A permit from Amafa aKwaZulu-Natali is required for its alteration. The extent of impacts will be site-specific, with very low magnitude in the long term. These impacts might occur in subsequent development phases.

Site 3 is the Nidd residence, built in 1968 and pictured below.



The house is younger than sixty years, but may have architectural or historical significance despite its modernity. Accordingly, we recommend that the developer apply to Amafa for a permit prior to any structural alterations to or demolition of the house. The extent of impacts will be site-specific and local, with low magnitude in the long term. These impacts might occur in subsequent development phases.

⇒ Places to which oral traditions are attached or which are associated with living heritage

None will be affected.

⇒ Historical settlements and townscapes

The settlements of Mount Moreland and Herrwood will be affected by the proposed development in many ways, including visual effects, noise pollution and reduced property values. All of these issues are the subject of specialist studies to determine impact levels and mitigation measures.

Residents of Mount Moreland have expressed an interest in applying for Heritage Status for the settlement. Whilst Mount Moreland as laid out for the Byrne settlement scheme is of interest historically most developments are post 1970 (Appendix I). Consequently it is our opinion that Mount Moreland does not fit the criteria for recognition (eg historical townscape, building of architectural merit). However the Mount Moreland conservancy might approach Amafa aKwaZulu-Natali for formal recognition as a historical place. The Provincial Heritage body (Amafa) would need to consider whether Mount Moreland would qualify as a place cultural and historical significance.

The Herrwood settlement is titled land holdings of the Naicker and Govender families that date back to the late ninetieth century. These properties have been farmed for over a hundred years and the greater part of these were expropriated in the 1970s for inclusion in the proposed La Mercy airport. Eight extended families currently hold title to the remaining land holding and retain a very strong historical and cultural bond with the land. They have expressed strong opposition to being moved from Herrwood (Appendix I).

The extent of these impacts will be at the local level, with medium to high magnitude in the long term. These impacts will occur with certain confidence and definite probability.

⇒ Landscapes and natural features

The landscape consists of typical near-coastal undulating dunelands, transformed by agriculture (predominantly sugar cane), residential areas (including the villages of Mount Moreland and Herrwood and the towns of Verulam, Tongaat, Umdloti, La Mercy and Westbrook Beach) and light industry. Interregional infrastructure includes a railway line, the N2 freeway, R102 regional road and power lines.

The proposed development is in keeping with this cultural landscape. The extent of impacts will be at the local level, with medium to high magnitude in the long term. These impacts will occur with certain confidence and definite probability.

⇒ Geological sites of scientific or cultural importance

None will be affected.

⇒ Archaeological and palaeontological sites

Along this part of the coastline, within a distance of about three kilometres from the shore, virtually every dune top includes the remains of a Late Iron Age homestead. Typically, artefacts include undecorated ceramic sherds, marine shell and upper and lower grindstones. Metalworking sites are often located in areas where iron ore is available and associated debris includes furnace remains, slag, bloom and ceramic sherds.

Decades of agricultural activity (consisting mainly of sugar cane cultivation along this coastline) churn the upper 30 centimetres of soil, blurring the visible spatial layout of sites. However, the presence of a site can

still be noted by the occurrence of the aforementioned artefacts, and deposits sometimes remain intact at depth.

We identified the remains of seven Late Iron Age archaeological sites within the proposed development site, as detailed in Appendix E. All of these sites have low heritage significance due to their disturbed nature and a permit from Amafa aKwaZulu-Natali is necessary for their alteration or destruction. It should be noted however that a proposed access road during construction may remove all traces of sites 8 and 9 (Appendix G). The extent of impacts will be site-specific, with very low magnitude in the long term. Impacts might occur to the other sites identified in subsequent development phases of the airport.

⇒ Graves and burial grounds

None will be affected (refer to methodology section for assumptions concerning graves).

⇒ Movable objects excluding any object made by a living person

None will be affected.

⇒ Battlefields

None will be affected.

⇒ Traditional building techniques

None will be affected.

Summary of findings in terms of the KwaZulu-Natal Heritage Act 1997 Section 27(3)

(a) the identification and mapping of all heritage resources in the area affected

Three structures and seven archaeological sites.

(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in regulations

All of the heritage resources have low heritage significance.

(c) an assessment of the impact of development on such heritage resources

Sites 8 and 9 fall within the proposed construction footprint and may be affected by the construction of an access road required for the construction phase.

None of these resources fall within the Special Zone 10 footprint. Accordingly, they will remain unaltered by this first phase of the proposed development. Further expansion of the airport should be brought to the attention of authorities as all the sites recorded on the Farm La Mercy fall outside this footprint.

(d) 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 benefits of the proposed development outweigh the negative effects on known heritage resources.

(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources

The client has undertaken such consultation in terms of statutory requirements and retains the relevant documentation.

(f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives

No sites may be altered or demolished without a permit from Amafa.

(g) plans for mitigation of any adverse effects during and after completion of the proposed development

If permission is granted for development to proceed, the client is reminded that the Act requires that a developer cease all work immediately and notify Amafa should any heritage resources, as defined in the Act, be discovered during the course of development activities.

Conclusion

We recommend that the proposed development proceed with the aforementioned mitigation measures and have submitted this report to Amafa aKwaZulu-Natali in fulfilment of the requirements of the KwaZulu-Natal Heritage Act. According to Section 27(4) of the Act:

The report shall be considered timeously by the Council which shall, after consultation with the person proposing the development, decide -

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

The client may contact Amafa's Pietermaritzburg office (telephone 033 394 6543) in due course to enquire about the Council's decision.

References

King, T. F. 1989. The archaeological survey: methods and uses. Quoted in Canter, L. W. 1996. Environmental impact assessment. Second Edition. New York: McGraw-Hill, Inc.

Maggs, T. 1989. The Iron Age farming communities. In Duminy, A. and Guest, B. (eds) Natal and Zululand from earliest times to 1910. A new history pp. 28-48. Pietermaritzburg: University of Natal Press.

Mazel, A. 1989. The Stone Age peoples of Natal. In Duminy, A. and Guest, B. (eds) Natal and Zululand from earliest times to 1910. A new history pp. 1-27. Pietermaritzburg: University of Natal Press.

APPENDIX A

BACKGROUND AND LITERATURE REVIEW

The general area is one of variable heritage resource significance and the following tables provide a brief summary of archaeological time periods:

E arly	1.5 million to 180 000 years ago	Only stone artefacts remain from
S tone		this time period, including large
A ge		choppers, cleavers and hand axes
M idle	180 000 to 35 000 years ago	Stone tools smaller than in ESA;
S tone		include blades and flakes; human
A ge		and animal remains also found
L ater	35 000 years ago to the time	Variety of artefacts made from
S tone	of European settlement	organic and inorganic materials;
A ge		human remains, shell middens etc

E arly	400 – 500 AD	Mzonjani phase
I ron	500 – 700 AD	Msuluzi phase
A ge	700 – 900 AD	Ndondondwane phase
	900 – 1200 AD	Ntshekane phase
L ate	1200 – 1500 AD	Settlement by Nguni speakers
I ron	1500 – 1700 AD	Introduction of maize
A ge	1700 – 1850 AD	Pre-European settlement
	1850 AD to present	Historical

Numerous Stone and Iron Age sites have been recorded in the vicinity of the study area. Early Stone Age stone scatters occur in raised beach gravels, eroded areas and ancient coastal dunes. No information is available on the foods eaten by the Early Stone Age people in Natal, but it can be assumed on the basis of evidence on Early Stone Age people elsewhere that their diet consisted primarily of animals and plant foods. It was also during this period that people learnt to control fire' (Mazel 1989: 3-5).

'Clear technological differences separate the Middle Stone Age from the Early Stone Age. Whereas Early Stone Age tools were generally core tools [choppers, handaxes, cleavers], Middle Stone Age tools were made of flakes and blades detached from the core [trapezoids, segments, scrapers, points, flakes, blades]. Handaxes and cleavers were absent...

'Relatively little is known about the particular types of food that the Middle Stone Age hunter-gatherers ate. Border Cave [situated in the Lebombo Mountains on the border between South Africa and Swaziland] is the only site from which information is at present available... Small quantities of a wide variety of animals were found in the Border Cave excavations. These included honey badger, dassie, Burchell's zebra, bushpig, warthog, hippopotamus, steenbok, oribi, mountain reedbuck, waterbuck, roan / sable, impala, blesbok, hartebeest / tsessebe, blue wildebeest, springbok, greater kudu, nyala, bushbuck, eland, Cape buffalo and possibly an extinct giant Cape horse (*Equus capensis*).

'A handful of seeds was also found at Border Cave, while grindstones, which may have been used in the processing of plant foods, have been recovered from the Middle Stone Age layers at Umhlatuzana Shelter [located between Durban and Pietermaritzburg]...

'Evidence of the manufacture of cultural articles from materials other than stone first appears during the Middle Stone Age. So also does evidence concerning religious practices, the final Middle Stone Age stage at Border Cave producing the earliest known burial so far attributed to the Middle Stone Age' (Mazel 1989: 6-8).

Recent excavations at Sibhudu Shelter, a near-coastal site located between the uMvoti and uMngeni rivers, promise to shed more light on the Middle Stone Age of KwaZulu-Natal.

Later Stone Age sites occur throughout the province, with high concentrations in places such as the uKhahlamba mountains where rock shelters suitable for occupation are plentiful.

'Stone artefacts are overwhelmingly the most common cultural item recovered from the excavations that have been carried out, followed by pottery (belonging to the last 2 000 years), ground, polished and shaved bone, beads and ostrich eggshell... [Stone] scrapers were probably used for removing the fat from animal skins before these were pegged out to dry. Adzes were probably used for shaving wood and, to a lesser extent, bone; while backed pieces, of which there are different types, were probably employed in hunting and cutting up carcasses.

'A great deal of information about the foods Later Stone Age hunter-gatherers ate has been obtained from animal, plant and marine and freshwater shell remains. In some cases, it has been possible to identify the remains of individual species. As small animals in particular are sensitive to environmental fluctuations, these remains can also tell us much about past environments. Botanical remains are also very useful, for seeds can indicate which fruits and berries Later Stone Age people ate. And, because fruits and berries are seasonal, they can also provide information about the months during the year when sites were occupied' (Mazel 1989: 11-12).

'One of the main themes of Later Stone Age research in South Africa, including Natal, has been that of seasonality. It has been hypothesized, on the basis of the analysis of the seasonal movements of large antelope, that the food resources of southern Natal would have been exploited on a seasonal basis by hunter-gatherers. According to this hypothesis, they would have occupied the Drakensberg in summer and the Thornveld and coastal areas during winter, traversing the Midlands along ridges rather than in the valleys.

'Recent field-work based on this hypothesis has suggested that in southern Natal during the last 3 500 years, hunter-gatherers would have occupied the Drakensberg in spring and summer (October to March), the coastal zone in winter (April / May to August), and the Midlands in autumn and late winter (March / April to September). This seasonal hypothesis...has given rise to the speculation that while they were in the Drakensberg, the hunter-gatherers would have lived in large groups and would have operated from large home-base sites.

'One of the results of the formation of these larger social units could have been an increase in ritual activity. Social organisation in the Midlands, however, would have been characterized by the small mobile groups that traversed the zone, while in the coastal zones larger groups, but not as large as those in the Drakensberg, would have been found' (Mazel 1989: 17).

'The advent of the Iron Age saw not only the introduction of metallurgy. Of even greater significance was the introduction of agriculture, necessitating a settled, village way of life instead of the nomadic patterns of the Stone Age. It also provided for an appreciable increase in population density, as well as a more complex life-style. Richly decorated pottery is a hallmark of these early settlements. Domestic animals including cattle, sheep, goats and dogs were also a feature of the Iron Age, although current information indicates that they had already reached parts of South Africa, but apparently not Natal, during the Late Stone Age, through the agency of Khoisan herders...

'... the earliest Iron Age sites in South Africa, including Natal, relate to an eastern coastal and lowland cultural tradition with links as far north as the Kwale sites of eastern Kenya. This tradition has been named 'Matola', after a site in southern Mozambique, which provided close typological links between the Natal and eastern Transvaal sites¹. [In KwaZulu-Natal] almost all of them are on the belt of ancient dunes, which would have been covered by coastal forest at the time.

'Although no direct evidence of agriculture has as yet been obtained from Natal sites, seeds of bulrush millet (a tropical African cultigen) have been recovered from [an Mzonjani] site in the Transvaal. Bulrush millet is still a favoured crop on the dunes around Kosi Bay. Evidence of domestic animals has yet to be found on any [Mzonjani] site and it seems likely that they were rare, if present at all. The forest environment would certainly have been unsuitable as pasture for domestic animals. Marine mussels may therefore have played an important part as a protein source in place of meat or milk' (Maggs 1989: 29-31).

'Most Early Iron Age sites in Natal are later than the [Mzonjani] period and are classified according to ceramic styles [refer to the table above]...By this time villages, often about eight hectares in size and probably containing a hundred or more people, had become common in the lower-lying and savannah areas, below an altitude of 1 000 metres. They were most common along the major rivers

¹ This tradition is now known as Mzonjani in KwaZulu-Natal.

and in the coastal belt, where there was good, deep soil, sweet year-round grazing, and timber for building and fuel...

'Diet was based on agriculture and pastoralism, with a little supplementary hunting, fishing and gathering of wild plants and shellfish. Crops identified from seeds include several grains (bulrush millet, finger millet and probably sorghum), and probably the African melon... Most villages had one or more iron smelting areas and therefore produced their own requirements' (Maggs 1989: 31-32).

The beginning of the Late Iron Age marked a period of significant change in pottery styles, attributable to both socio-political and demographic factors (Maggs 1989). Settlements were no longer located in river valleys, but were built on higher ground where homesteads would benefit from cooling breezes and good views for strategic purposes.

Steep slopes, wetlands and marshy areas were used for grazing domestic animals and gathering wild food and medicinal plants. Settlements appear to have been much smaller, implying that 'society underwent a change away from the large Early Iron Age villages and towards the individual family homesteads of the historic Nguni-speaking peoples (Maggs 1989: 35).

Artefacts on Iron Age homestead sites include ceramic sherds, upper and lower grindstones and human and animal bones. Metalworking sites are often located in areas where iron ore is available and associated debris includes furnace remains, slag, bloom and ceramic sherds.

'The evidence or written sources [from shipwrecked Portuguese and other European mariners, who traversed lowland and coastal Natal on their way northwards to Mozambique] shows that, by the 1550s, while the coastal sourveld of Pondoland was thinly inhabited, coastal Natal from the Mtamvuna northwards was already well populated. A settlement of twenty hemispherical huts built of poles and thatch is described as being typical of the coast at that time. A later report confirms that such 'small villages' were the homes of kinship groups, each under the authority of a senior man. There can have been little difference between these homesteads and those of the nineteenth century in Natal and Zululand.

'The agro-pastoral economy of the Iron Age prevailed throughout the coastal regions, with cultivation typically a combination of grains, legumes and vegetables of the pumpkin-melon family. There were three types of grains, one being sorghum and another a smaller-seeded millet, specific identification being difficult to establish from the old Portuguese documents. Vegetables included beans, African groundnuts (both legumes), gourds, watermelons and pumpkins, while sorghum was cultivated for its sweet pith as well as for its seeds...There is evidence to show that tobacco was being cultivated and smoked by 1686. Cattle, sheep and goats were seen in quantities, as were chicken from southern Natal northwards' (Maggs 1989: 39).

APPENDIX B

SIGNIFICANCE AND VALUE OF HERITAGE RESOURCE SITES

The following guidelines for determining site significance were developed by the South African Heritage Resources Agency in 2003. We use them in conjunction with tables of our own formulation (see that for the Southern African Iron Age, below) when considering intrinsic site significance and significance relative to development activities, as well as when recommending mitigatory action.

Type of Resource

Place

Structure

Archaeological Site

Palaeontological Site

Geological Feature

Grave

Type of Significance

1. Historical Value

It is important in the community, or pattern of history

- Importance in the evolution of cultural landscapes and settlement patterns
- Importance in exhibiting density, richness or diversity of cultural features illustrating the human occupation and evolution of the nation, Province, region or locality.
- Importance for association with events, developments or cultural phases that have had a significant role in the human occupation and evolution of the nation, Province, region or community.
- Importance as an example for technical, creative, design or artistic excellence, innovation or achievement in a particular period

It has strong or special association with the life or work of a person, group or organisation of importance in history

- Importance for close associations with individuals, groups or organisations whose life, works or activities have been significant within the history of the nation, Province, region or community.

It has significance relating to the history of slavery

- Importance for a direct link to the history of slavery in South Africa.

2. Aesthetic Value

It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group

- Importance to a community for aesthetic characteristics held in high esteem or otherwise valued by the community.
- Importance for its creative, design or artistic excellence, innovation or achievement.
- Importance for its contribution to the aesthetic values of the setting demonstrated by a landmark quality or having impact on important vistas or otherwise contributing to the identified aesthetic qualities of the cultural environs or the natural landscape within which it is located.
- In the case of an historic precinct, importance for the aesthetic character created by the individual components which collectively form a significant streetscape, townscape or cultural environment.

3. Scientific Value

It has potential to yield information that will contribute to an understanding of natural or cultural heritage

- Importance for information contributing to a wider understanding of natural or cultural history by virtue of its use as a research site, teaching site, type locality, reference or benchmark site.
- Importance for information contributing to a wider understanding of the origin of the universe or of the development of the earth.
- Importance for information contributing to a wider understanding of the origin of life; the development of plant or animal species, or the biological or cultural development of hominid or human species.
- Importance for its potential to yield information contributing to a wider understanding of the history of human occupation of the nation, Province, region or locality.

It is important in demonstrating a high degree of creative or technical achievement at a particular period

- Importance for its technical innovation or achievement.

4. Social Value

It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons

- Importance as a place highly valued by a community or cultural group for reasons of social, cultural, religious, spiritual, symbolic, aesthetic or educational associations.
- Importance in contributing to a community's sense of place.

Degrees of Significance

Rarity

It possesses uncommon, rare or endangered aspects of natural or cultural heritage

- Importance for rare, endangered or uncommon structures, landscapes or phenomena.

Representivity

It is important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects

Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class.

Importance in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, Province, region or locality.

Sphere of Significance	High	Medium	Low	
International	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
National	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Provincial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Regional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Local	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specific Community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-----

What other similar sites may be compared to this site?

.....

.....

.....

.....

.....

.....

Southern African Iron Age

	Significance		
	- low	- medium	- high
Unique or type site			Yes
Formal protection			Yes
Spatial patterning	?Yes	?Yes	?Yes
Degree of disturbance	75 – 100%	25 – 74%	0 – 24%
Organic remains (list types)	0 – 5 / m ²	6 – 10 / m ²	11 + / m ²
Inorganic remains (list types)	0 – 5 / m ²	6 – 10 / m ²	11 + / m ²
Ancestral graves			Present
Horizontal extent of site	< 100m ²	101 – 1000m ²	1000 + m ²
Depth of deposit	< 20cm	21 – 50cm	51 + cm
Spiritual association			Yes
Oral history association			Yes
➤ Research potential			High
➤ Educational potential			High

Please note that this table is a tool to be used by qualified cultural heritage managers who are also experienced site assessors.

APPENDIX C

CULTURAL LANDSCAPES

The American National Parks Services sets out various criteria for the identification and management of cultural landscapes:

'Cultural landscapes are complex resources that range from large rural tracts covering several thousand acres to formal gardens of less than an acre. Natural features such as landforms, soils and vegetation are not only part of the cultural landscape, they provide the framework within which it evolves. In the broadest sense, a cultural landscape is a reflection of human adaptation and use of settlement, land use, systems of circulation and the natural resources and is often expressed in the way land is organised and divided, patterns of types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls and vegetation, and by use reflecting cultural values and traditions.

'Identifying the character-defining features in a landscape and understanding them in relation to each other and to significant historic events, trends and persons allows us to read the landscape as a cultural resource. In many cases, these features are dynamic and change over time. In many cases, too, historical significance may be ascribed to more than one period in a landscape's physical and cultural evolution.

'Cultural landscape management involves identifying the type and degree of change that can occur while maintaining the character-defining features. The identification and management of an appropriate level of change in a cultural landscape is closely related to its significance. In a landscape significant for its association with a specific style, individual, trend or event, change may diminish its integrity and needs to be carefully monitored and controlled. In a landscape significant for the pattern of use that has evolved, physical change may be essential to the continuation of the use. In the latter case, the focus should be on perpetuating the use while maintaining the general character and feeling of the historic period(s), rather than on preserving a specific appearance.

'A cultural landscape is a geographic area, including both natural and cultural resources, associated with a historic event, activity or person. The National Park Services recognises four cultural landscape categories: historic designed landscapes, historic vernacular landscapes, historic sites and ethnographic landscapes. These categories are helpful in distinguishing the values that make landscapes cultural resources and in determining how they should be treated, managed and interpreted...

'The four cultural landscape categories are not mutually exclusive. A landscape may be associated with a significant event, include designed or vernacular characteristics and be significant to a specific cultural group.'

APPENDIX D

Table 1: Assessment criteria for the evaluation of impacts

CRITERIA	CATEGORY	DESCRIPTION
Extent or spatial influence of impact	International	Wider than the boundary of RSA
	National	Within RSA but wider than KwaZulu-Natal
	Regional	Within the eThekweni & Ilembe Municipalities and broader KwaZulu-Natal
	Local	The area from the Umhlanga River up the north coast to Sheffield Beach and inland to Tongaat and south to Verulam and Phoenix.
	Site specific	Within Farm La Mercy No. 15124 - 2060ha
Magnitude of impact (at the indicated spatial scale)	High	Natural and/or social functions and/or processes are <i>severely</i> altered.
	Medium	Natural and/or social functions and/or processes are <i>notably</i> altered.
	Low	Natural and/or social functions and/or processes are <i>slightly</i> altered.
	Very low	Natural and/or social functions and/or processes are <i>negligibly</i> altered.
	Zero	Natural and/or social functions and/or processes remain <i>unaltered</i> .
Duration of impact	Construction	Up to 3 years.
	Short term	Up to 5 years after construction (ie 2015).
	Medium term	Up to 20 years after construction (ie 2035).
	Long term	More than 20 years after construction.

Table 2: Definition of significance ratings

SIGNIFICANCE RATINGS	LEVEL OF CRITERIA REQUIRED
High	<ul style="list-style-type: none"> High magnitude with regional extent and long term duration. High magnitude with either a regional extent and medium term duration or a local extent and long term duration. Medium magnitude with a regional extent and long term duration.
Medium	<ul style="list-style-type: none"> High magnitude with local extent and medium term duration. High magnitude with regional extent and short term duration or a site specific extent and long term duration. High magnitude with either a local extent and short term duration or a site specific extent and medium term duration. Medium magnitude with any combination of extent and duration except site specific and short term or regional and long term. Low magnitude with a regional extent and long term duration.
Low	<ul style="list-style-type: none"> High magnitude with a site specific extent and short term duration. Medium magnitude with a site specific extent and short term duration. Low magnitude with any combination of extent and duration except site specific and short term. Very low magnitude with a regional extent and long term duration.
Very low	<ul style="list-style-type: none"> Low magnitude with a site specific extent and short term duration. Very low magnitude with any combination of extent and duration except regional and long term.
Neutral	<ul style="list-style-type: none"> Zero magnitude with any combination of extent and duration.

Table 3: Definition of probability ratings

PROBABILITY RATINGS	CRITERIA
Definite	Estimated greater than 95% chance of the impact occurring.
Probable	Estimated 5 to 95% chance of the impact occurring.
Unlikely	Estimated less than 5% chance of the impact occurring.

Table 4: Definition of confidence ratings

CONFIDENCE RATINGS	CRITERIA
Certain	Wealth of information on and sound understanding of the environmental factors potentially influencing the impact.
Sure	Reasonable amount of useful information on and relatively sound understanding of the environmental factors potentially influencing the impact.
Unsure	Limited useful information on and understanding of the environmental factors potentially influencing this impact.

Table 5: Definition of reversibility ratings

REVERSIBILITY RATINGS	CRITERIA
Irreversible	The activity will lead to an impact that is permanent.
Long term	The impact is reversible within 10 years after construction.
Short term	The impact is reversible within the 3 years of construction.

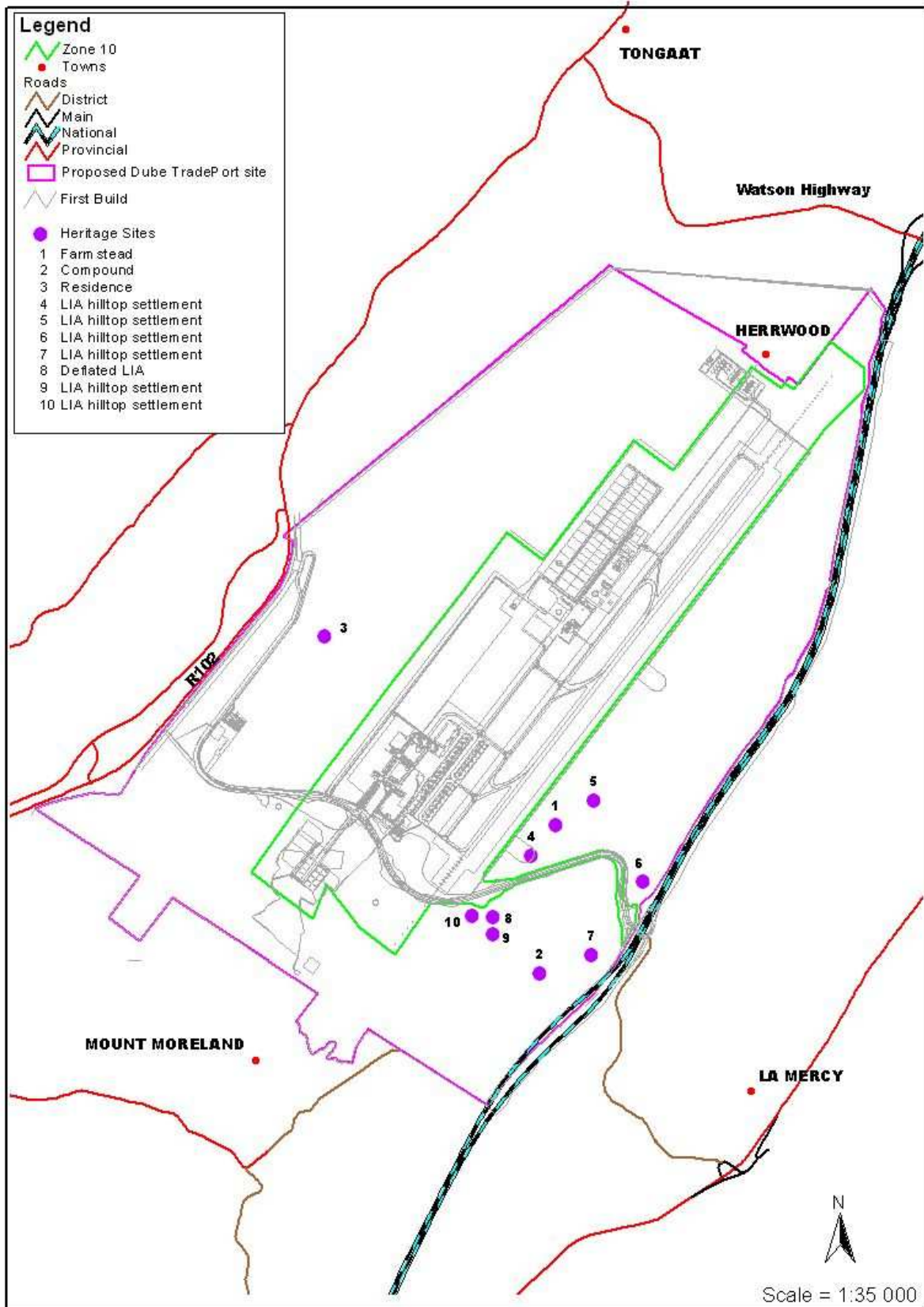
APPENDIX E

Table of heritage resources identified within the proposed development area

Site number	Description	Location	Heritage significance	Mitigation
1	Farmstead, cement block and brick ruins	S29 37 23.0; E31 06 54.0	Low	May be demolished with no permit from Amafa
2	Compound, structures demolished	S29 37 59.5; E31 06 49.5	Low	May be removed with no permit from Amafa
3	Nidd residence, dating to 1968	S29 36 36.8' E31 05 49.2	Low (possibly low to medium)	May not be altered or demolished without permit from Amafa
4	LIA hilltop settlement, with slag; flattened for construction of modern structures (?compound), also now in ruins	S29 37 30.5; 31 06 47.0E	Low	May be demolished with no permit from Amafa
5	LIA hilltop settlement, very few ceramic sherds and hammer stones.	S29 3717.0; E31 07 04.5	Low	Ditto
6	LIA hilltop settlement, ceramic sherds <5/10m ² and very fragmented; one whetstone	S29 37 37.0; E31 07 18.5	Low	Ditto
7	LIA hilltop settlement, ceramic sherds <5/10m ² and very fragmented; smithing slag	S29 37 55.0; E31 07 04.0	Low	Ditto
8	Deflated LIA iron working midden with bloomery/smithing slag; ceramic sherds >10/m ² on surface, no artefacts in profile. Located in saddle on high point	S29 37 45.7; E31 06 36.5	Low	Ditto
9	LIA hilltop settlement, ceramic sherds only, <2/10m ²	S29 37 50.0; E31 06 36.5	Low	Ditto
10	LIA hilltop settlement, ceramic sherds only, <2/10m ²	S29 37 45.5; E31 06 30.5	Low	Ditto

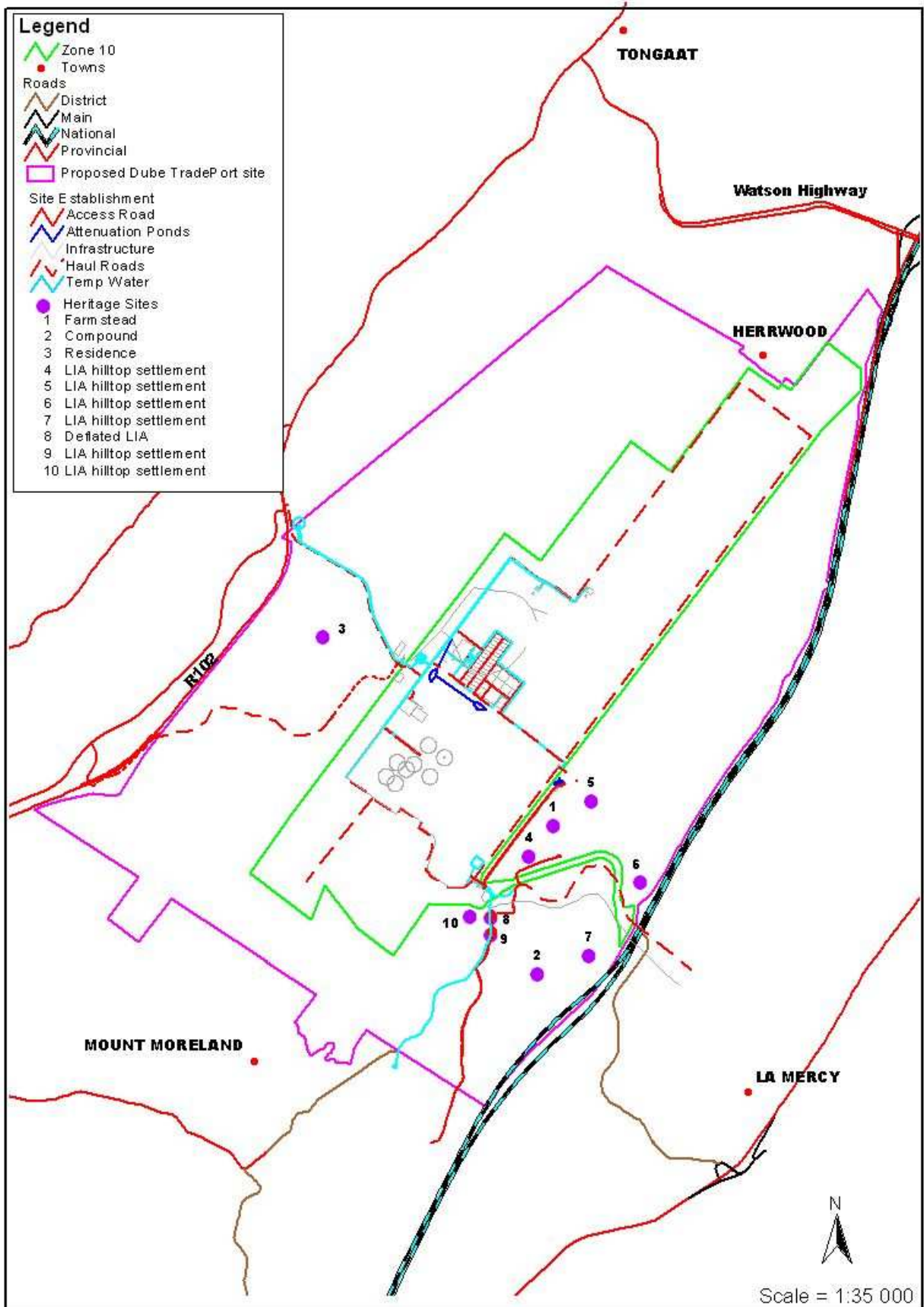
APPENDIX F

Map indicating the location of heritage resources (purple dots) relative to the Dube TradePort property (outlined in pink) and the Special Zone 10 footprint (outlined in green).



APPENDIX G

Map indicating the location of heritage resources (purple dots) relative to the Dube TradePort property (outlined in pink) and the Construction phase footprint.



APPENDIX H

We declare that Len van Schalkwyk, Beth 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 heritage assessment and management consulting services.

Len van Schalkwyk and Beth Wahl are equal partners in eThembeni Cultural Heritage and the following synopsis of our respective qualifications and experience demonstrates our ability to complete heritage impact assessments. We are accredited by Amafa aKwaZulu-Natali to complete heritage impact assessments in KwaZulu-Natal, and by the Cultural Resources Management section of the Association of South African Professional Archaeologists (ASAPA) and the South African Heritage Resources Agency (SAHRA) to do so in the rest of South Africa.

Len has a master's degree in archaeology (specialising in the history of early farmers in southern Africa) from the University of Cape Town and sixteen years' experience in cultural heritage management. He left his position as assistant director of Amafa aKwaZulu-Natali, the provincial cultural heritage authority, to start eThembeni. Len 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. Len has worked with many rural communities to establish integrated heritage and land use plans and speaks good Zulu.

Beth has an honours degree in African studies (majoring in archaeology and sociology) from the University of Cape Town and is completing her masters in heritage and tourism at the University of KwaZulu-Natal. Most recently she was employed by Amafa aKwaZulu-Natali as head of archaeology, which position she left to start eThembeni. Beth was a co-developer of the cultural heritage management plan for the uKhahlamba Drakensberg Park World Heritage Site and has developed and implemented training programmes for community guides and members of the public. Much of this training has focussed on the rock paintings of the uKhahlamba (Drakensberg) mountains.

❖ Heritage impact assessments

Such assessments are required as part of Environmental Impact Assessments by the KwaZulu-Natal Heritage Act 1997, the South African Heritage Resources Management Act 1999 and all national and provincial environmental legislation. We have completed numerous projects and Amafa aKwaZulu-Natali and the South African Heritage Resources Agency have supported our recommendations, without exception. The following projects are a sample of our work during 2005 and 2006:

Eskom power lines

- Braamhoek integrated power supply for PBA International
- Obanjeni, Mtunzini substation and power lines for SIVEST Environment and Planning
- Majuba Mfolozi power lines for BKS Environmental Management Division
- Idwala Carbonates for Stemele Bosch Africa
- Braamhoek power lines for Ludloko Developments

Housing, office and game estate developments

- Shakaskraal residential and commercial estate for ACER (Africa)
- Bird Valley Estate, Cramond; Camdeboo, Hilton and Sundara Estate, Oliviershoek for Alletson Ecologicals
- Muluja Heights, uKhahlamba Drakensberg for Brousse-James & Associates
- Lot 938 Port Edward for Buk'Indalo Consultancy cc
- Uitvlugt equestrian and wildlife estate, Pietermaritzburg for DR A'Bear & Associates
- New Forest, Dargle for Environmental Assessments cc
- Burlington Greenfield, Queensburgh; Hillary, Durban; Umkhumbaan, Cato Manor; Rem of Lot 125 Ifafa; Lot 6417 Tongaat, Westbrook Beach
- Erf 121 Bazley Beach and Rem of Lot 1 Umzumbe for Environmental Solutions
- Intathakusa Retreat, Inanda for futureWORKS!
- Alverstone, Assagay for Gary van Wyk and Scott Gelder
- Bishopstowe; Brookdales, Howick; Himeville; Kamberg; Northington, Mooi River; Phinda Game Reserve; Rietvallei equestrian estate, Lidgetton; Rietvlei, Craigieburn; Riversdale, Himeville; Spring Grove, Nottingham Road;

- Inhluzani, Dargle / Impendle; Umdloti; Lot 535 Kloof; Meycol Farm, uThukela Mouth; New Guelderland, Blythedale Beach; Simbithi eco-estate, Shakas Rock
- Zinkwazi Lagoon Lodge and forest estate for Indiflora cc Environmental Services
- Umbogintwini golf course for Kerry Seppings Environmental Management Services
- Zwelisha, Bergville for McFerran & Associates
- Executive Village, Umhlanga Triangle and Umhlanga New Town Centre for Moreland Developments (Pty) Ltd
- Cherry Farm, Port Shepstone; Kingthorpe equestrian estate, Pietermaritzburg; San Marina estate, Marina Beach; Shelly Ridge, Marburg Commonage; Sunrise Bay eco-estate; The Plantation agri eco-estate, Ramsgate; Uplands, Margate for NMH Consulting
- Buffelshoek, Winterton for Peter Jewell Consulting Services
- Umdloti Lagoon Valley and KwaDabeka C, Durban for SiVEST Environment and Planning
- Garden Park residential and commercial development for Spencer Gore Construction
- Manzengwenya dive camp for Strategic Environmental Focus (Pty) Ltd
- Balcomb, Mtunzini; Braeside Farm, Umhlali; Hillside farm, Umhlali; Helmsley Farm, Umhlali; Lot 617 Sheffield Beach; Mtikini, Ulundi; Palm Lakes, Umhlali; Tara Estate, Salt Rock for Sustainable Development Projects
- Allemans Drift and Waterford, Howick for WSP Environmental
- Almond Bank, Pietermaritzburg for Afzelia Environmental Consultants cc
- Nodunga and Cele-Nhlangweni for CHS Developments
- Eendvogel Vley and Gordon Hill, Ladysmith for DEK Simpson Professional Land Surveyors
- Mhlumayo housing for Inkonjane Developments

Road upgrades

- Road 1B Mkhazeni, Mgai farm road, Esifubeni road and Sani Pass Phase 1 for ACER (Africa)
- Ncengeni road, Tugela Ferry for J Mitchell & Associates
- Vukani Phase 2, Inanda for Pravin Amar Development Planners
- P230 road, Empangeni / Eshowe and Zwelimbomvu road for Terratest Incorporated
- Hillcrest roads for WSP Environmental

Bridge construction

- Bridge 1 Batshe and Bridge 18 Diki for ACER (Africa)
- Mfule River bridge, Nkwalini for Eyethu Engineers

Water supply projects

- Fairbreeze mine and Simdlangentsha for ACER (Africa)
- Makhabeleni, Masihambisane and Ntanzu for Saunders & Wium Trust
- Ozwathini / Mathulini and Wosiyane, Emalangeni and Cibane for SiVEST Environment and Planning
- KwaDeyi / St Faiths, KwaFodo and Stuartsville for Stemele Bosch Africa
- KwaGugquma for Terratest Incorporated
- Albert Falls and south coast water supply system, Amanzimtoti to Umzinto / Scottburgh for Umgeni Water Amanzi

Dams

- Nsami, Molepo and Acornhoek dams, Limpopo Province for Cave Klapwijk & Associates
- Sundara, Oliviershoek for Alletson Ecologicals

Virgin soil assessments

- Ideal View and Mid-Selbourne farms, Underberg for Alletson Ecologicals

Other

- Gautrain tunnel and portal variants, Johannesburg for Bohlweki Environmental
- Gautrain route variants, Tshwane for Felehetsa Environmental (Pty) Ltd
- Ermelo Majuba rail realignments for Cave Klapwijk & Associates
- Nondabuya and Welcome agricultural development programmes for ACER (Africa) and Institute of Natural Resources
- Ntingwe tea estate, N11 and N12 borrow pits for ACER (Africa)
- Ashburton quarry, Pietermaritzburg and Idwala mining, Port Shepstone for Council for Geoscience
- King Matiwane cultural village for NDG Africa
- Alton North ferrochrome smelter, Richards Bay for CSIR Environmentek
- Chieveley, KwaDlamini, Injasuthi and Elandskraal base stations for David Totman & Associates
- Msukeni and Lugelweni ecotourism developments, Eastern Cape for Environmental and Rural

Solutions

- KwaBulawayo tourism development for ZAI Consultants
- Avon and Geogedale peaking power plants for Environmental Impact Management Services (Pty) Ltd
- Riverside industrial park, Durban for Environmental Planning & Design
- Port Shepstone commercial development for Environmental Solutions
- Nquthu artefact collection for Ernst Cloete & Associates
- Braamhoek Pumped Storage Scheme impact assessment and monitoring for Eskom
- Erf 50 Cato Ridge and Westway commercial developments for Guy Nicolson Consulting cc
- Wellington wine estate, Rosetta for Harbour Rocks Properties (Pty) Ltd
- Enyokeni, KwaKhangela for SiVEST Environment and Planning
- Nanxing mining, Wartburg for Terratest Incorporated
- Sappi Saiccor Amakhulu expansion, Umkomaas and underground cable installation, Richards Bay for WSP Environmental
- 10 000BC filming location, Garden Castle for Brousse-James & Associates
- Heritage resources component of the KwaDukuza Strategic Environmental Assessment for SiVEST Selatile Moloji

APPENDIX I



Box 20057 Ashburton 3213
PIETERMARITZBURG South Africa
Telephone 033 326 1136 Facsimile 086 672 8557
082 655 9077
thembeni@iafrica.com

Institute of Natural Resources

21 May 2007

Attention: Jenny Mitchell

Mount Moreland and Herrwood

Further to your request to ascertain the historical background to Mt Moreland and Herrwood respectively we have interviewed residents at both settlements.

03 May 2007. Mt Moreland

Interview with Hillary and Ted Vickers. The Vickers' have been residents of Mt. Moreland for 17 years and Mrs Hillary Vickers is currently Chairperson of the Lake Victoria Conservancy. She provided the following information:

" Mt. Moreland's history goes back to early 1850's and is associated with the Byrne Settlers. Several of the streets in Mt Moreland reflect the names of Byrne's wife and children. Various plots in Mt Moreland were originally allocated to immigrants who ended up in distinguished positions in Durban. These included W E. Robarts who became Mayor of Durban 1886/8, Sir Liege Hulett who started his farming career from this area and Marshall Campbell, whose name is reflected in KwaMashu, first lived on the adjacent Umdloti Estate. John Moreland was surveyor for Natal and gave his name to the village which in turn came to be used by the current Moreland Properties Group of Hulett-Tongaat.

Just below Mt Moreland by the river crossing - the old stone bridge (we have photographic records) gave way in the floods 1989 - there is a general dealers store dated 1929 belonging to an Indian family. Behind it is an old house and a cluster of more recent ones which are still owned by descendants of the family.

There is considerable oral history to be gained from these families. In the valley alongside the Umdloti River there are graves belonging to the Chetty family who still reside and farm on the flood plain.

However it was not until the early 1970's that development really started in the village of Mt Moreland, when a developer, M Oberholzer, acquired some plots from Tongaat-Hulett and began developing the township which has had a chequered career since then, due to various attempts to establish an airport on the site to the north of us. Much of our research has come from *Natal Settler-Agent, The Career of John Moreland* published by AA Balkema. Cape Town 1972."

Mrs Vickers' principal enquiry was to the possibility of declaring Mt Moreland a site of heritage significance in the light of the proposed airport and the current EIA process. We informed her that this would have to be an initiative from the residents of Mt Moreland and should be submitted to Amafa aKwaZulu-Natali for consideration. She undertook to pursue the matter further with Amafa.

08 May 2007. Herrwood

Interview with Mr Jack Govender. Born in 1936 and a lifelong resident at Herrwood.

The Naicker and Govender families resident at Herrwood are direct descendants of Munian Naicker, an indentured labourer from Kharagpur in southern India, who arrived in Natal in the late 19th Century to work in the emergent sugar industry. Munian Naicker was granted a land title at Herrwood on completion of his indenture and farmed sugar cane and vegetables. In 1909 his title was divided into a number of 25 acre titled allotments and allocated to individual sons. These allotments were largely farmed for sugar cane and the crop supplied to Hulett-Tongaas. Mr Jack Govender's father, Rhupasammy Govender, subsequently divided his share into five 5 acre allotments for his respective sons, Mr Jack Govender being one of the beneficiaries. Today, eight extended families live on these five allotments which comprise the settlement of Herrwood.

The balance of the original Munian Naicker land grant was expropriated in the 1970's for inclusion into the proposed La Mercy Airport. The titled landowners at the time were paid compensation at a rate of R2000 per acre. As with the balance of the La Mercy Airport land this was subsequently leased back by Hulett-Tongaas for continued cane production. Post the expropriation Hulett-Tongaas provided water and electricity to the residents of Herrwood and many of the men from the settlement were employed by Hulett-Tongaas in their cane farming activities.

The Herrwood settlement is presently zoned as a residential node and landowners are registered as rate payers with the Durban Metro. Mr Jack Govender asserted, on behalf of all the residents, that they were unwilling to move from land that has been in the family for over 100 years.

Yours sincerely

Len van Schalkwyk and Beth Wahl.