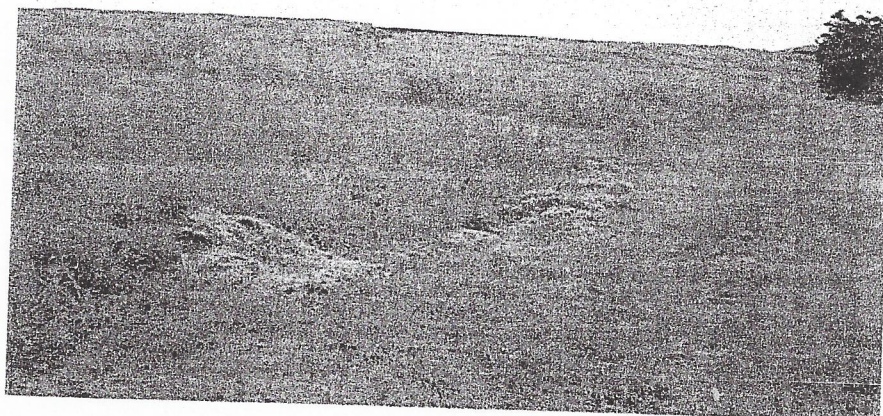


HERITAGE IMPACT ASSESSMENT OF BARTLETT RESIDENTIAL
ESTATE PHASE 1, HAMMARSDALE,
KWAZULU-NATAL, SOUTH AFRICA



Assessment and report by



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For **Balanced Environment**

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3 December 2007

Management summary

eThembeni Cultural Heritage was appointed by Balanced Environment to undertake a heritage impact assessment of a proposed residential development near Hammarsdale, in terms of the KwaZulu-Natal Heritage Act No 10 of 1997. Two eThembeni staff members inspected the area on 23 November 2007 and completed a controlled-exclusive surface survey, as well as a database and literature search.

We identified two heritage resources within the proposed development area. Both comprise Late Iron Age or historical archaeological sites with low heritage significance at all levels for their scientific value. The developer must obtain a permit from Amafa aKwaZulu-Natali for their alteration or destruction.

It is possible that unmarked ancestral graves are associated with these sites. We remind the developer that all graves have high heritage significance at all levels for their social value and may not be altered in any way without a permit from Amafa.

The landscape is generally semi-rural with numerous small holdings supporting a wide variety of activities including horse stabling and riding establishments and sugar cane farming. The Hammarsdale / Inchanga N3 interchange is located immediately next to the proposed development site, the bulk of which is presently a sugar cane farm.

This landscape will be altered significantly and permanently by the proposed development.

We recommend that this project may proceed with the proposed heritage resource mitigation and have submitted this report to Amafa aKwaZulu-Natali in fulfilment of the requirements of the KwaZulu-Natal Heritage Act. The client may contact Ms Wesuwe Tshabalala at Amafa's Pietermaritzburg office (telephone 033 3946 543) in due course to enquire about the Council's decision.

If permission is granted for 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.

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Introduction and legislation

eThembeni Cultural Heritage was appointed by Balanced Environment to undertake a heritage impact assessment of a proposed residential development near Hammarsdale, 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 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);

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- (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

The proposed Bartlett Estate Phase 1 will comprise a multi use development on approximately 206 hectares in four phases including the following activities and zones:

- Special Residential (± 139 single residential dwellings);
- Planned Unit Development (± 130 residential units on 3 PUD erven at 15u/ha);
- Service Industrial (Logistics Park - ± 43 erven);
- Mixed Use (± 14 erven on ± 10 Ha site sizes ranging from 1500m² to 4.5Ha);
- Private Open Space / Conservation (± 14 erven covering ± 37 Ha);
- Conservation (± 3 erven covering ± 31 Ha); and
- Future Residential (2 erven on ± 3.6 Ha),

as well as the necessary supporting infrastructure comprising roads, sewage disposal, water supply, electricity supply, storm water management, and solid waste management and disposal.

The development proponents propose a multi faceted residential approach, acknowledging the necessity for a community of mixed income and economic standing as the fabric of a successful society. The residential component will be released in a number of phases including Lower Middle Income (the value of homes in this sector of the market anticipated at R450K to R750K catering for upstream mid-management, retirees and first time homeowners) and Middle Income (the value anticipated at R750k to R 1.2million catering for working families looking to live in a semi-rural environment and travel to their places of work).

On the mixed use sites the proponents envisage a retail component with a low-key country feel including tourism related outlets, and the showcasing of local craftwork thereby reinforcing a 'Gateway to Mpumalanga' concept attracting and engaging the public in an interactive manner with the history, art and culture of the area.

The Service Industrial (Logistics Park) component is proposed to serve the growing interest and the biggest perceived demand in the Hammarsdale area for warehousing space to accommodate logistics. This land-use capitalises on the unique geographical advantage of the applicant site's close proximity to the N3 Hammarsdale / Inchanga interchange halfway between Pietermaritzburg and Durban, and reinforces the corridor concept identified in the Provincial Spatial Economic Development Strategy. The ad hoc development of service industry along the N3 corridor from Cato Ride to Camperdown confirms the identified need.

Finally the areas reserved for Conservation and Open Space reinforce the developers' commitment to responsible sustainable development by identifying sensitive areas for inclusion in environmental corridors.

A Social Investment Programme has been committed to, under the auspices of a trust, which will have a shareholding in Bartlett Country Estate (Pty) Ltd with a minimum of four trustees including two community representatives. The primary objective of the trust is the upliftment of the local community, through strategic planning and co-management of community initiatives.

The anticipated benefits of the development proposal already identified include:

- Temporary job creation during construction and skills transfer to local artisans;
- Permanent job creation in the region;
- Reinforcement of the growth corridors identified in terms of the Provincial Spatial Economic Development Strategy;
- Social upliftment of the local community – skills development, adult literacy etc.;
- Upgrading of existing services, specifically roads; and
- Improved land values.

Balanced Environment has been appointed as the independent Environmental Assessment Practitioner by Domain Property Group acting on behalf of Bartlett Estate Phase 1 (Pty) Ltd to undertake a Scoping and Environmental Impact Assessment (EIA) as required by the National Environmental Management Act No 107 of 1998 as amended and the Regulations and listed activities published in terms of Government Notices

R385, R386, R387 dated 21 April 2006 and effective 3 July 2006. The proposed development requires approval from the Department of Agriculture and Environmental Affairs for the following activities:

Notice R387, 21 April 2006

1(e) The construction of facilities or infrastructure, including associated structure or infrastructure, for any process or activity which requires a permit or license in terms of legislation governing the generation or release of emissions, pollution, effluent or waste and which is not identified in Government Notice No. R386 of 2006.

1(p) The construction of facilities or infrastructure, including associated structure or infrastructure, for the treatment of effluent, wastewater or sewage with an annual throughput capacity of 15 000 cubic metres or more.

1(r) The construction of facilities or infrastructure, including associated structure or infrastructure, for the microbial deactivation, chemical sterilisation or non-thermal treatment of waste or effluent.

2 Any development activity, including associated structures and infrastructure, where the total area of the developed area is, or is intended to be, 20 hectares or more.

5 The route determination of roads and design of associated physical infrastructure, including roads that have not yet been built for which routes have been determined before the publication of this notice and which has not been authorised by a competent authority in terms of the Environmental Impact Assessment Regulations, 2006 made under section 24(5) of the Act and published in Government Notice No. R. 385 of 2006, where

(a) it is a national road as defined in section 40 of the South African National Roads Agency Limited and National Roads Act No. 7 of 1998; (b) it is a road administered by a provincial authority; (c) the road reserve is wider than 30 metres; or (d) the road will cater for more than one lane of traffic in both directions.

Notice R386, 21 April 2006

1(e) The construction of facilities or infrastructure, including associated structure or infrastructure, for any purpose where lawns, playing fields or sports tracks covering an area of more than three hectares, but less than 10 hectares, will be established.

1(j) The construction of facilities or infrastructure, including associated structure or infrastructure, for agri-industrial purposes, outside areas with an existing land use zoning for industrial purposes, that cover an area of 1 000 square metres or more.

1(k) The construction of facilities or infrastructure, including associated structure or infrastructure, for the bulk transportation of sewage and water, including storm water, in pipelines with (i) an internal diameter of 0,36 metres or more; or (ii) a peak throughput of 120 litres per second or more.

1(m) The construction of facilities or infrastructure, including associated structure or infrastructure, for any purpose in the one in ten year flood line of a river or stream, or within 32 metres from the bank of a river or stream where the flood line is unknown, excluding purposes associated with existing residential use, but including - (i) canals; (ii) channels; (iii) bridges; (iv) dams; and (v) weirs.

1(s) The construction of facilities or infrastructure, including associated structure or infrastructure, for the treatment of effluent, wastewater or sewage with an annual throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.

1(v) The construction of facilities or infrastructure, including associated structure or infrastructure, for advertisements as defined in classes 1(a), 1(b), 1(c), 3(a) 3(b), 3(1) of the South African Manual for Outdoor Advertising Control.

4 The dredging, excavation, infilling, removal or moving of soil, sand or rock exceeding 5 cubic metres from a river, tidal lagoon, tidal river, lake, in-stream dam, floodplain or wetland.

15 The construction of a road that is wider than 4 metres or that has a reserve wider than 6 metres, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 metres long.

16 The transformation of developed vacant or derelict land to (a) establish infill development covering an area of 5 hectares or more, but less than 20 hectares, or (b) residential, mixed, retail, commercial, industrial or institutional use where such development does not constitute infill and where the total area to be transformed is bigger than 1 hectare.

17 Phased activities where any one phase of the activity may be below a threshold specified in this Schedule but where a combination of the phases, including expansions or extensions, will exceed a specified threshold.

18 The subdivision of portions of land 9 hectares or larger into portions of 5 hectares or less.

19 The development of a new facility or the transformation of an existing facility for the conducting of manufacturing processes, warehousing, bottling, packaging, or storage, which, including associated

structures or infrastructure, occupies an area of 1 000 square metres or more outside and existing area zoned for industrial purposes.

The EIA process is required to consider alternatives to any proposal which must include the 'no-go' option (i.e. the status quo remains as is), and may consider alternative layouts, land uses and / or servicing options. The development described throughout this document is known as the 'preferred' option. In addition to the 'no-go' option, the first alternative considers the provision of a mixed commercial / office park component with a smaller service industrial component south east of the MR 385, the second alternative considers the entire south eastern sector of the applicant site for office park/commercial development. Alternative servicing options have also been considered.

Site access, description and environmental issues

The applicant site, Bartlett Estate Phase 1, is located within the boundary of the eThekweni Municipal area, straddling the MR 385 to Hammarsdale immediately south west of the MR385 / N3 interchange. The area falls into Ward 4 and is under the jurisdiction of the Outer West Operational Entity of Durban Metro.

The six properties concerned, in total extent 206.0075 hectares, are described as:

- Proposed Portion of Farm Bartlett No 16387,
- Portion 7 (of 1) of Farm Bartlett No 16387,
- Remainder of Portion 1 of Farm Bartlett,
- Proposed Remainder of the Farm Bartlett No 16387 in extent 193.620 hectares and owned by Bartlett and Edwards Farms cc,
- Portion 10 of the Farm Leckhampton No 13282, 6.7469Ha in extent, owned by Mr V.J.O. Volker, and
- Portion 420 (of 1) of the Farm Sterkspruit No 907, 5.6407 hectares in extent, owned by Morning Tide Investments 225 Pty Ltd.

Mr Volker and Morning Tide Investments have entered into agreements with the Development Company Bartlett Estate Phase 1 (Pty) Ltd to include their land in the development application and have provided the requisite landowners consent to the department. Consent has also been provided by the South African National Roads Agency and the KwaZulu-Natal Department of Transport to include in this scoping / EIA process the anticipated upgrades to the MR 385 and MR385 / N3 interchange which may become necessary in the event of authorisation for the Bartlett Estate Phase 1 application being granted.

In general the area is of a semi-rural nature characterised by numerous small holdings supporting a wide variety of activities including horse stabling and riding establishments and sugar cane farming amongst others. The bulk of the property proposed for development is presently a sugar cane farm, with most of the cane farming activity taking place on the portions owned by Bartlett & Edwards Farms cc. Also located on the farm is the well known Hammond Range, home to several clubs practicing clay pigeon, hand gun and long-bore rifle shooting. The Volker land is occupied by the existing South-Tex textile factory and a residence is located on the portion of land under the ownership of Morning Tide Investments at Emerald Hill.

The climate exhibits temperatures averaging 18°C with occasional frost restricting the growing season. Rainfall ranges between 751 and 800mm per annum. A preliminary geotechnical investigation undertaken by Geosure (Pty) Ltd in July 2006 reveals that the site is underlain by a mantle of fill, colluvial, alluvial, and residual soils which overlie weathered sandstone of the Natal Group and concludes that the site is stable and suitable for development provided that recommendations made are adhered to.

The site is bisected by the MR385. The terrain is gently undulating with localised areas where the land becomes very steep forming krantzies. The northern portion of the site has a steep kranz along the western boundary and two drainage lines running from the north west into the main drainage line running from the south west in a north easterly direction. The southern portion of the site is characterised by more gentle gradients situated on the land known as Emerald Hill. Along the southern boundary there is deep depression in the landscape being the head of a catchment draining a southerly direction.

The natural vegetation type of the site is described as typical Ngongoni Veld, locally referred to as Dry coastal Hinterland Ngongoni Veld, with some remaining patches of good grassland occurring. Most of the

site is transformed and is under sugar cane. In some areas formerly transformed areas secondary grassland has established. The drainage lines and valleys are vegetated with trees appearing as a forest but inspection reveals a dense stand of black wattle, syringa, slash pine and bugweed with undergrowth comprising large-leaf bristle grass, guinea grass, and alien Spanish reed, lantana and trifid.

The Ezemvelo KwaZulu-Natal Wildlife C-Plan shows the site to have an irreplaceability index of $>0 -0.2$, which is very low, totally irreplaceable having a 1 rating. The C-Plan lists several species worthy of conservation as possibly occurring in the vicinity of the site, and although some species were expected to occur, the vegetation assessment by INDIFlora cc indicates that only *Scilla natalensis* was observed in a single clump of mature bulbs on the southern portion of the site. The northern most portion of the site falls within the eThekweni Metropolitan Open Space System and has therefore been designated Conservation.

The agricultural potential mapping supplied by the Department of Agriculture shows the site falling into Bioresource Unit Vb15. This is dealt with in an independent report of the site by Richard Hurt (see attached)

Road access to the site is excellent, taking immediate access off the tarred provincial road MR385 to Hammarsdale travelling south west off the Hammarsdale / Inchanga N3 interchange.

Potential environmental impacts of the development proposal already identified include:

- Increased storm water runoff from additional roofs and hardened areas and associated increased erosion potential;
- Increased risk for general environmental damage during construction phase (including risks associated with temporary fuel storage, heavy machinery movement, increased human traffic, trench digging for infrastructure etc);
- Ground water pollution from provision of sewage facilities;
- Visual impact on adjacent land;
- Change to the existing rural / agricultural sense of place at Cato Ridge / Inchanga; and
- Increased security risk during the construction phase.

Methodology

Two eThembeni staff members inspected the area on 23 November 2007. 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).

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.

The client has provided a map of the area, submitted to Amafa separately. 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 D contains a statement of independence and a summary of our ability to undertake this heritage impact assessment.

The assumptions and limitations of this heritage impact assessment are as follows:

- We have assumed that the description of the proposed project, provided by Balanced Environment, is accurate.
- We have assumed that 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 was good in places, but non-existent within areas of dense vegetation, including sugar cane plantations. Although unlikely, it is possible that heritage resources, including marked or unmarked ancestral graves, could be present and we remind the client 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.
- No subsurface investigations (including excavations or sampling) were undertaken, since a permit from Amafa aKwaZulu-Natali is required to disturb a heritage resource.

Observations and recommendations

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

⇒ Places, buildings, structures and equipment

None were identified within the proposed development area.

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

None were identified within the proposed development area.

⇒ Historical settlements and townscapes

None were identified within the proposed development area.

⇒ Landscapes and natural features

The landscape is generally semi-rural with numerous small holdings supporting a wide variety of activities including horse stabling and riding establishments and sugar cane farming. The Hammarsdale / Inchanga N3 interchange is located immediately next to the proposed development site, the bulk of which is presently a sugar cane farm.

This landscape will be altered significantly and permanently by the proposed development.

⇒ Geological sites of scientific or cultural importance

None were identified within the proposed development area.