
PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT

**THE HOPEWELL CONSERVATION PROJECT,
GREENBUSHES, PORT ELIZABETH, EASTERN CAPE, SOUTH AFRICA**

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**PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT
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EXECUTIVE SUMMARY

TERMS OF REFERENCE

NMN Developments (Pty) Ltd proposes to develop a conservation project comprising a rural residential estate, an equestrian estate and bush lodges within the proposed Hopewell conservation area in the Greenbushes area of the Nelson Mandela Bay Municipality, Eastern Cape, South Africa. The project domain totals 3,064.55ha in size, of which 231.47ha is proposed for development.

THE PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT

Project Area: The Phase 1 AIA covered an approximate 900ha area inclusive of the approximate 237.47ha development footprint.

Methodology: The Phase 1 AIA was conducted over a 5 day period (2007-09-19 to 2007-09-23) by one archaeologist. Assessment was done by foot and off-road vehicle and limited to a Phase 1 surface survey; no excavation or sub-surface testing was done. Sub-surface interpretations were based on assessment of exposed mining / quarry sections. GPS co-ordinates were taken with a Garmin e-Trex Vista GPS (Datum: WGS84). Photographic documentation was done with a Casio X-S2 Exilim camera. A combination of Garmap, Google Earth and ArcView software was used in the display of spatial information. Archaeological and cultural heritage site significance assessment and associated mitigation recommendations were done according to the system prescribed by SAHRA (2007). Impact identification assessment was done according to the SRK Consulting guidelines (2007).

Summary: Eleven cultural heritage resources were located within the approximate 900ha assessed area. Of the identified resources one (Site 01) is situated immediately adjacent to the development area. Ten resources (Sites HCP01-HCP07) centred at 7 localities are located within the assessed portion of the greater development area.

Development will directly impact on 5 identified cultural heritage resources comprising of:

- a) Site HCP01 (Stone Age);
- b) Site HCP03 (Historic Period / Contemporary);
- c) Site HCP04 (Historic Period);
- d) Site HCP06 (Historic Period); and
- e) Site HCP07 (Historic Period / Contemporary).

Development impact on Sites HCP02 and HCP05 will be indirect; the integrity of these sites may thus either be retained or diminished depending on the discretion of the developer. Site 01, a contemporary graveyard currently in process of grave relocation is situated immediately adjacent to the development area; the site will not be impacted on by the Hopewell Conservation Project development.

Impact significance ratings on the identified resources can be summarised as follows:

IMPACT	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	STATUS	CONFIDENCE
Site HCP01 – Conservation	Low	Improbable	Very Low	Positive	High
Site HCP01 – Destruction (No permit)	Low	Definite	Low	Negative	Medium
Site HCP02 – Conservation	Very Low	Improbable	Insignificant	Positive	High
Site HCP02 – Destruction (Permit)	Medium	Definite	Medium	Negative	Medium
Site HCP03 – Conservation	Very Low	Improbable	Insignificant	Positive	High
Site HCP03 – Destruction (Permit)	Medium	Definite	Medium	Negative	High
Site HCP04 – Conservation	Low	Improbable	Very Low	Positive	High
Site HCP04 – Destruction (No permit)	Low	Definite	Low	Negative	High
Site HCP05 – Conservation	Very Low	Improbable	Insignificant	Positive	High
Site HCP05 – Destruction (Site Inspection / Permit)	N/A	N/A	N/A	Negative	Medium
Site HCP06 – Conservation	Low	Improbable	Very Low	Positive	High
Site HCP06 – Destruction (No permit)	Low	Definite	Low	Negative	High
Site HCP07 – Conservation	Very Low	Improbable	Insignificant	Positive	High
Site HCP07 – Destruction (Permit)	Medium	Definite	Medium	Negative	High

RECOMMENDATIONS

The Hopewell Conservation Project will impact on cultural heritage resources as defined and protected by the NHRA 1999. *It is recommended that development proceed provided the developer complies with the following recommendations:*

MC	SITE	CO-ORDINATES	TYPE	PERIOD	DESCRIPTION	IMPACT	RECOMMENDATIONS
SITES LOCATED OUTSIDE THE HOPEWELL CONSERVATION PROJECT DEVELOPMENT AREA							
01	Site 01	S33°50'11.4"; E25°22'04.6"	Contemporary	-	Graveyard	N/A	(Sensitivity)
SITES LOCATED WITHIN THE HOPEWELL CONSERVATION PROJECT DEVELOPMENT AREA							
HCP01	Site HCP01	S33°50'11.4"; E25°22'04.6"	Archaeological	Stone Age	MSA	Direct	Destruction
HCP02	Site HCP02	S33°51'17.7"; E25°22'25.4"	Archaeological	Historic	Farmstead	Not Direct	<i>In situ</i> conservation; or Destruction
HCP03	Site HCP03	S33°52'57.3"; E25°22'42.4"	Archaeological	Historic	Farmstead	Direct	Destruction -ECPHRA Permit
HCP03	Site HCP03	S33°52'57.3"; E25°22'42.4"	Contemporary	-	Residence	N/A	N/A
HCP04	Site HCP04	S33°53'28.6"; E25°22'45.1"	Archaeological	Historic	Feature	Direct	Destruction
HCP05	Site HCP05	S33°52'57.3"; E25°22'42.4"	Archaeological	Historic	Farmstead 2	Not Direct	<i>In situ</i> conservation; or Destruction
HCP05	Site HCP05	S33°52'57.3"; E25°22'42.4"	Cotemporary	-	Residence	N/A	N/A
HCP06	Site HCP06	S33°53'08.9"; E25°24'36.8"	Archaeological	Historic	Feature	Direct	Destruction
HCP07	Site HCP07	S33°52'57.3"; E25°22'42.4"	Archaeological	Historic	Farmstead 3	Direct	Destruction -ECPHRA Permit
HCP07	Site HCP07	S33°52'57.3"; E25°22'42.4"	Contemporary	-	Residence	N/A	N/A

Compliance Requirements during the Construction Phase: The developer should ensure that heritage related information is communicated to all contractors and sub-contractors, inclusive of the localities of identified sites and related SAHRA and ECPHRA recommendations thereto.

Destruction of sites may only be permitted under formal SAHRA comment / the relevant *Destruction Permit* issued by the ECPHRA.

Should any cultural heritages resources, not reported on in this report be encountered during the course of development, both on the surface or sub-surface, the developer should ensure that operation in the immediately vicinity be ceased and the find reported to SAHRA / ASAPA accredited CRM archaeologist.

Post Construction Compliance Requirements: Should any cultural heritage resources be reported on by either residents or visitors to the Hopewell Conservation Project the developer / management should report the find to SAHRA / ASAPA accredited CRM archaeologist / Albany Museum, Grahamstown.

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CONTENTS

1)	TERMS OF REFERENCE	6
2)	INTRODUCTION TO THE SOUTH AFRICAN CULTURAL ENVIRONMENT	9
2.1)	<i>EARLY HOMININ EVOLUTION</i>	<i>9</i>
2.2)	<i>THE STONE AGE</i>	<i>10</i>
2.2.1)	<i>THE EARLIER STONE AGE</i>	<i>10</i>
2.2.2)	<i>THE MIDDLE STONE AGE</i>	<i>11</i>
2.2.3)	<i>THE LATER STONE AGE</i>	<i>12</i>
2.3)	<i>THE IRON AGE</i>	<i>14</i>
2.3.1)	<i>THE EARLY IRON AGE</i>	<i>14</i>
2.3.1.1)	<i>THE CENTRAL CATTLE PATTERN</i>	<i>16</i>
2.3.2)	<i>THE MIDDLE IRON AGE</i>	<i>17</i>
2.3.3)	<i>THE LATE IRON AGE</i>	<i>18</i>
2.4)	<i>THE HISTORICAL PERIOD</i>	<i>20</i>
3)	THE ARCHAEOLOGICAL IMPACT ASSESSMENT	22
3.1)	<i>ARCHAEOLOGICAL LEGISLATIVE COMPLIANCE</i>	<i>22</i>
3.1.1)	<i>BACKGROUND TO THE ENVIRONMENTAL AND ARCHAEOLOGICAL IMPACT ASSESSMENT</i>	<i>22</i>
3.1.2)	<i>THE SAHRA ARCHAEOLOGICAL IMPACT ASSESSMENT PROCESS</i>	<i>22</i>
3.1.3)	<i>THE BASICS OF ARCHAEOLOGICAL IMPACT ASSESSMENTS</i>	<i>24</i>
3.2)	<i>THE HOPEWELL CONSERVATION PROJECT: PRE-FEASIBILITY ARCHAEOLOGICAL IMPACT ASSESSMENT</i>	<i>25</i>
3.3)	<i>THE HOPEWELL CONSERVATION PROJECT: PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT</i>	<i>27</i>
3.3.1)	<i>METHODOLOGY</i>	<i>27</i>
3.3.2)	<i>COVERAGE AND GAP ANALYSIS</i>	<i>28</i>
3.3.3)	<i>DEVELOPMENT IMPACT</i>	<i>28</i>
3.3.4)	<i>PHASE 1 AIA ASSESSMENT FINDINGS</i>	<i>28</i>
3.3.4.1)	<i>SITE DESCRIPTIONS</i>	<i>33</i>
	SITE 01: CONTEMPORARY - GRAVEYARD	33
	SITE HCP01: STONE AGE - MIDDLE STONE AGE	35
	SITE HCP02: HISTORICAL PERIOD - RIET KUIL HISTORICAL FARMSTEAD	38
	SITE HCP03: HISTORICAL PERIOD - NOOITGEDACHT HISTORICAL FARMSTEAD 1	41
	CONTEMPORARY - RESIDENCE	41
	SITE HCP04: HISTORICAL PERIOD - STONE FEATURE	44
	SITE HCP05: HISTORICAL PERIOD - NOOITGEDACHT HISTORICAL FARMSTEAD 2	45
	CONTEMPORARY - RESIDENCE	45
	SITE HCP06: HISTORICAL PERIOD - STONE FEATURE	48
	SITE HCP07: HISTORICAL PERIOD - NOOITGEDACHT HISTORICAL FARMSTEAD 3	49
	CONTEMPORARY - RESIDENCE	49
3.4)	<i>RECOMMENDATIONS</i>	<i>52</i>
3.4.1)	<i>BASIC AIA COMPLIANCE PROCEDURES</i>	<i>53</i>
3.4.2)	<i>COMPLIANCE REQUIREMENTS DURING THE CONSTRUCTION PHASE</i>	<i>54</i>
3.4.3)	<i>POST CONSTRUCTION COMPLIANCE REQUIREMENTS</i>	<i>54</i>
4)	REFERENCES CITED	55

LIST OF TABLES

Table 1: Probability assessment of sites present in the study area	25
Table 2: A selection of protected building in Port Elizabeth (SAHRA database)	26
Table 3: Cultural heritage site significance assessment and mitigation recommendations	27
Table 4: SRK Consulting: Impact Assessment Identification guidelines	27
Table 5: Site HCP01 Impact Assessment Identification.....	37
Table 6: Site HCP02 Impact Assessment Identification.....	40
Table 7: Site HCP03 Impact Assessment Identification.....	43
Table 8: Site HCP04 Impact Assessment Identification.....	44
Table 9: Site HCP05 Impact Assessment Identification.....	47
Table 10: Site HCP06 Impact Assessment Identification.....	48
Table 11: Site HCP07 Impact Assessment Identification.....	51
Table 12: Summary of Identified sites and recommended mitigation measures	52
Table 13: Summarised site impact assessment identifications	53

LIST OF FIGURES

Figure 1: The Hopewell Conservation Project development area	7
Figure 2: The 3,064.55ha Hopewell Conservation Project development area.....	7
Figure 3: The proposed Hopewell Conservation Project development	8
Figure 4: The Mrs. Pless <i>A. africanus</i> specimen from	10
Figure 5: MSA lithic artefacts (Volman 1984)	12
Figure 6: Lithic and ceramic LSA artefacts (Deacon 1984).....	13
Figure 7: Rock art painting of a transbuck with a line of dots emanating	14
Figure 8: Msuluzi and Ndongonwane phase ceramics	15
Figure 9: Major ceramic traditions of the Iron Age (Mitchell 2002).....	16
Figure 10: Gravegoods from an elite burial, Mapungubwe Hill	17
Figure 11: Late Iron Age groupings, circa 1850 (Mitchell 2002)	19
Figure 12: The Historical site of Salem, Eastern Cape (Mitchell 2002).....	21
Figure 13: The SAHRA AIA evaluation process.....	23
Figure 14: General view of the south central development area	28
Figure 15: The south-eastern residential development area	28
Figure 16: General view of the central bush lodge development area.....	29
Figure 17: General view of the north-western development area.....	29
Figure 18: General view of the south-western development area	29
Figure 19: Anthropically sterile sub-surface quarry sections in the	30
Figure 20: Anthropically sterile sub-surface quarry sections in the	31
Figure 21: Phase 1 AIA assessment findings.....	32
Figure 22: General view of the Site 01 graveyard	33
Figure 23: Grave relocation in progress.....	33
Figure 24: General view of the north-eastern assessment area.....	35
Figure 25: Existing roads and tracks in which artefacts were discovered	35
Figure 26: Site HCP01 MSA flakes and scrapers	36
Figure 27: A side and end scraper from Site HCP01	36
Figure 28: General view of the Site HCP02 farmhouse remains.....	38
Figure 29: HCP02 farmhouse structure remains	38
Figure 30: Square stone stock enclosure remains, located adjacent to	39
Figure 31: Admixture of historical and recent cultural midden material.....	39
Figure 32: Structure remains located approximately 60m south of the	39
Figure 33: Farming infrastructure (cattle dip) located approximately.....	40
Figure 34: General view of Site HCP02	41
Figure 35: Remains of the HCP02 old farm house	41
Figure 36: Close-up of vegetation cover inside the house remains	42
Figure 37: Associated farmstead infrastructure remains	42
Figure 38: The contemporary informal residence of Phillip	42
Figure 39: The site HCP04 historical period stone feature	44
Figure 40: General view of Site HCP05	45
Figure 41: One of the residences comprising Mr Hatmann's.....	45
Figure 42: Contemporary stock enclosures of Mr. Hatmann	46
Figure 43: Mens Maghilidane.....	46
Figure 44: The site HCP06 historical period stone feature	48
Figure 45: General view of Site HCP07	49
Figure 46: Farmhouse ruins at site HCP07	49
Figure 47: Mr. Ndlovu at the historical ruins.....	50
Figure 48: Mr. Ndlovu with his sons and friends at his homestead.....	50

1) TERMS OF REFERENCE

NMN Developments (Pty) Ltd proposes to develop a conservation project comprising a rural residential estate, an equestrian estate and bush lodges within the proposed Hopewell conservation area in the Greenbushes area of the Nelson Mandela Bay Municipality, Eastern Cape, South Africa. The developer is hereafter referred to as the Hopewell Conservation Project.

NMN Developments (Pty) Ltd is a private company that has partnered with the Issroff family, the historical owners of much of the land that is proposed for conversion to a conservation area. In addition to the Issroff properties, NMN Developments (Pty) Ltd has purchased more land in order to increase the total size of the project domain.

The project domain totals 3,064.55ha in size, of which 231.47ha is proposed for development. The proposed project will include:

- a) Two bush lodges for tourist accommodation and various associated facilities in the most inaccessible parts of the site to create a high quality accommodation option;
- b) Approximately 47 lodges in exceptionally beautiful parts of the site. These will be marketed to corporations or syndicates for use as executive benefit management incentives schemes, entertainment of clients etc;
- c) An equestrian estate consisting of approximately 65 units of roughly 1ha each, clustered around boarding stables. A riding school will also be created;
- d) A rural residential estate of approximately 872 units will be established in clusters on the south eastern section closest to the nearest point of the municipal urban fence. These stands will be between 800 and 1,200m² and they will be arranged in an informal pattern designed to emphasise access to walking, cycling and horse riding routes through the whole estate and conservation area. There will be strict architectural and landscaping control and the objective will be to create a high quality shared public environment to foster a sense of community and security along the lines of the international movement referred to as *New Urbanism*. Within this development will be a community leisure facility which will provide *sport and recreation club* style facilities, as well as accommodation, and will include small conference venues;
- e) Primary access, in terms of current planning will be on Main road 368 from Old Cape Road. An application will be made to close this road to access from the north in order to ensure the integrity of the conservation area. A secondary access node is proposed at the south-eastern corner of the planning domain via Kloof and Duiker Roads;
- f) The management of the remaining 2,833ha as a conservation area, including the restoration of the ecology of the area via the control of alien invasive plants and the rehabilitation of degraded areas such as illegal mine / quarry sites; and
- g) All services will be provided at the expense of the developers because the area is outside the urban fence.

In addition to those described above, certain other initiatives are under investigation and discussion. These include the exploration of the possibility of extending the conservation area to include land owned by the Municipal Council, particularly, but not exclusively those sections of land that were expropriated from the Issroff family and expanding the conservation activities to

include community tourism and environmental education projects, in potential partnership with the Bethelsdorp Development Trust, the Uitenhage / Despatch Development Initiative, and others.



Figure 1: The Hopewell Conservation Project development area

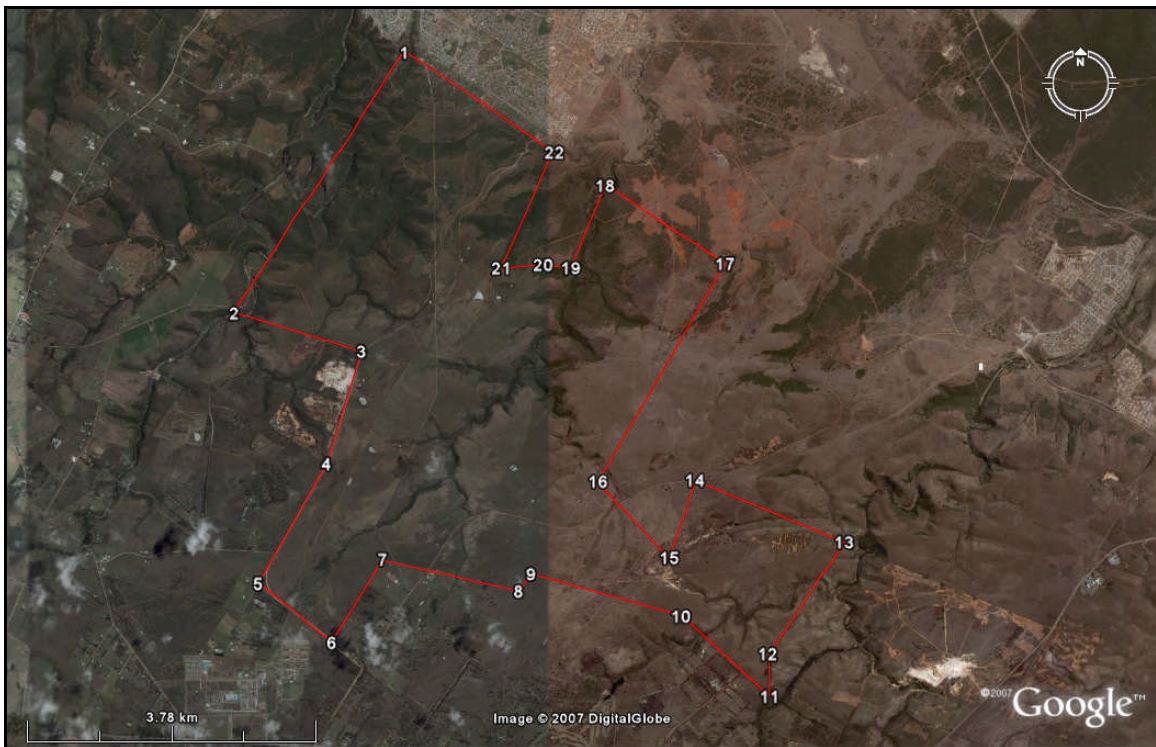
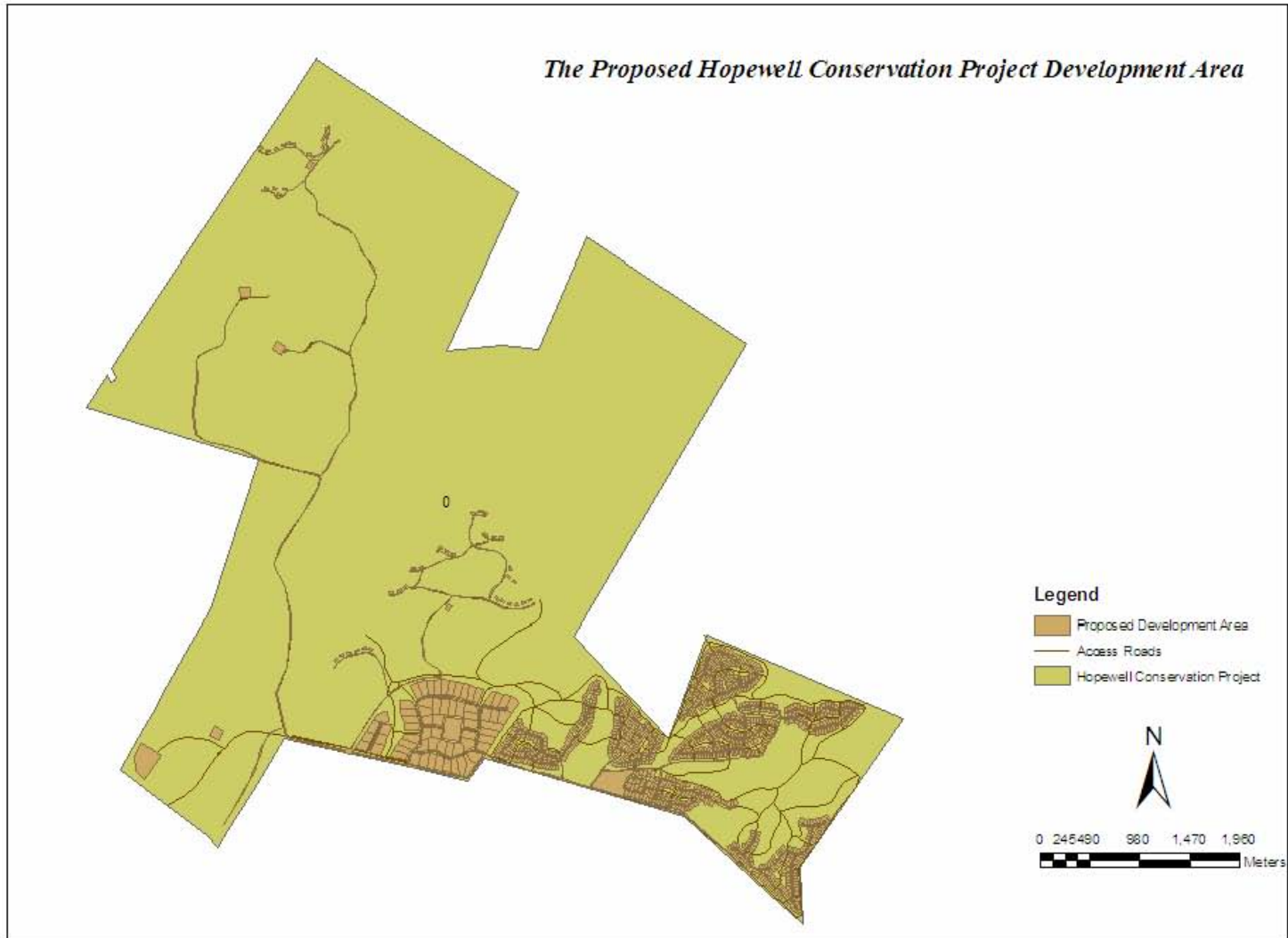


Figure 2: The 3,064.55ha Hopewell Conservation Project development area

Figure 3: The proposed Hopewell Conservation Project development



2) INTRODUCTION TO THE SOUTH AFRICAN CULTURAL ENVIRONMENT

Archaeologically the southern African cultural environment is roughly divided into the Stone Age, the Iron Age and the Historical Period. This cultural division has a rough temporal association beginning with the Stone Age, followed by the Iron Age and the Historical Period. The division is based on the identified primary technology used. The hunter-gatherer lifestyle of the Stone Age is identified in the archaeological record through stone being the primary raw material used to produce tools. Iron Age people, known for their skill to work iron and other metal, also practised agriculture and animal husbandry. Kingdoms and civilizations associated with the Iron Age are indicative of a complex social hierarchy. The Historical Period is marked by the advent of writing, in southern Africa primarily associated with the first European travellers (Mitchell 2002).

During the latter part of the Later Stone Age (LSA) hunter-gatherers shared the cultural landscape with both pastoralists and Early Iron Age people, while the advent of the Historical Period is marked by a complex cultural mosaic of people; including LSA hunter-gatherers, Later Iron Age farming communities and colonial occupation.

2.1) EARLY HOMININ EVOLUTION

DNA studies indicates that humans and chimpanzees shared a common ancestor between 6-8Mya (Sibley & Ahlquist 1984). By 4Mya, based on fossil evidence from Ethiopia and Kenya, hominins (humans and their immediate fossil ancestors and relatives) had already evolved. The earliest fossils are ascribed to *Ardipithecus ramidus* (4.4Mya), succeeded by *Australopithecus anamensis* (4.2-3.9Mya). These fossils are inferred to lie at the base from which all other hominins evolved (Leakey *et al.* 1995; White *et al.* 1994). Later hominins fall into 3 groups or distinct genera; *Australopithecus* (gracile australopithecines), *Paranthropus* (robust australopithecines) and *Homo*.

A general description of the australopithecines (*Australopithecus* and *Paranthropus*) would include definite bipedalism, while skeletally still retaining evidence of arboreal adaptation. Cranial capacity varied from 350-530cm³, with large projecting faces and large cheek teeth. *Homo* on the other hand exhibit trends towards increased cranial capacity (530-1500cm²), stature and body weight, reduction in dentition, jaws and cranial crests, delayed maturation rates and more obligatory bipedalism (Klein 1999).

Between 4-3Mya the East African record is dominated by *A. afarensis*, with the most famous fossil evidence being the Lucy skeleton from Hadar in Ethiopia (Johanson & Edey 1981) and the Laetoli footprints, Tanzania (Hay & Leakey 1982).

South Africa has 3 major hominin sites;

- a) Taung in the North-West Province, where Raymond Dart identified the first *Australopithecus* fossil in 1924 (Dart 1925);
- b) The Cradle of Humankind (Sterkfontein Valley) sites in Gauteng, the most prolific hominin locality in the world for the period dating 3.5-1.5Mya which have yielded numerous *Australopithecus*, *Paranthropus* and limited *Homo* fossils (Keyser *et al.* 2000; Tobias *et al.* 2000); and
- c) Makapansgat in the Limpopo Province, which yielded several more specimens believed to be older than most of the Cradle specimens (Klein 1999).

A. africanus, represented at all 3 sites are believed to have been present on the South African landscape from about 3Mya. From approximately 2.8Mya they shared, at least in the Cradle area, the landscape with *P. robustus* and from roughly 2.3Mya with early forms of *Homo* (Clarke 1999).



Figure 4: The Mrs. Pless *A. africanus* specimen from Sterkfontein Cave (Johanson & Edgar 1996)

Global climatic cooling around 2.5Mya may have stimulated a burst of species turnover amongst hominins (Vrba 1992); the approximate contemporary appearance of the first stone tools does suggest that this was a critical stage in human evolution. But exactly which early hominin population should be accredited as the ancestor of *Homo* remains elusive.

H. ergaster is present in the African palaeo-anthropological record from around 1.8Mya and shortly thereafter the first exodus from Africa is evidenced by *H. erectus* specimens from China, Indonesia and even Europe (Klein 1999).

2.2) **THE STONE AGE**

2.2.1) **THE EARLIER STONE AGE**

In South Africa the only Earlier Stone Age (ESA) Oldowan lithic assemblage comes from Sterkfontein Cave. The predominant quartz assemblage is technologically very simple, highly informal and inferred to comprise exclusively of multi-purpose tools (Kuman *et al.* 1997). But not all artefacts from the early assemblages are made from stone; several long-bone polished fragments from Drimolen, Swartkrans and Sterkfontein, Cradle of Humankind, may have been used as digging tools (Brain 1985; Backwell & d’Errico 2000).

The latter part of the ESA is characterised by the Acheulean Industrial Complex, present in the archaeological record from at least 1.5Mya. Both *H. ergaster* and *P. robustus* may be accredited for the production of these tools. However, if a primary role for stone tools was to increase access

to meat and bone marrow, as cutmark and microwear evidence suggests, stone tool production would fit the presumed greater interest in meat eating by *Homo*. The combination of extended tool use and greater dietary breadth with more efficient heat regulation and locomotion may have been vital to *Homo's* evolutionary success; and the eventual extinction of the robust australopithecines (Klein 1999).

Probably the longest lasting artefact tradition ever created by hominins, the Acheulean is found from Cape Town to north-western Europe and India, occurring widely in South Africa. Despite the many sites it is still considered a 'prehistoric dark age' by many archaeologists, encompassing one of the most critical periods in human evolution; the transition from *H. ergaster* to archaic forms of *H. Sapiens* (Klein 1999).

The Acheulean industry is characterised by handaxes and cleavers as *fosilles directeurs*, in association with cores and flakes. Handaxes and cleavers occur in a variety of shapes. Handaxes are elongated pear-shaped or triangular in form, terminating in a point, while cleavers have a broad axe-like cutting edge. Handaxes and cleavers were multi-purpose tools used to work both meat and plant matter (Binneman & Beaumont 1992). The lithic artefact component was probably supplemented by wood and other organic material (Deacon 1970). Prominent South African sites include Wonderwerk Cave (Beaumont 1990), the Cave of Hearths and Olieboompoort (Mason 1962).

Later Acheulean flaking techniques involved a degree of core preparation that allowed a single large flake of predetermined shape and size to be produced. In the western-central interior this is represented by the so-called Victoria West cores (Inskeep 1978). Both endstruck and sidestruck flakes could be produced. The Victoria West technique indicates an origin within the Acheulean for the *Levallois technique* of the Middle Stone Age (Noble & Davidson 1966).

2.2.2) THE MIDDLE STONE AGE

The Middle Stone Age (MSA), dating from approximately 300kya to 40-27/23kya is interpreted as an intermediate technology between the Acheulean and the Later Stone Age (LSA) (Goodwin & van Riet Lowe 1929). Typologically the MSA is characterised by the absence of handaxes and cleavers, the use of prepared core techniques and the production of blades, triangular and convergent flakes, with convergent dorsal scars and faceted striking platforms, often produced by means of the *Levallois technique* (Volman 1984). The widespread occurrence of MSA technology across Africa and its spread into much of Eurasia in Oxygen Isotope Stage (OIS) 7 is viewed as part of a process of population dispersal associated with both the ancestors of the later Neanderthals in Europe and anatomically modern humans in Africa (Foley & Lahr 1997).

Persuasive evidence of ritual activity or bodily decoration is evidenced by the widespread presence of red ochre at particularly MSA 2 sites (after Volman's 1984 MSA 1-4 model), while evidence from Lion Cave, Swaziland, indicates that specularite may have been mined as early as 100kya (Beaumont 1973). Presumably the pigments were used in body decoration, but decoration of artefacts, hide-working and use in barrier creams are also possible. Evidence for symbolic behavioural activity is largely absent; no evidence for rock art or formal burial practices exists.

After the riches offered by the Cradle sites and Makapansgat, southern Africa's Middle Pleistocene fossil record is comparatively poor. Early Middle Pleistocene fossil evidence do suggest an archaic appearance, albeit a much larger cranial capacity (1,250cm³) and fossils are often assigned to *H. heidelbergensis* and *H. sapiens rhodesiensis* (Rightmire 1976). Modern looking remains, primarily from Border Cave (KwaZulu-Natal) and Klasies River Mouth (Eastern

Cape) raised the possibility that anatomically modern humans had, by 120kya, originated south of the Sahara before spreading to other parts of the world (Brauer 1982; Stringer 1985). Subsequent studies of modern DNA indicated that African populations are genetically more diverse and probably older than those elsewhere (Cann *et al.* 1987). Combined, the fossil and genetic evidence underpins the so-called *Out of Africa 2* model (arguing that gene flow and natural selection led regional hominin populations along distinct evolutionary trajectories after *Homo*'s expansion from Africa in the Lower Pleistocene *Out of Africa 1* model) of modern human origins and the continuing debate as to whether it should be preferred to its *Multiregional* alternative (arguing that modern humans evolved more or less simultaneously right across the Old World) (Mellars & Stringer 1989; Aitken *et al.* 1993; Nitecki & Nitecki 1994).

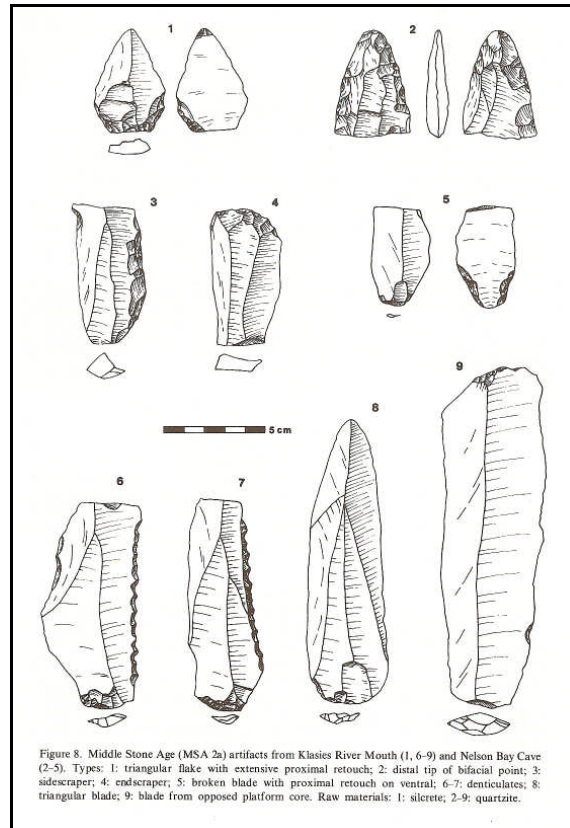


Figure 5: MSA lithic artefacts (Volman 1984)

2.2.3) THE LATER STONE AGE

Artefacts characteristic of the Later Stone Age (LSA) appear in the archaeological record from 40/27-23kya and incorporates microlithic as well as macrolithic assemblages. Artefacts were produced by modern *H. sapien* or *H. sapien sapien*, who subsisted on a hunter-gatherer way of life (Deacon 1984; Mitchell 2002).

Temporally the LSA can be divided into 4 broad units associated with climatic, technological and subsistence changes:

- a) Late Pleistocene microlithic assemblages (40-12kya);
- b) Terminal Pleistocene / early Holocene non-microlithic assemblages (12-8kya);
- c) Holocene microlithic assemblages (8kya to the Historic Period); and
- d) Holocene assemblages with pottery (2kya to the Historic Period) closely associated with the influx of pastoralist communities into South Africa (Mitchell 2002).

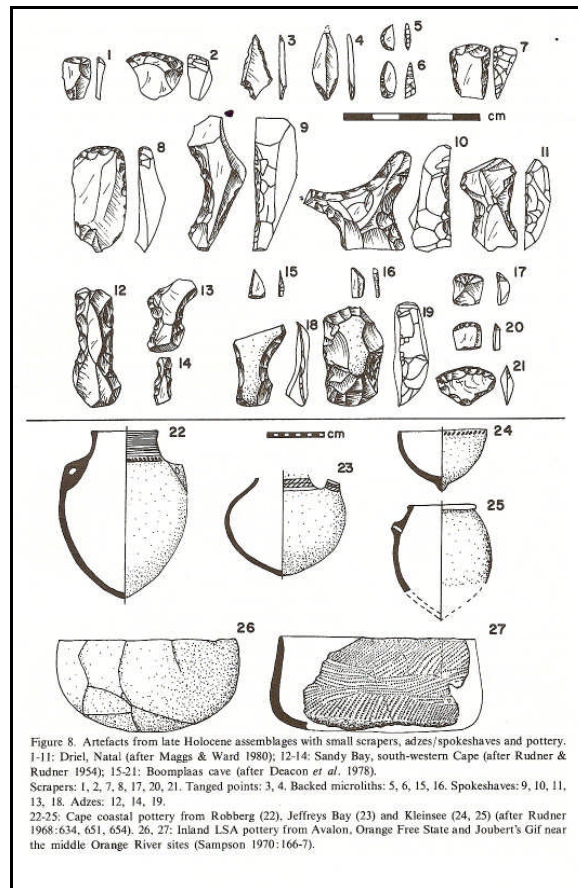


Figure 6: Lithic and ceramic LSA artefacts (Deacon 1984)

Elements of material culture characteristic of the LSA reflect modern behaviour. Deacon (1984) summarises these as:

- a) Symbolic and representational art (paintings and engravings);
- b) Items of personal adornment such as decorated ostrich eggshell, decorated bone tools and beads, pendants and amulets of ostrich eggshell, marine and freshwater shells;
- c) Specialised hunting and fishing equipment in the form of bows and arrows, fish hooks and sinkers;
- d) A greater variety of specialised tools including bone needles and awls and bone skin working tools;
- e) Specialised food gathering tools and containers such as bored stone digging stick weights, carrying bags of leather and netting, ostrich eggshell water containers, tortoiseshell bowls and scoops and later potter and stone bowls;
- f) Formal burial of the dead in graves (sometimes covered with painted stones or grindstones and accompanied by gravegoods);
- g) The miniaturisation of selected stone tools linked to the practise of hafting for composite tools production; and
- h) A characteristic range of specialised tools designed for making some of the items listed above.



Figure 7: Rock art painting of a transbuk with a line of dots emanating from the back of its neck. Blood falls from its nose, and it has hoofs not feet. It holds a skull-like object (Lewis-Williams 2003)

2.3) *THE IRON AGE*

For close to 2 millennia people combining cereal agriculture with stock keeping have occupied most of southern Africa's summer rainfall zone. The rapid spread of farming, distinctive ceramics and metallurgy is understood as the expansion of a Bantu-speaking population, in archaeological terms referred to as the Iron Age.

2.3.1) *THE EARLY IRON AGE*

From around 3kya African societies north of the Congo and Serengeti practised diverse forms of food production. Further south, the perceived homogeneity of the material culture of the earliest agricultural groups and the fact that this was introduced rapidly and without local precursors has led archaeologists to conclude that it must reflect the physical movement of substantial numbers of people. Farming and the presumed advantages of iron tools for land clearance and cultivation are thought to have fuelled population growth (Oliver 1966). In addition linguistics identified the Cameroon / Nigeria border as the centre of origin for Bantu languages (Dalby 1975).

Ceramic typology is central to current discussions of the expansion of iron using farming communities. The most widely used approach is that of Huffman (1980), who employs a multidimensional analysis of 3 variables; vessel profile, decoration layout and motif to reconstruct different ceramic types. Huffman (1989) argues that since large zones of ceramic uniformity are often punctuated by short distances over which style changes substantially, these changes in non-verbal communication may also mirror patterning in verbal communication such as language. If this is correct then ceramics can be used to trace the movements of people, though not necessarily of specific social or political groupings. Huffman's Urewe Tradition coincides largely with Phillipson's (1977) *Eastern Stream*. A combined Urewe Tradition / *Eastern Stream* model can be summarised as:

- a) The Kwale branch (extending along the coast from Kenya to KwaZulu-Natal);
- b) The Nkope branch (located inland and reaching from southern Tanzania through Malawi and eastern Zambia into Zimbabwe); and
- c) The Kalundu branch (stretching from Angola through western Zambia, Botswana and Zimbabwe into South Africa).

In southern Africa, recent work distinguishes two phases of the Kwale branch. The earlier Silver Leaves facies (250-430BP) occur as far south as the Northern Province. The later expression or Mzonjani facies (420-580BP) occurs in the Northern Province as well as along the KwaZulu-Natal coastal belt (Huffman 1998). Since the Silver Leaves facies is only slightly younger than the Kwale type site in Kenya, very rapid movement along the coast, perhaps partly by boat, is inferred (Klapwijk 1974). Subsequently (550-650BP) people making Mzonjani derived ceramics settled more widely in the interior of South Africa.

Assemblages attributable to the Nkope branch appear south of the Zambezi but north of South Africa from the 5th Century. Ziwa represents an early facies, with Gokomere deriving jointly from Ziwa and Bambata. A subsequent phase is represented by the Zhizo facies of the Shashe-Limpopo basin, and by Taukome (Huffman 1994). Related sites occur in the Kruger National Park (Meyer 1988). Zhizo (7th – 10th Century) is ancestral to the Toutswe tradition which persisted in eastern Botswana into the 13th Century.

Kalundu origins need further investigation; its subsequent development is however better understood. A post Bambata phase is represented by 5th – 7th Century sites of Happy Rest, Klein Africa and Maunatlana in the Northern Province and Mpumalanga (Prinsloo 1974, 1989). Later phases are present at the Lydenburg Heads site (Whitelaw 1996) and by the succession of Mzuluzi, Ndongonwane and Ntshekane in KwaZulu-Natal (7th – 10th Centuries) (Prins & Grainger 1993). Later Kalundu facies include Klingbeil and Eiland in the northern part of the country (Evers 1980) with Kgopolwe being a lowveld variant in Mpumalanga (10th – 12th Century). Broadhurst and other sites indicate a still later survival in Botswana (Campbell 1991).

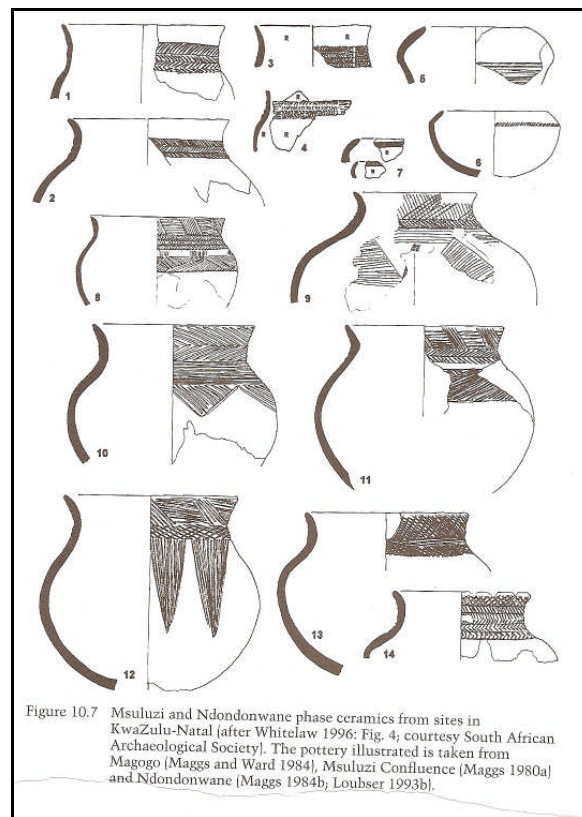


Figure 8: Msuluzi and Ndongonwane phase ceramics (Mitchell 2002)

Despite the importance accorded to iron agricultural implements in expanding the spread of farming and frequent finds of production debris, metal objects are rare. Metal techniques were simple, with no particular sign of casting, wire drawing or hot working. Jewellery (bangles, beads, pendants etc.) constitute by far the largest number of finds but arrows, adzes, chisels, points and spatulae are known (Miller 1996).

Early Iron Age people were limited to the Miombo and Savannah biomes; excluded from much of the continent's western half by aridity and confined in the south during the 1st millennium to bushveld areas of the old Transvaal. Declining summer rainfall restricted occupation to a diminishing belt close to the East Coast and north of S33° (Maggs 1994); sites such as Canasta Place, Eastern Cape, marks the southern most limit of Early Iron Age settlement (Nogwaza 1994).

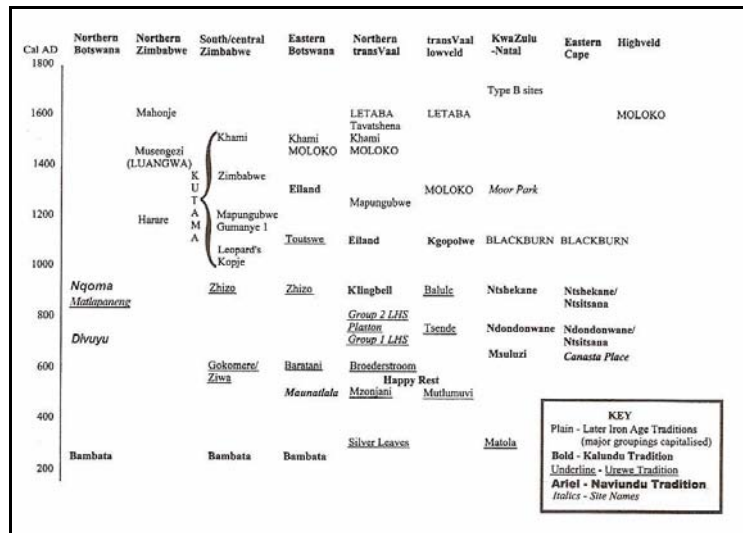


Figure 9: Major ceramic traditions of the Iron Age (Mitchell 2002)

2.3.1.1) THE CENTRAL CATTLE PATTERN

The Central Cattle Pattern (CCP) was the main cognitive pattern since the Early Iron Age (Huffman 1986). The system can be summarized as opposition between male pastoralism and female agriculture; ancestors and descendants; rulers and subjects; and men and women. Cattle served as the primary means of transaction; they represented symbols exchanged for the fertility of wives, legitimacy of children and appeasement of ancestors. Cattle were also used as tribute to rulers confirming sub-ordination and redistribution as loan cattle by the ruler to gain political support. Cattle represented healing and fertilizing qualities (Huffman 1998; Kuper 1980).

This cognitive and conceptual structure underlies all cultural behavior, including the placement of features in a settlement. The oppositions of male and female, pastoralism and agriculture, ancestors and descendants, rulers and subjects, cool and hot are represented in spatial oppositions, either concentric or diametric (Huffman 1986).

A typical CCP village comprise of a central cattle enclosure (byre) where men are buried. The *Kgotla* (men's meeting place / court) is situated adjacent to the cattle enclosure. Surrounding the enclosure is an arc of houses, occupied according to seniority. Around the outer perimeter of the houses is an arc of granaries where women keep their pots and grinding stones (Huffman 1986). The model varies per ethnic group which helps to distinguish ethnicity throughout the Iron Age, but more studies are required to recognize the patterns.

2.3.2) THE MIDDLE IRON AGE

The hiatus of the South African Middle Iron Age activity was centred in the Shashe-Limpopo Valley and characterised by the 5-tier hierarchical Mapungubwe State spanning some 30,000km². By the 1st millennium ivory and skins were already exported overseas, with sites like Sofala and Chibuene, Mosambique, interfacing between interior and transoceanic traders. Exotic glass beads, cloth and Middle Eastern ceramics present at southern African sites mark the beginning of the regions incorporation into the expanding economic system that, partly tied together with maritime trading links across the Indian Ocean, increasingly united Africa, Asia and Europe long before Da Gama or Columbus (Eloff & Meyer 1981; Meyer 1998).

Occupation was initially focussed at Bambandanyalo and K2. The Bambandanyalo main midden (1030-1220BP) stands out above the surrounding area, reaching more than 6m in places. Covering more than 8ha and possibly housing as many as 2,000 people (Meyer 1998). The CCP was not strictly followed; whether this is ideologically significant or merely a reflection of local topography remains unclear. The midden, the size of which may reflect the status of the settlement's ruler, engulfed the byre around 1060-1080BP, necessitating relocation of the cattle previously kept there. The reorganisation of space and worldview implied suggests profound social changes even before the sites' abandonment in the early 13th century, when the focus of occupation moved to Mapungubwe Hill, 1 km away (Huffman 1998).

Excavations at Mapungubwe Hill, though only occupied for a few decades (1220-1290BP), yielded a deep succession of gravel floors and house debris (Eloff & Meyer 1981). Huffman (1998) suggests that the suddenness with which Mapungubwe was occupied may imply a deliberate decision to give spatial expression to a new social order in which leaders physically removed themselves from ordinary people by moving onto more inaccessible, higher elevations behind the stone walls demarcating elite residential areas. Social and settlement changes speak of considerable centralisation of power and perhaps the elaboration of new ways of linking leaders and subjects.



Figure 10: Gravegoods from an elite burial, Mapungubwe Hill (Tiley 2004)

At Bambandanyalo and Mapungubwe elite burial gravegoods include copper, bone, ivory and gold ornaments and beads. Social significance of cattle is reinforced by their importance among the many human and animal ceramic figurines and at least 6 'beast burials' (Meyer 1998).

Today the drought prone Shashe-Limpopo Valley receives under 350mm of rainfall per annum, making cereal cultivation virtually impossible. The shift to drier conditions in the late 1200's across the Shashe-Limpopo basin and the eastern Kalahari may have been pivotal in the break-up of the Mapungubwe polity, the collapse of Botswana's Toutswe tradition and the emergence of Great Zimbabwe (1220-1550BP), southern Africa's best known and largest (720ha) archaeological site (Meyer 1998).

South of the Limpopo and north of the Soutpansberg, Mapungubwe derived communities survived into the 14th Century, contemporary with the establishment of Sotho-speaking makers of Maloko pottery.

2.3.3) THE LATE IRON AGE

South African farming communities of the 2nd millennium experienced increased specialisation of production and exchange, the development of more nucleated settlement patterns and growing political centralisation, albeit not to the same extent as those participating in the Zimbabwe tradition. However together they form the background to the cataclysmic events of the late 18th / early 19th Century *Mfecane* (Mitchell 2002).

Archaeological evidence of settlement pattern, social organisation and ritual practise often differ from those recorded ethnographically. The Moloko ceramic tradition seems to be ancestral to modern Sotho-Tswana speakers (Evers 1983) and from about 1100BP a second tradition, the Blackburn tradition, appears along South Africa's eastern coastline. Blackburn produced mostly undecorated pottery (Davies 1971), while Mpambanyoni assemblages, reaching as far south as Transkei, includes examples of rim notching, incised lines and burnished ochre slip (Robey 1980). At present, no contemporary farming sites are known further inland in KwaZulu-Natal or the Eastern Cape.

Huffman (1989) argues that similarities between Blackburn and early Maloko wares imply a related origin, presumably in the Chifumbaze of Zambia or the Ivuna of Tanzania, which contains a range of ceramic attributes important in the Blackburn as well as beehive grass huts similar to those made by the Nguni. This is one of the few suggestions of contact between Sotho-Tswana and Nguni speakers on the one hand and farming communities who, if Huffman is correct, were already long established south of the Limpopo. Both ethnographic and archaeological data demonstrate that Sotho-Tswana and Nguni are patrilineal and organise their settlements according to the CCP (Kuper 1980).

From 1300BP there is increasing evidence for the beginning of agropastoralist expansion considerably beyond the area of previous occupation. It is also to this time that the genealogies of several contemporary Bantu speaking groups can be traced (Wilson & Thompson 1969). Associated with this expansion was the regular employment of stone, rather than wood, as building material, an adaptation that has greatly facilitated the discovery and identification of settlements. Maggs (1976) describes 4 basic settlement types all characterised by the use of semi weathered dolomite to produce hard binding *daga* for house floors and a wall building tradition employing larger more regular stones for the inner and outer faces and smaller rubble for the infill. As with the more dispersed homesteads of KwaZulu-Natal and the Eastern Cape, sites tend to be in locally elevated situations, reflecting a deep seated Sotho and Nguni preference for benign higher places rather than supernaturally dangerous riverside localities; another important contrast to both 1st millennium (Maggs 1976) and later Zulu Kingdom settlement patterns (Hall & Maggs 1979).

The lack of evidence for iron production in the interior and eastern part of South Africa emphasise exchange relationships between various groups and associated more centralised polities. By the 19th Century iron production in KwaZulu-Natal was concentrated in particular clans and lineages and associated with a range of social and religious taboos (Maggs 1992). South of Durban comparatively few smelting sites are known (Whitelaw 1991), a trend even more apparent in Transkei (Feely 1987). However, metal remained the most important and archaeologically evident item traded between later farming communities. (Other recorded trade items include glass and ostrich eggshell beads; Indian Ocean seashells; siltstone pipes; *dagga*, and later on tobacco; pigments including ochre, graphite and specularite; hides and salt.)

Rising polity settlements are particularly evident in the north of the country and dated to the 17th Century, including Molokwane, capital of the Bakwena chiefdom (Pistorius 1994) and Kaditshwene, capital of a major section of the Hurutshe, whose population of 20,000 in 1820 equalled contemporary Cape Town in size (Boeyens 2000). The agglomeration of Tswana settlements in the north of the country was fuelled by both population growth and conflict over access to elephant herds for ivory and long distance trade with the East Coast. During this period ceramic decoration became blander and more standardised than the earlier elaborate decoration that included red ochre and graphite colouring.

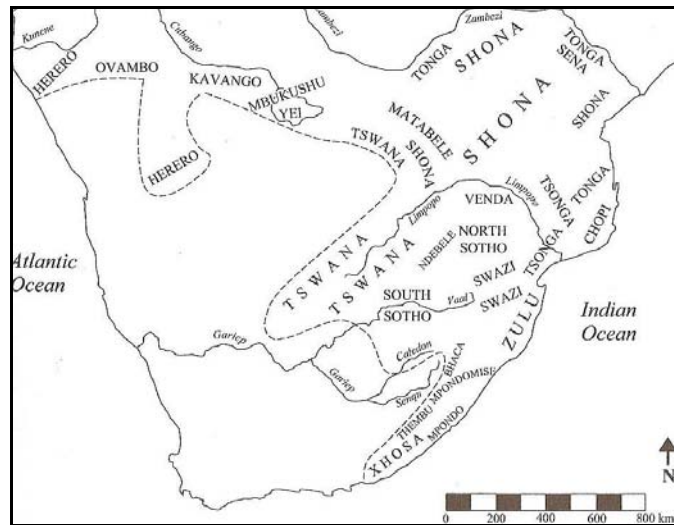


Figure 11: Late Iron Age groupings, circa 1850 (Mitchell 2002)

The *Mfecane* refers to the wars and population movements of the early 19th Century which culminated in the establishment of the Zulu Kingdom and came to affect much of the interior, even beyond the Zambezi.

The late 18th Century was marked by increasing demands for ivory (and slaves) on the part of European traders at Delagoa Bay; as many as 50 tonnes of ivory were exported annually from 1750-1790. As elephant populations declined, competition increased both for them and for the post 1790 supply of food to European and American whalers calling at Delagoa Bay (Smith 1970). Cattle raiding, conflict over land and changes in climatic and subsistence strategies characterised much of the cultural landscape of the time.

Competition for access to overseas trade encouraged some leaders to replace locally organised circumcision schools and age-sets with more permanently maintained military regiments. These were now used to gain access through warfare to land, cattle and stored food. By 1810 three groups, the Mthethwa, Ndwandwe and Ngwane dominated northern KwaZulu-Natal (Wright 1995).

The Mthethwa paramountcy was undermined by the killing of its leader Dingiswayo in *circa* 1818, which led to a brief period of Ndwandwe dominance. In consequence one of Dingiswayo's former tributaries, Shaka, established often forceful alliances with chiefdoms further south. Shaka's Zulu dominated coalition resisted the Ndwandwe who in return fled to Mozambique. As the Zulu polity expanded it consolidated its control over large areas, incorporating many communities into it. Others sought refuge from political instability by moving south of the Thukela River, precipitating a further *domino effect* as far as the Cape Colony's eastern border (Wright 1995).

2.4) THE HISTORICAL PERIOD

In the 15th Century Admiral Zheng He and his subordinates impressed the power of the Ming Dynasty rulers in a series of voyages as far afield as Java, Sri Lanka, southern Arabia and along the East African coast, collecting exotic animals *en route*. But nothing more came of his expeditions and China never pursued opportunities for trade or colonisation (Mote 1991).

Portuguese maritime expansion began around the time of Zheng He's voyages; motivated by a desire to establish a sea route to the riches of the Far East. By 1485 Diogo Cão had reached Cape Cross, 3 years later Bartolomeu Dias rounded the Cape of Good Hope and less than a decade later Vasco da Gama called at several places along South Africa's coast, trading with Khoekhoen at Mossel Bay before reaching Mozambique and crossing the ocean to India. His voyage initiated subsequent Portuguese bases from China to Iraq. In Africa interest was focussed on seizing important coastal trading towns such as Sofala and gaining access to the gold of Zimbabwe. Following the 1510 Portuguese-Khoekhoen battle at Table Bay, in which the viceroy of India was killed, Portuguese ships ceased to call along the South African coast (Elphick 1985).

A number of shipwrecks, primarily along the eastern coast attest to Portuguese activity including the São João, wrecked in 1552 near Port Edward and the São Bento, destroyed in 1554 off the Transkei coast. Survivors' accounts provided the 1st detailed information on Africa's inhabitants (Auret & Maggs 1982).

By the late 1500's Portuguese supremacy of the Indian Ocean was threatened. From 1591 numerous Dutch and English ships called at Table Bay and in 1652 the Dutch East Indian Company (VOC) established a permanent base, with the intent to provide fresh food and water to VOC ships. In an attempt to improve the food supply a few settlers (freeburghers) were allowed to establish farms. The establishment of an intensive mixed farming economy failed due to shortages of capital and labour, and freeburghers turned to wheat cultivation and livestock farming. While the population grew slowly the area of settlement expanded rapidly with new administrative centres established at Stellenbosch (1676), Swellendam (1743) and Graaf-Reinet (1785). By the 1960's the Colony's frontier was too long to be effectively policed by VOC officials (Elphick 1985).

From the 1700's many settlers expanded inland over the Cape Fold Mountain Belt. The high cost of overland transport constrained the ability to sell their produce while settlement of the interior was increasingly made difficult by resident KhoiSan groups, contributing due to a lack of VOC military support to growing Company opposition in the years before British control of the Cape (1795 / 1806) (Davenport & Saunders 2000).

In 1820 a major British settlement was implanted on the eastern frontier of the Cape Colony, resulting in large numbers of the community moving into the interior, initially to KwaZulu-Natal,

and then after Britain annexed Natal (1843), further into the interior to beyond the Vaal River. Disruptions of the *Mfecane* eased their takeover of Africa lands and the *Boers* (farmers) established several republics. A few years later the 2nd South African War saw both the South African and Orange Free State republics annexed by Britain, a move largely motivated by British desire to control the goldfields of the Witwatersrand. With adjacent regions of the sub-continent also falling, directly or indirectly, under British rule and German colonization of Namibia, European control of the whole of southern Africa was firmly established before the 1st World War (Davenport & Saunders 2000).

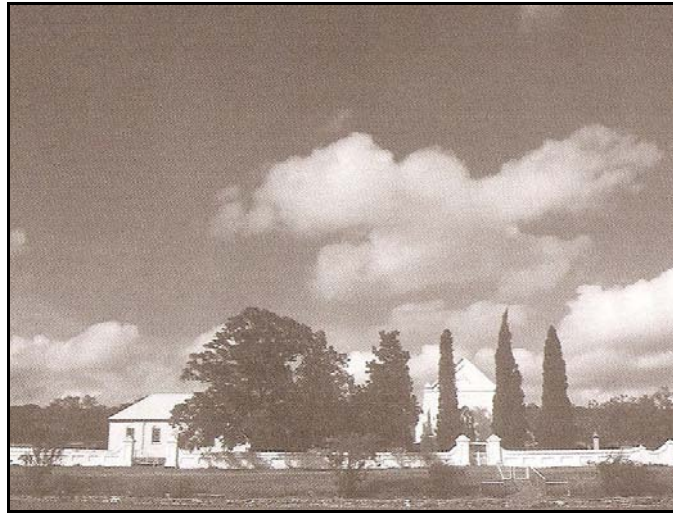


Figure 12: The Historical site of Salem, Eastern Cape (Mitchell 2002)

3) THE ARCHAEOLOGICAL IMPACT ASSESSMENT

3.1) ARCHAEOLOGICAL LEGISLATIVE COMPLIANCE

3.1.1) BACKGROUND TO THE ENVIRONMENTAL AND ARCHAEOLOGICAL IMPACT ASSESSMENT

SRK Consulting has been appointed to conduct an Environmental Impact Assessment (EIA), in terms of section 56(3) of the regulations published in Government Gazette No. R385 under Section 24(5) of the National Environmental Management Act, Act No. 107 of 1998 (NEMA 1998).

SRK Consulting initiated the EIA process in February 2007 with the undertaking of a Scoping Study. The Scoping Study was documented in *SRK report 365595/4 – Final Scoping Report for the Proposed Hopewell Conservation Project between Greenbushes and Kwanobuhle, Nelson Mandela Bay*, and was sent together with a plan of study for the EIA to the Provincial Department of Economic Development and Environmental Affairs (DEDEA) for review and approval to proceed with the EIA phase. The final Scoping Report and Plan of Study for the EIA were approved by DEDEA on 2007-08-08.

Requested specialist studies to be conducted during the EIA phase includes:

- a) Heritage Impact Assessment;
- b) Terrestrial Ecology Impact Assessment; and
- c) Transportation Impact Assessment.

The Heritage Impact Assessment (HIA) was requested by the South Africa Heritage Resources Agency (SAHRA) in terms of section 38(1) of the National Heritage Resources Act, Act No 25 of 1999 (NHRA 1999). A HIA may comprise of 3 primary sub-sections:

- a) Archaeological Impact Assessment (AIA);
- b) Palaeontological Impact Assessment (PIA); and
- c) Living Heritage Impact Assessment (LhIA).

3.1.2) THE SAHRA ARCHAEOLOGICAL IMPACT ASSESSMENT PROCESS

Cultural property can be defined as sites having palaeontological, archaeological (pre-historic), historical, religious and unique natural values, encompassing thus both sites of anthropic and natural origin (WB OPN 11.3). These cultural resources are non-renewable and the loss thereof or damage thereto irreversible. In South Africa cultural property is protected under the NEMA 1998 and the NHRA 1999. Both pieces of legislation make provision for the protection and management of cultural property through the EIA process, compulsory to any major development including ‘the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length; the construction of a bridge or similar structure exceeding 50m in length; any development or other activity which will change the character of a site including developments exceeding 0.5ha in extent; or involving three or more existing erven or subdivisions thereof; or three or more erven or subdivisions thereof which have been consolidated within the past five years and the rezoning of a site exceeding 1ha in extent’ (section 38 of the NHRA 1999).

Section 38 of the NHRA 1999 provides for Archaeological Impact Assessments (AIA’s) to assess the potential effects and provide mitigation or management recommendations of planned development activities on South Africa’s cultural property prior to development.

AIA's should be submitted, as specialist sub-sections to the EIA, to SAHRA for evaluation. SAHRA accepts AIA reports authored by Association of Southern African Professional Archaeologist (ASAPA) accredited Cultural Resources Management (CRM) practitioners.

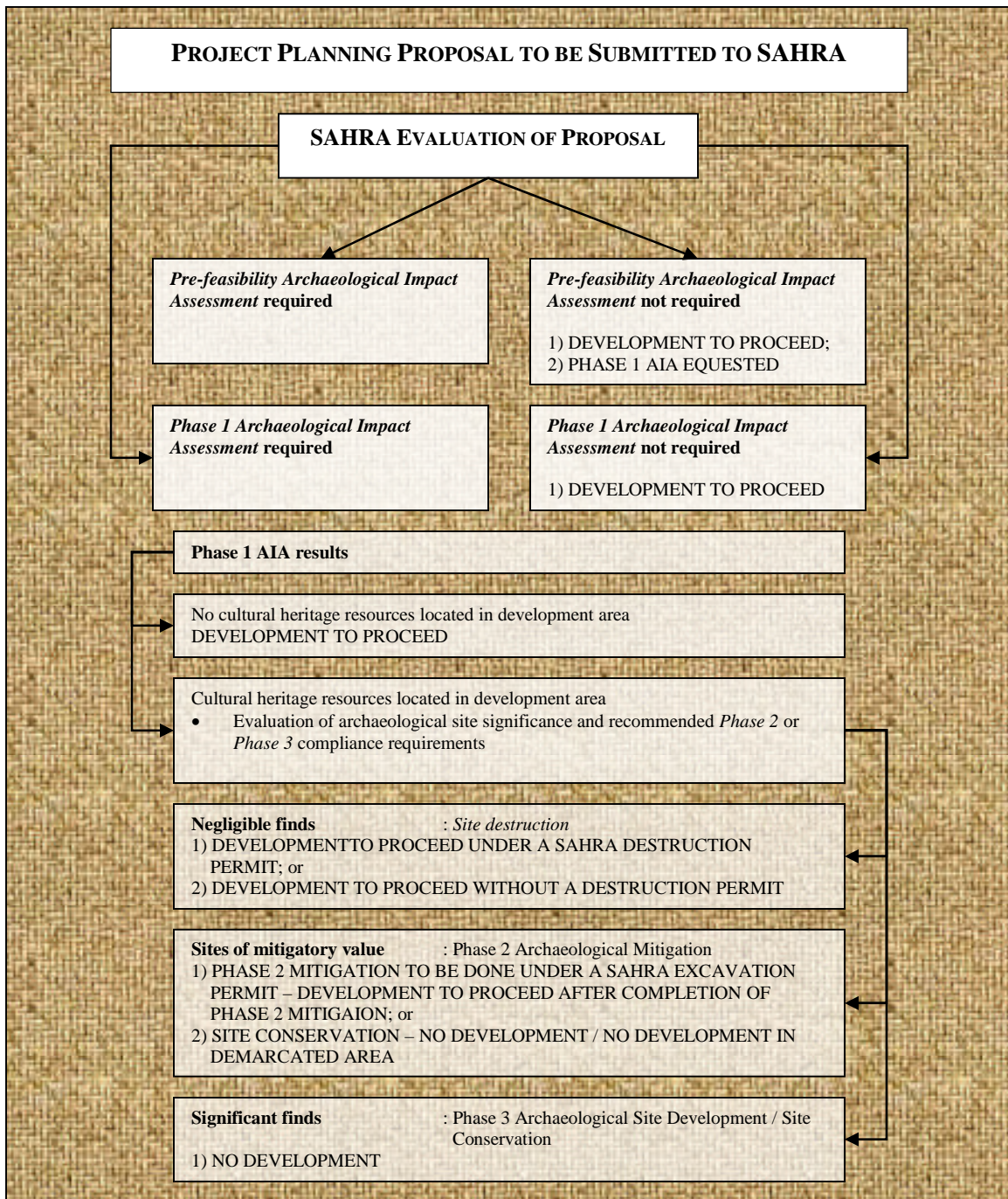


Figure 13: The SAHRA AIA evaluation process

The management and evaluation of a particular development project's associated archaeological process and requirements is largely dependent on the archaeological sensitivity of the particular project, basic guidelines are provided by SAHRA. Limited SAHRA functions are divulged to provincial level and managed by the particular provinces' Provincial Heritage Resources Agency

(PHRA); in the case of the Eastern Cape by the Eastern Cape Provincial Heritage Resources Agency (ECPHRA).

In addition to the AIA SAHRA may request a Palaeontological Impact Assessment (PIA) or Letter of Recommendation (LoR) as specialist component to the HIA for a particular development. SAHRA accepts PIA's authored by professional palaeontologists accredited with SAHRA.

Sensitivities relating to living heritage sites are as a norm identified during the AIA or Social Impact Assessment (SIA) of a particular development. In addition to the AIA or SIA SAHRA may request a Living Heritage Impact Assessment (LhIA) as specialist component to the HIA.

3.1.3) THE BASICS OF ARCHAEOLOGICAL IMPACT ASSESSMENTS

Archaeological survey or reconnaissance can be defined as the systematic process of discovery, location (and identification) of archaeological sites (Sharer & Ashmore 1979). By definition reconnaissance incorporates the investigation of old documents and photographs, maps, previous reports and publications in order to learn as much as possible about a particular area before field survey starts (McIntosh 1999). This stage of reconnaissance is often referred to as the *Pre-feasibility Assessment*.

Phase 1 Archaeological Impact Assessments (also termed surface survey or field reconnaissance) are based on visual inspection at ground level (Sharer & Ashmore 1979). Two basic approaches exist, namely total and sample coverage:

- a) Total coverage, always the preferable method, aims for total coverage of the data universe. The practicality of total coverage depends largely on the methods used. Total or near total coverage has been achieved by combining ground based and aerial reconnaissance techniques. The feasibility of total coverage may be affected by time and cost constraints, unsuitable environmental or political conditions, or the reconnaissance methods chosen.
- b) When total reconnaissance is not possible sample areas can be selected by means of either probabilistic methods (statistical manipulations based upon probability theory, a method only accurate within a certain tolerance range) or non-probabilistic methods (random sampling) (Greene 1996).

Defined areas are then covered systematically. Encountered sites, features and artefacts may be recorded *in situ*. Alternatively artefacts may be collected, photographically documented and left on site, or they may be removed (in South Africa under a SAHRA *Collections Permit*) and deposited at the relevant repository (McIntosh 1999).

Artefacts encountered in the field may comprise of stone tools and knapping debris, ceramic, porcelain, earthenware and glass sherds, mineral slag, bone, metal objects, structure remains including foundations and building material ranging from *daga* to branch and brick, associated occupation middens, stock enclosure remains including vetrified dung etc. Dense concentrations of artefacts may suggest an occupation site; isolated pieces need to be considered more carefully. Encountered artefacts are preliminary classified to identify the sites.

Vegetation change may also be indicative of former occupation. Variations in the colour of soil and the luxuriance, line, type and number of species of vegetation may all be a result of former anthropic disturbance of the natural environment (Renfrew & Bahn 1996; Sharer & Ashmore 1979).

Located sites are labelled, with numbers running in consecutive series generally being the easiest. The purpose of labelling sites is to tie locational data with other information; physical descriptions of remains, surface collections taken, drawings, maps, photographs and future excavations (Greene 1996).

The location of encountered sites is recorded to relate the new finds to their spatial setting. This can be done by a variety of technical procedures and methods, Geographic Positioning Systems (GPS) being the most common method used today (McIntosh 1999). Hereafter field plots are transferred to a base map to provide a complete record of the reconnaissance. The base map often serves to represent a larger area on which overall progress can be gauged and emergent distributional patterns examined. Identification of and the plotting of sites further allows the archaeologist to compare anomalies noted during the *Pre-feasibility Assessment* and in making recommendations regarding future excavation or conservation (Greene 1996; Renfrew & Bahn 1996), in Cultural Resources Management (CRM) terms referred to as *Phase 2 Archaeological Mitigation* (excavation) or *Phase 3 Site Management*.

3.2) **THE HOPEWELL CONSERVATION PROJECT: PRE-FEASIBILITY ARCHAEOLOGICAL IMPACT ASSESSMENT**

The SAHRA archaeology database is currently under construction and could not be made available for the purposes of this study. The pre-feasibility study thus aimed to assess the probability of culture-temporal industries that may well be present in the proposed development area, according to the outline provided in Chapter 2 *Introduction to the South African Cultural Environment*. The assessment was based on a limited literature research and restricted to published sites. Assessment findings are summarised as follows:

PERIOD	PROBABILITY ASSESSMENT		DESCRIPTION OF CONTRIBUTION
	PROBABILITY	SIGNIFICANCE	
Hominid / Human	Medium	High	Evidence of early modern human remains i.e. at Klasies River Mouth, EC (proposed for World Heritage Status)
STONE AGE			
Earlier Stone Age	High	Medium	Assessment of distribution of early <i>Homo</i> ; occupation of selected biomes and adaptation patterns
Middle Stone Age	High	Medium	Assessment of distribution of <i>Homo Sapien</i> ; occupation of selected biomes / adaptation patterns; early modern behaviour
Later Stone Age	High	Medium	Modern behaviour; ethno-archaeology; cultural interaction between LSA / Iron Age and historical archaeology; linguistics; association with rock art
- Pastoralist	Low	-	No sites recorded in the Eastern Cape – deposits not expected. Does raise questions relating to the presence of pastoralists in the southern Cape at the time of Colonial impact
- Rock Art	High	High	Spread of KhoiSan people and related adaptation. Possibility of art by other cultural groups. Alternative documentation relating to acculturation. Religion / Myth
IRON AGE			
Early Iron Age	Not expected	-	Known extent of occupation not reaching to the Eastern Cape
Middle Iron Age	Not Expected	-	Known extent of occupation not reaching to the Eastern Cape
Later Iron Age	Low	-	Possible early influx of later farming communities; relationships with existing KhoiSan residents (expected to be restricted to the very northern parts of the Eastern Cape)
- Post <i>Mfecane</i>	High	High	Socio-economic cultural change; Iron Age / Colonial contact; cultural adaptation (including responses by local Stone Age and pastoralist? communities)
HISTORICAL PERIOD			
Historical Period	High	High	Colonial / Iron Age contact (including responses by local Stone Age and pastoralist? communities; western cultural integration, responses to political dominance)

Table 1: Probability assessment of sites present in the study area

In addition to the basic probability assessment the SAHRA Built Environment database research yielded a wealth of provincially declared Historic buildings. A selection of the database sites can be summarised as:

NHRA STATUS	SUB TYPE	SITE / OBJECT NAME	PROVINCE	MAGISTERIAL DISTRICT
?	Police Station	Extension police station, Military Rd.	Eastern Cape	Port Elizabeth
Provincial Heritage	-	24 Newington Rd, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	40 Newington Rd, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	42 Newington Rd, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	44 Newington Rd, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	46 Newington Rd, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	48 Newington Rd, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	50 Newington Rd, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	52 Newington Rd, PE	Eastern Cape	Port Elizabeth
?	Court House	Old Court Buildings, Baakens Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Opera House	Opera House, Whites Rd, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Market Hall	Feathemarket Hall, Baakens Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Memorial	Prince Alfred's Guard's Memorial, St George's Park, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Memorial	Horse Memorial, Cape Rd, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	9 Cora Terrace, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	Sharley Gribb Nursing College, 58 Park Dr, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	31 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	33 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	35 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	37 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	39 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	41 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	43 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	45 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	47 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	49 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	51 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	53 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	55 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	21/23 Donkin Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Church	Holy Trinity Anglican Church, Havelock Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Church Hall	Holy Trinty Anglican Church Hall, Havelock Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	Old Parsonage, Pearson Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Synagogue	Pioneer's Memorial Synagogue, Raleigh Street, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	David Livingston Cottage, Bethelsdorp, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Church	Van der Kemp Memorial Church, Bethelsdorp, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Post Office	Old Post Office, Court Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Club	Atheneum Club, Belmont Terrace, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	-	Pearsons' Conservatory, St George's Park, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Drill Hall	Prince Alfred's Guard Drill Hall, Prospect Hill, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	School	Old Erica Girl's School, Richmond Hill, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	Library	Library, Main Str, PE	Eastern Cape	Port Elizabeth
Provincial Heritage	City Hall	City Hall, Market Square, PE	Eastern Cape	Port Elizabeth

Table 2: A selection of protected building in Port Elizabeth (SAHRA database)

3.3) **THE HOPEWELL CONSERVATION PROJECT: PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT**

3.3.1) METHODOLOGY

The Phase 1 AIA was conducted over a 5 day period (2007-09-19 to 2007-09-23) by one archaeologist. The assessment was done by foot and off-road vehicle (200cc quad) and limited to a Phase 1 surface survey; no excavation or sub-surface testing was done. Sub-surface interpretations are based on assessment of exposed mining / quarry sections.

Visibility ranged from good to poor; a direct result of vegetation cover.

- a) Visibility was best towards the south-west and south-central development area; comprising primarily of the staff quarter and equestrian estate development areas.
- b) The south-eastern residential development area is topographically characterised by a gorge; implying high relief and associated vegetation changes. Visibility ranged from good at higher altitudes, or areas of proposed development impact, to very poor at lower lying altitudes or areas of no direct impact where the survey was restricted to existing game tracks. Survey in this area focussed on the development footprint.
- c) Visibility in the central bush lodge and associated development area ranged from good at central latitudes, or the area of proposed development impact, to poor at lower (ravine) and higher (hilltop) latitudes. Survey in these areas was restricted to existing game and walking tracks.
- d) Visibility in the north-western development area was poor and the survey was restricted to existing roads, game and walking tracks.

GPS co-ordinates were taken with a Garmin e-Trex Vista GPS (Datum: WGS84). Photographic documentation was done with a Casio X-S2 Exilim camera. A combination of Garmap, Google Earth and ArcView software was used in the display of spatial information.

Archaeological and cultural heritage site significance assessment and associated mitigation recommendations were done according to the system prescribed by SAHRA (2007). Impact identification assessment was done according to the SRK Consulting guidelines (2007).

SITE SIGNIFICANCE	FIELD RATING	GRADE	RECOMMENDED MITIGATION
High Significance	National Significance	Grade 1	Site conservation / Site development
High Significance	Provincial Significance	Grade 2	Site conservation / Site development
High Significance	Local Significance	Grade 3A / 3B	Site conservation or extensive mitigation prior to development / destruction
High / Medium Significance	Generally Protected A	-	Site conservation or mitigation prior to development / destruction
Medium Significance	Generally Protected B	-	Site conservation or mitigation / test excavation / systematic sampling / monitoring prior to or during development / destruction
Low Significance	Generally Protected C	-	On-site sampling, monitoring or no archaeological mitigation required prior to or during development / destruction

Table 3: Cultural heritage site significance assessment and mitigation recommendations

SPATIAL EXTENT	INTENSITY	DURATION	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	STATUS	CONFIDENCE
None	None	None	Not significant	Improbable	Insignificant	Negative	Low
Local	Low	Short term	Very Low	Possible	Very low	Positive	Medium
Regional	Medium	Medium term	Low	Probable	Low		High
National	High	Long term	Medium High Very high	Definite	Medium High Very high		

Table 4: SRK Consulting: Impact Assessment Identification guidelines

3.3.2) COVERAGE AND GAP ANALYSIS

The Phase 1 AIA covered an approximate 900ha area inclusive of the approximate 237.47ha development footprint (horizontal and linear development). Assessment focussed on the exact development footprint; intensity of assessment decreased towards areas surrounding the footprint and areas of dense vegetation. Linear assessment comprised of a development corridor varying from 5-20m in diameter, depending on vegetation cover.

3.3.3) DEVELOPMENT IMPACT

The Hopewell Conservation Project will impact on the approximate 237.47ha development footprint area to an estimated sub-surface level not exceeding 1-1.5m in depth. Development impact on the affected area will be total; resulting in the loss of all surface and sub-surface cultural heritage resources located within the development area.

3.3.4) PHASE 1 AIA ASSESSMENT FINDINGS



Figure 14: General view of the south central development area (equestrian estate development)

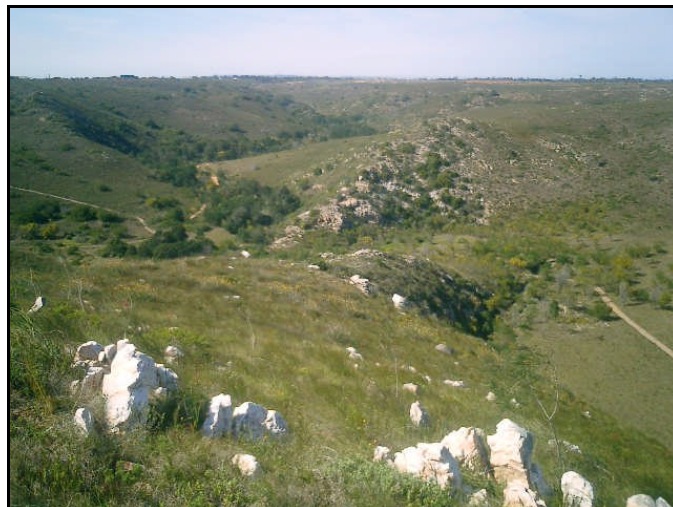


Figure 15: The south-eastern residential development area



Figure 16: General view of the central bush lodge development area



Figure 17: General view of the north-western development area



Figure 18: General view of the south-western development area (including the staff quarter development)

Eleven cultural heritage resources were located within the approximate 900ha assessed area. Of the identified resources one is situated immediately adjacent to the development area. Ten resources centred at 7 localities are located within the assessed portion of the greater development area.

Site 01, a contemporary graveyard currently in process of grave relocation is situated immediately adjacent to the development area; the site will not be impacted on by the Hopewell Conservation Project development.

Three contemporary cultural heritage resources comprising of the informal residences / homesteads of subsistence farmers were located / reported on (Sites HCP03; HCP05 and HCP07). In all cases occupation post-dates 60 years of age, resources are thus not protected by the NHRA 1999.

All 3 identified contemporary cultural heritage resources were located in close proximity to Historic Period farmsteads (Sites HCP03; HCP05 and HCP07), making direct use of remaining farmstead infrastructure (Site HCP05); alternatively simply conforming to cultural overlay (Sites HCP03 and HCP07). One identified Historic Period farmstead (Site HCP02) is not associated with contemporary occupation. In addition to Historical Period farmsteads, historical presence is evidenced by Sites HCP04 and HCP06 comprising of low impact remains directly associated with historic occupation.

In addition to historic presence in the proposed development area, the pre-historic period is represented by a single Middle Stone Age occurrence (Site HCP01).

Development will directly impact on 5 identified cultural heritage resources comprising of:

- f) Site HCP01 (Stone Age);
- g) Site HCP03 (Historic Period / Contemporary);
- h) Site HCP04 (Historic Period);
- i) Site HCP06 (Historic Period); and
- j) Site HCP07 (Historic Period / Contemporary).

Development impact on Sites HCP02 and HCP05 will be indirect; the integrity of these sites may thus either be retained or diminished depending on the discretion of the developer.



Figure 19: Anthropically sterile sub-surface quarry sections in the south-western part of the development area

All Phase 1 AIA identified sites and features comprise of surface finds except Site HCP01 where stone artefacts were found in the sub-surface scraped levels of existing roads and tracks, cautioning the possibility of further sub-surface resources. Additional sub-surface interpretations were based on existing open mining / quarry sections, and limited to the southern portion of the development area. None of the assessed sections yielded any anthropic stratigraphic deposit as opposed to the identified sub-surface anthropic component to the north of the development area (Site HCP01).

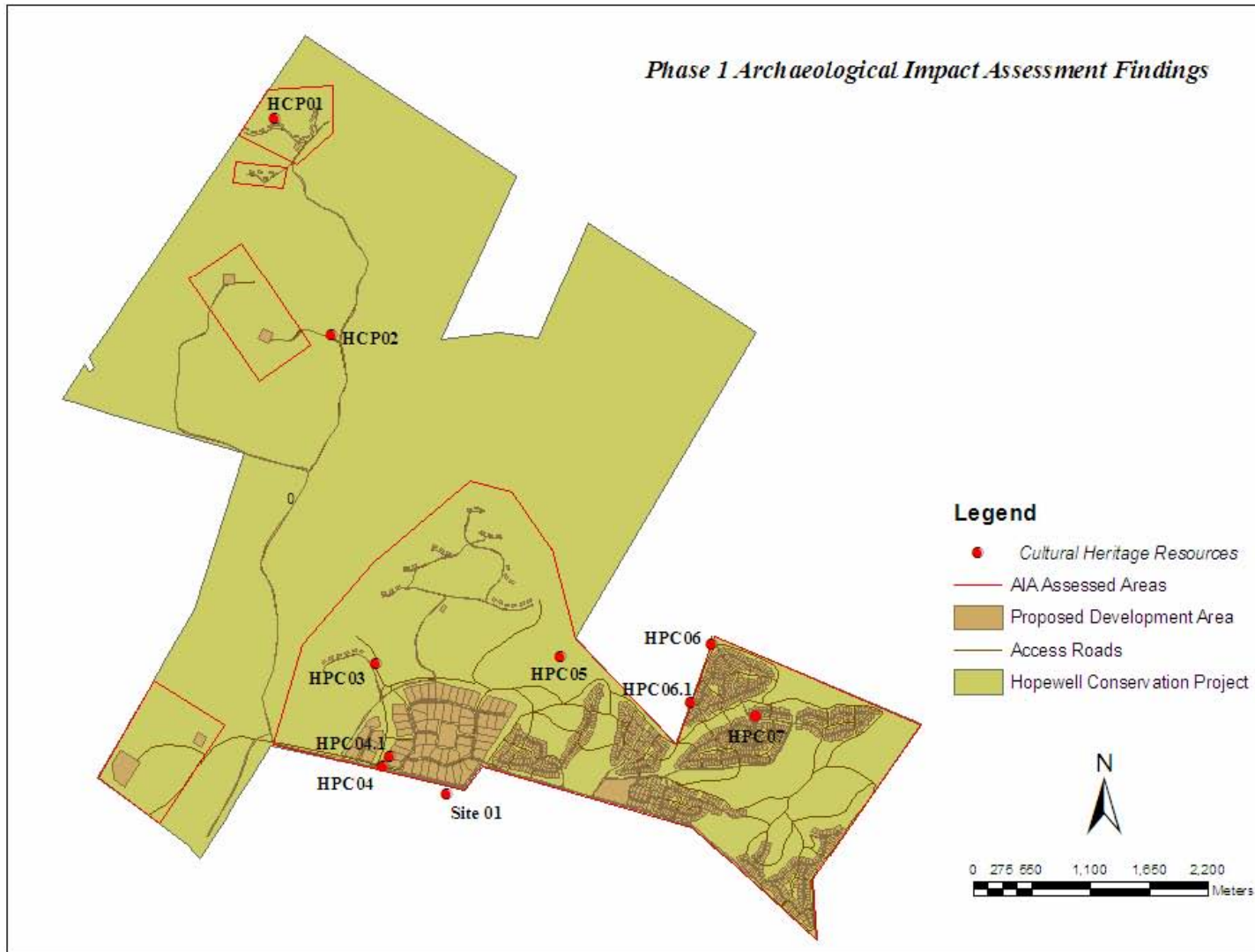


Figure 20: Anthropically sterile sub-surface quarry sections in the south-eastern part of the development area

Limited consultation with 3 local residents (Phillip, Mens Maghilidane and Felokwakhe Jerry Ndlovu) served to provide information on intangible heritage resources. Consultation findings can be summarised as:

- a) Contemporary occupation of the area is of recent origin (claimed to extend as far back as 13 years) backed by financial motivation; no indigenous beliefs are known, held or practised with reference to any particular part of the landscape that will be affected by the proposed development.
- b) No burial sites were known to the informants.

Figure 21: Phase 1 AIA assessment findings



3.3.4.1) SITE DESCRIPTIONS

- **SITE 01: CONTEMPORARY
- GRAVEYARD**

S33°50'11.4"; E25°22'04.6"

Site 01, situated immediately adjacent to the Hopewell Conservation Project area comprise of a contemporary graveyard, originally containing an estimated 80-100 graves. Graves are in an apparent process of relocation, an assumed development requirement for the neighbouring development.

Graves are located in rows within the graveyard. Many graves are marked by piled stones, others by headstones; some of which carry inscriptions, some of which the inscription have weathered away and some of which were never inscribed. Inscribed headstones as well as type of marker / headstone indicate a mixed cultural origin for individuals as well as dates. Graves located in the eastern part of the graveyard are inferred to be the oldest (some may well predate 60 years of age), decreasing in age towards the west of the site.



Figure 22: General view of the Site 01 graveyard



Figure 23: Grave relocation in progress

✂ ***Site Significance and Recommendations:***

- a) Site 01, a contemporary graveyard (in process of grave relocation) is situated on the neighbouring property, immediately adjacent to the development area. The Hopewell Conservation Project will not impact on the site. The site thus does not form the subject of this AIA apart from proximity to the development area.

It is recommended that, should the Hopewell Conservation Project development start prior to completion of the graveyard's relocation project, the developer ensures that necessary sensitivity and care be exhibited by all contractors and subcontractors when working in the vicinity of the site.

(The site is not located within the Hopewell Conservation Project area: No SAHRA significance rating or SRK Impact Assessment Identification is relevant.)

-
- **SITE HCP01: STONE AGE**
- MIDDLE STONE AGE (MSA)
-

S33°50'11.4"; E25°22'04.6"

Site HCP01 comprise of an approximate 20ha area located in the southern portion of the north-eastern assessment area. The 'site' comprises of a low density Middle Stone Age (MSA) lithic artefact occurrence. Dense vegetation and surface cover obscured possible ratios; artefacts were exclusively located in limited scraped roads, hiking and game tracks. Artefact ratios (artefacts: m²) approximated $\leq 1:15$. Local quartzite was used as raw material for production, a raw material more common in the lower lying altitudes of the gorge than reflected in the geographic spread of artefacts. Artefact types included scrapers, flakes and cores and can typologically, primarily based on size, be ascribed to an earlier phase of the MSA. Platform preparation comprised part of the employed technology; however no secondary retouch was observed. No artefacts were present on accessible surface areas implying an essential sub-surface artefact component, at least to the depth of scraped roads and tracks, approximately 20cm below the surface. No organic material was observed in association with the artefacts.



Figure 24: General view of the north-eastern assessment area

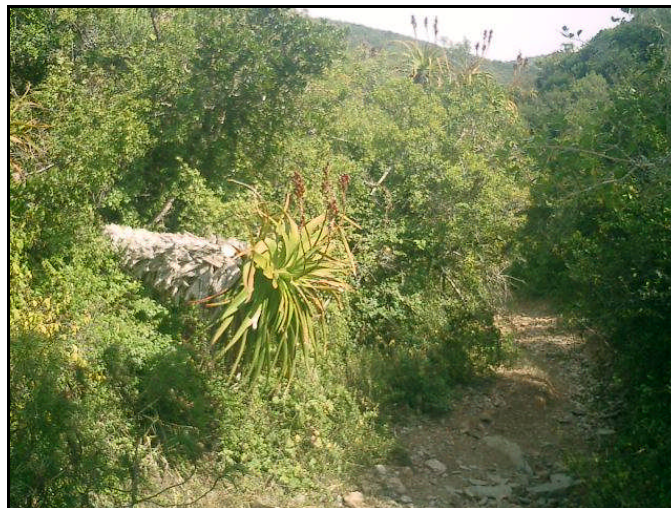


Figure 25: Existing roads and tracks in which artefacts were discovered



Figure 26: Site HCP01 MSA flakes and scrapers



Figure 27: A side and end scraper from Site HCP01

✂ **Site Significance and Recommendations:**

- a) Site HCP01, a low density MSA lithic occurrence is assigned a *Low Significance* and a *Generally Protected C* field rating. It is recommended that development proceed without the developer having to apply for a *SAHRA Destruction Permit*.

Despite the potential importance of an *in situ* MSA deposit, the extremely low density of artefacts observed does not warrant further investigation. It is reasonably expected that more artefacts will be encountered during the course of development; should reported ratios radically increase / a definite sub-surface anthropic member be encountered, the developer should immediately cease operation in the vicinity and report the find to SAHRA or an ASAPA accredited CRM archaeologist.

SPATIAL EXTENT	INTENSITY	DURATION	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	STATUS	CONFIDENCE
Site HCP01 – Middle Stone Age					MITIGATION: Conservation		
2 Regional	1 Low	3 Long term	5 Low	Improbable	Very Low	Positive	High
Site HCP01 – Middle Stone Age					MITIGATION: Site destruction		
2 Regional	1 Low	3 Long term	5 Low	Definite	Low	Negative	Medium

Table 5: Site HCP01 Impact Assessment Identification

• **SITE HCP02: HISTORICAL PERIOD**
- RIET KUIL HISTORICAL FARMSTEAD

S33°51'17.7"; E25°22'25.4"

Site HCP02, the historical farmstead of the farm Riet Kuil is characterised by remains of the old farmhouse, related outbuildings and infrastructure and associated cultural landscape. The old farmhouse, comprising of an at least 3 roomed structure, is demarcated by foundation and wall remains only. A square stone stock enclosure of approximately 30x30m in diameter was situated adjacent to the house with some midden remains found nearby. The majority of midden material comprise of more recent origin. One pit midden contained a number of old bottles and metal and is inferred to represent at least one associated disposal area; recent cultural overlay and disturbance however resulted in the current primarily *ex situ* context of artefacts. Approximately 60m to the south is the remains of a 1 roomed outbuilding with further farmstead infrastructure located approximately 250m north-east of the farmhouse. The date of origin of the farmstead is unknown, based on architecture and building material a late 1800's / early 1900's date can be inferred. A line of Eucalyptus demarcates the most prominent cultural landscape feature associated with the farmstead.



Figure 28: General view of the Site HCP02 farmhouse remains



Figure 29: HCP02 farmhouse structure remains



Figure 30: Square stone stock enclosure remains, located adjacent to the farmhouse



Figure 31: Admixture of historical and recent cultural midden material



Figure 32: Structure remains located approximately 60m south of the farmhouse remains



Figure 33: Farming infrastructure (cattle dip) located approximately 250m NW of the farmhouse

✂ **Site Significance and Recommendations:**

- a) Site HCP02, the Riet Kuil historical farmstead pre-dates 60 years of age, the site is thus protected by the NHRA 1999. The site is assigned a *Medium Significance* and a *Generally Protected B* field rating. The site should be conserved. Recommended minimum conservation measures include *in situ* site conservation (implying that the site remains as is without any alteration or impact thereon); alternatively application for site destruction should be done under a SAHRA / ECPHRA *Destruction Permit*.

Disturbed associated archaeological midden deposits, together with general neglect and site decay does not warrant formal protection, rehabilitation or Phase 2 mitigation. Development will not directly impact on the site; however site destruction may take preference over conservation.

SPATIAL EXTENT	INTENSITY	DURATION	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	STATUS	CONFIDENCE
Site HCP02 – Riet Kuil Historical Farmstead					MITIGATION: Conservation		
1 Local	0 None	3 Long term	4 Very Low	Improbable	Insignificant	Positive	High
Site HCP02 – Riet Kuil Historical Farmstead					MITIGATION: Destruction SAHRA / ECPHRA Permit		
1 Local	2 Medium	3 Long term	6 Medium	Definite	Medium	Negative	Medium

Table 6: Site HCP02 Impact Assessment Identification

-
- **SITE HCP03: HISTORICAL PERIOD / CONTEMPORARY** **S33°52'57.3"; E25°22'42.4"**
- **NOOITGEDACHT HISTORICAL FARMSTEAD 1**
- **CONTEMPORARY RESIDENCE OF PHILLIP**
-

Site HCP03, 1 of 3 historical farmsteads located on the farm Nooitgedacht is identified by the remains of the old farmhouse and limited related infrastructure. Farmhouse remains comprise of the ruined basic structure; with roof, windows and doors having in the interim been removed. Vegetation evidently resulted in major structural damages. Related farming infrastructure remains are located approximately 50m south-east of the farmhouse. No associated middens were located in the vicinity of the site; thick vegetation may well have obscured expected remains. The date of origin of the farmstead is unknown but pre-dates 1941, the date of Issroff ownership of the land. Based on architectural style and building material a late 1800's date can be inferred. Limited Eucalyptus is indicative of an associated low impact cultural landscape.



Figure 34: General view of Site HCP02



Figure 35: Remains of the HCP02 old farm house



Figure 36: Close-up of vegetation cover inside the house remains



Figure 37: Associated farmstead infrastructure remains



Figure 38: The contemporary informal residence of Phillip

Cultural overlay is evidenced by the contemporary informal residence of Phillip, a subsistence farmer, located approximately 20-30m from the old farmhouse. Phillip claims to have resided at the locality for approximately 6 years. He was not aware of any graves, oral histories or intangible heritage resources present in the general area or associated with part of the landscape.

✂ **Site Significance and Recommendations:**

- a) Site HCP03, the Nooitgedacht historical farmstead 1 pre-dates 60 years of age; the site is thus protected by the NHRA 1999. Site HCP03 is assigned a *Medium Significance* and a *Generally Protected B* field rating. The site should be conserved; alternatively application for site destruction should be done under a SAHRA / ECPHRA *Destruction Permit*.

Site decay in association with the seeming absence of related archaeological deposits does not warrant formal protection, rehabilitation or Phase 2 mitigation. Development will necessitate destruction of the site; it is recommended that the developer applies for a SAHRA / ECPHRA *Destruction Permit* prior to development impact.

SPATIAL EXTENT	INTENSITY	DURATION	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	STATUS	CONFIDENCE
Site HCP03 – Nooitgedacht Historical Farmstead 1					MITIGATION: Conservation		
1 Local	0 None	3 Long term	4 Very Low	Improbable	Insignificant	Positive	High
Site HCP03 – Nooitgedacht Historical Farmstead 1					MITIGATION: Destruction SAHRA / ECPHRA Permit		
1 Local	2 Medium	3 Long term	6 Medium	Definite	Medium	Negative	High

Table 7: Site HCP03 Impact Assessment Identification

- b) The residence of Philip does constitute a contemporary cultural heritage resource, post-dating 60 years of age the site is not protected by the NHRA 1999. The site does not form the subject of this report and it is recommended that recommendations as per the (SIA) Social Impact Assessment or public liaison process be complied with.

• **SITE HCP04: HISTORICAL PERIOD
- STONE FEATURE**

S33°53'28.6"; E25°22'45.1"

Site HCP04 comprise of a straight line of stacked stones of approximately 120m in length in a rough north-east south-west orientation. The feature is interpreted as the foundations of an old farm boundary fence. No associated archaeological artefacts were located in the vicinity of the feature.



Figure 39: The site HCP04 historical period stone feature

✂ **Site Significance and Recommendations:**

- a) Site HCP04, a historic period stone feature is assigned a *Low Significance* and a *Generally Protected C* field rating. It is recommended that development proceed without the developer having to apply for a *SAHRA Destruction Permit*.

SPATIAL EXTENT	INTENSITY	DURATION	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	STATUS	CONFIDENCE
Site HCP04 – Historic Period Stone Feature					MITIGATION: Conservation		
1 Local	1 Low	3 Long term	5 Low	Improbable	Very Low	Positive	High
Site HCP04 – Historic Period Stone Feature					MITIGATION: Site destruction		
1 Local	1 Low	3 Long term	5 Low	Definite	Low	Negative	High

Table 8: Site HCP04 Impact Assessment Identification

-
- **SITE HCP05: HISTORICAL PERIOD / CONTEMPORARY S33°52'57.3"; E25°22'42.4"**
 - **NOOITGEDACHT HISTORICAL FARMSTEAD 2**
 - **CONTEMPORARY RESIDENCE OF MR HATMANN**
-

Site HCP05, the 2nd of 3 historical farmsteads located on the farm Nooitgedacht could only be identified from a distance; access was prohibited by the guard dogs of Mr. Hatmann. The remains of what seemed to be corrugated iron shed were the only visible evidence from a distance. Associated farmstead remains are expected. Saul Issroff provided information on a farmstead situated in the vicinity, most probably associated with the observed corrugated shed. Issroff (2007) reported on recalling remains of an old homestead, which as late as the 1960's was sublet by the overall tenant of the property, Mr. Vernon Comley. The original homestead was apparently 'quite large with yellowwood floors and ceilings' set amongst Eucalyptus trees. Structure remains probably dates to the 1880's. The substantial size of the homestead as recalled by Issroff may well be evidenced from Google Earth satellite imagery. Disturbances extending beyond the boundaries of the contemporary residence of Mr. Hatmann were visible.



Figure 40: General view of Site HCP05



Figure 41: One of the residences comprising Mr Hatmann's contemporary homestead



Figure 42: Contemporary stock enclosures of Mr. Hatmann



Figure 43: Mens Maghilidane

The contemporary residence of Mr. Hatmann comprise of a number of informal dwellings and stock enclosures located immediately adjacent to the still in use original dam. Information relating to the residence was provided by Mens Maghilidane, an employee of Mr. Hatmann. Mr. Maghilidane was encountered in the field while herding cattle. He reported on the fact that the contemporary homestead belonged to Mr Hatmann, a black farmer, for whom he has been herding cattle for the last 7 years. Mr Maghilidane confirmed the presence of old structures close to their residence. He was not aware of any graves, oral histories or intangible heritage resources present in the general area or associated with part of the landscape.

✂ Site Significance and Recommendations:

- a) Site HCP05, the reported on Nooitgedacht historical farmstead 2 pre-dates 60 years of age; the site is thus protected by the NHRA 1999. The site could not be accessed; no significance rating can thus be assigned.
 - i. The site is not situated within the development footprint and may thus well be conserved by the development (implying that the site remains as is without any alteration or impact thereon).

- ii. Should the developer require demolition of the site it is recommended that it be preceded by an archaeological site inspection and under a SAHRA / ECPHRA *Destruction Permit*.
- iii. Should the developer wish to formally conserve and develop the site, opening it up to tourism it is recommended that the development be preceded by an archaeological site inspection and the site managed under a SAHRA approved *Site Management Plan*.

SPATIAL EXTENT	INTENSITY	DURATION	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	STATUS	CONFIDENCE
Site HCP05 – Nooitgedacht Historical farmstead 2					MITIGATION: Conservation (Formal conservation: Site Management Plan)		
1 Local	0 None	3 Long term	4 Very Low	Improbable	Insignificant	Positive	High
Site HCP05 – Nooitgedacht Historical farmstead 2					MITIGATION: Destruction ARCHAEOLOGICAL SITE INSPECTION SAHRA / ECPHRA Permit		
1 Local	- N/A	- N/A	- N/A	- N/A	- N/A	Negative	Medium

Table 9: Site HCP05 Impact Assessment Identification

- b) The homestead of Mr. Hatmann constitutes a contemporary cultural heritage resource, post-dating 60 years of age the site is not protected by the NHRA 1999. The site does not form the subject of this report and it is recommended that recommendations as per the (SIA) Social Impact Assessment or public liaison process be complied with.

- **SITE HCP06: HISTORICAL PERIOD
- STONE FEATURE**

S33°53'08.9"; E25°24'36.8"

Site HCP06 comprise of a straight line of stacked stones of approximately 600m in length in a rough north-east south-west orientation. The feature is interpreted as the foundations of an old farm boundary fence, directly coinciding with the existing farm boundary and development area. The feature is directly associated with Site HCP07.



Figure 44: The site HCP06 historical period stone feature

✂ Site Significance and Recommendations:

- Site HCP06, a historic period stone feature is assigned a *Low Significance* and a *Generally Protected C* field rating. It is recommended that development proceed without the developer having to apply for a *SAHRA Destruction Permit*.

SPATIAL EXTENT	INTENSITY	DURATION	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	STATUS	CONFIDENCE
Site HCP06 – Historic Period Stone Feature					MITIGATION: Conservation		
1 Local	1 Low	3 Long term	5 Low	Improbable	Very Low	Positive	High
Site HCP06 – Historic Period Stone Feature					MITIGATION: Site destruction		
1 Local	1 Low	3 Long term	5 Low	Definite	Low	Negative	High

Table 10: Site HCP06 Impact Assessment Identification

-
- **SITE HCP07: HISTORICAL PERIOD / CONTEMPORARY S33°52'57.3"; E25°22'42.4"**
 - **NOOITGEDACHT HISTORICAL FARMSTEAD 3**
 - **CONTEMPORARY RESIDENCE OF FELOKWAKHE JERRY NDLOVU**
-

Site HCP07, the 3rd of 3 historical farmsteads located on the farm Nooitgedacht is characterised by the ruined remains of an old farmhouse which must originally have comprised of at least 4 rooms. Remains of limited related farming infrastructure is present at the site. No associated middens were located, the presence of which may well have been obscured by cultural overlay. The date of origin of the farmstead is unknown but pre-dates 1941, the date of Issroff ownership of the land. Based on architectural style and building material a late 1800's / early 1900's date can be inferred. Eucalyptus is indicative of the associated historical landscape.

The contemporary homestead of Felokwakhe Jerry Ndlovu is located no more than 40m south-west of Site HCP07. Mr. Ndlovu claims to have been residing at the informal residence for approximately 13 years, from here he runs his subsistence farming business. The Ndlovu homestead comprise of a number of informal residences and associated stock enclosures. Mr.Ndlovu was not aware of any graves, oral histories or intangible heritage resources present in the general area or associated with part of the landscape.



Figure 45: General view of Site HCP07



Figure 46: Farmhouse ruins at site HCP07



Figure 47: Mr. Ndlovu at the historical ruins



Figure 48: Mr. Ndlovu with his sons and friends at his homestead located approximately 40m from the historical ruins

✂ ***Site Significance and Recommendations:***

- a) Site HCP07, the Nooitgedacht historical farmstead 3 pre-dates 60 years of age; the site is thus protected by the NHRA 1999. Site HCP07 is assigned a *Medium Significance* and a *Generally Protected B* field rating. The site should be conserved; alternatively application for site destruction should be done under a SAHRA / ECPHRA *Destruction Permit*.

Site decay in association with the seeming absence of related archaeological deposits does not warrant formal protection, rehabilitation or Phase 2 mitigation. Development will necessitate destruction of the site; it is recommended that the developer applies for a SAHRA / ECPHRA *Destruction Permit* prior to development impact.

SPATIAL EXTENT	INTENSITY	DURATION	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	STATUS	CONFIDENCE
Site HCP07 – Nooitgedacht Historical Farmstead 3					MITIGATION: Conservation		
1 Local	0 None	3 Long term	4 Very Low	Improbable	Insignificant	Positive	High
Site HCP07 – Nooitgedacht Historical Farmstead 3					MITIGATION: Destruction SAHRA / ECPHRA Permit		
1 Local	2 Medium	3 Long term	6 Medium	Definite	Medium	Negative	High

Table 11: Site HCP07 Impact Assessment Identification

- b) The residence of Felokwakhe Jerry Ndlovu constitutes a contemporary cultural heritage resource, post-dating 60 years of age the site is not protected by the NHRA 1999. The site does not form the subject of this report and it is recommended that recommendations as per the (SIA) Social Impact Assessment or public liaison process be complied with.

3.4) RECOMMENDATIONS

The Hopewell Conservation Project will impact on cultural heritage resources, inclusive of archaeological deposits / sites, built structures older than 60 years, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict and cultural landscapes or views as defined and protected by the NHRA 1999. Particular categories that will be affected include:

- a) Archaeological deposits / sites; and
- b) Built structures older than 60 years (and associated cultural landscapes).

It is recommended that development proceed provided the developer complies with the following recommendations:

- a) Site 01, a contemporary graveyard in process of grave relocation is situated immediately adjacent to the development area. It is recommended that, should the Hopewell Conservation Project development start prior to completion of the graveyard's relocation project, the developer ensures that necessary sensitivity and care be exhibited by all contractors and subcontractors when working in the vicinity of the site;
- b) Sites HCP01 (Middle Stone Age), HCP04 (Historic Period feature) and HCP06 (Historic Period feature) are of *Low Significance* and a *Generally Protected C* field rating. It is recommended that the sites be destroyed without the developer having to apply for SAHRA *Destruction Permits*.
- c) Sites HCP03 (Historic farmstead) and HCP07 (Historic farmstead) are of *Medium Significance* and a *Generally Protected B* field rating. Development will necessitate destruction. It is recommended that the developer applies to the ECPHRA for *Built Environment Destruction Permits* prior to development in these areas.
- d) Sites HCP02 (Historic farmstead) and HCP05 (Historic farmstead) will not directly be impacted on by the development. The sites can either be:
 - Conserved *in situ* (no development impact);
 - Destroyed under ECPHRA *Built Environment Destruction Permits*; or
 - Site development (i.e. management of tourism to the sites) under a SAHRA *Site Management Plan*.
- e) Contemporary residences located at Sites HCP03, HCP05 and HCP07 are not protected under the NHRA 1999. It is recommended that recommendations as per the Social Impact Assessment (SIA) or public liaison process be complied with.

MC	SITE	CO-ORDINATES	TYPE	PERIOD	DESCRIPTION	IMPACT	RECOMMENDATIONS
SITES LOCATED OUTSIDE THE HOPEWELL CONSERVATION PROJECT DEVELOPMENT AREA							
01	Site 01	S33°50'11.4"; E25°22'04.6"	Contemporary	-	Graveyard	N/A	(Sensitivity)
SITES LOCATED WITHIN THE HOPEWELL CONSERVATION PROJECT DEVELOPMENT AREA							
HCP01	Site HCP01	S33°50'11.4"; E25°22'04.6"	Archaeological	Stone Age	MSA	Direct	Destruction
HCP02	Site HCP02	S33°51'17.7"; E25°22'25.4"	Archaeological	Historic	Farmstead	Not Direct	<i>In situ</i> conservation; or Destruction
HCP03	Site HCP03	S33°52'57.3"; E25°22'42.4"	Archaeological	Historic	Farmstead	Direct	Destruction -ECPHRA Permit
HCP03	Site HCP03	S33°52'57.3"; E25°22'42.4"	Contemporary	-	Residence	N/A	N/A
HCP04	Site HCP04	S33°53'28.6"; E25°22'45.1"	Archaeological	Historic	Feature	Direct	Destruction
HCP05	Site HCP05	S33°52'57.3"; E25°22'42.4"	Archaeological	Historic	Farmstead 2	Not Direct	<i>In situ</i> conservation; or Destruction
HCP05	Site HCP05	S33°52'57.3"; E25°22'42.4"	Cotemporary	-	Residence	N/A	N/A
HCP06	Site HCP06	S33°53'08.9"; E25°24'36.8"	Archaeological	Historic	Feature	Direct	Destruction
HCP07	Site HCP07	S33°52'57.3"; E25°22'42.4"	Archaeological	Historic	Farmstead 3	Direct	Destruction -ECPHRA Permit
HCP07	Site HCP07	S33°52'57.3"; E25°22'42.4"	Contemporary	-	Residence	N/A	N/A

Table 12: Summary of Identified sites and recommended mitigation measures

SPATIAL EXTENT	INTENSITY	DURATION	CONSEQUENCE	PROBABILITY	SIGNIFICANCE	STATUS	CONFIDENCE
Site HCP01 – Middle Stone Age					MITIGATION: Conservation		
2 Regional	1 Low	3 Long term	5 Low	Improbable	Very Low	Positive	High
Site HCP01 – Middle Stone Age					MITIGATION: Site destruction		
2 Regional	1 Low	3 Long term	5 Low	Definite	Low	Negative	Medium
Site HCP02 – Riet Kuil Historical Farmstead					MITIGATION: Conservation		
1 Local	0 None	3 Long term	4 Very Low	Improbable	Insignificant	Positive	High
Site HCP02 – Riet Kuil Historical Farmstead					MITIGATION: Destruction SAHRA / ECPHRA Permit		
1 Local	2 Medium	3 Long term	6 Medium	Definite	Medium	Negative	Medium
Site HCP03 – Nootgedacht Historical Farmstead 1					MITIGATION: Conservation		
1 Local	0 None	3 Long term	4 Very Low	Improbable	Insignificant	Positive	High
Site HCP03 – Nootgedacht Historical Farmstead 1					MITIGATION: Destruction SAHRA / ECPHRA Permit		
1 Local	2 Medium	3 Long term	6 Medium	Definite	Medium	Negative	High
Site HCP04 – Historic Period Stone Feature					MITIGATION: Conservation		
1 Local	1 Low	3 Long term	5 Low	Improbable	Very Low	Positive	High
Site HCP04 – Historic Period Stone Feature					MITIGATION: Site destruction		
1 Local	1 Low	3 Long term	5 Low	Definite	Low	Negative	High
Site HCP05 – Nootgedacht Historical farmstead 2					MITIGATION: Conservation (Formal conservation: Site Management Plan)		
1 Local	0 None	3 Long term	4 Very Low	Improbable	Insignificant	Positive	High
Site HCP05 – Nootgedacht Historical farmstead 2					MITIGATION: Destruction ARCHAEOLOGICAL SITE INSPECTION SAHRA / ECPHRA Permit		
1 Local	- N/A	- N/A	- N/A	- N/A	- N/A	Negative	Medium
Site HCP06 – Historic Period Stone Feature					MITIGATION: Conservation		
1 Local	1 Low	3 Long term	5 Low	Improbable	Very Low	Positive	High
Site HCP06 – Historic Period Stone Feature					MITIGATION: Site destruction		
1 Local	1 Low	3 Long term	5 Low	Definite	Low	Negative	High
Site HCP07 – Nootgedacht Historical Farmstead 3					MITIGATION: Conservation		
1 Local	0 None	3 Long term	4 Very Low	Improbable	Insignificant	Positive	High
Site HCP07 – Nootgedacht Historical Farmstead 3					MITIGATION: Destruction SAHRA / ECPHRA Permit		
1 Local	2 Medium	3 Long term	6 Medium	Definite	Medium	Negative	High

Table 13: Summarised site impact assessment identifications

3.4.1) BASIC AIA COMPLIANCE PROCEDURES

The Phase 1 AIA report should be submitted in digital and hard copy format to:

- SAHRA Archaeology Unit for comment; and the
- ECPHRA, as background information document to the *Destruction Permit* applications.

The SAHRA Archaeology Unit comment on the development can be expected no later than 4-6 weeks after submission of the report.

Destruction Permit applications forms are available from the ECPHRA and should be applied for by the developer. Destruction of each site has to be applied for on an individual application form. Completed applications forms should be submitted to the ECPHRA for evaluation by the Built Environment Committee. Documentation to the ECPHRA (Phase 1 AIA report and *Destruction Permit* application forms) can be submitted immediately; submission needs not await comment by SAHRA Archaeology Unit. The ECPHRA committee meets between 1-2 times per month; comment on the development can thus be expected between 2-4 weeks after submission.

Formal comment on the proposed development by both SAHRA and the ECPHRA are compulsory for purposes of a Record of Decision (RoD).

3.4.2) COMPLIANCE REQUIREMENTS DURING THE CONSTRUCTION PHASE

The developer should ensure that heritage related information is communicated to all contractors and sub-contractors, inclusive of the localities of identified sites and related SAHRA and ECPHRA recommendations thereto.

Destruction of sites may only be permitted under formal SAHRA comment / the relevant *Destruction Permit* issued by the ECPHRA.

Should any cultural heritages resources, not reported on in this report be encountered during the course of development, both on the surface or sub-surface, the developer should ensure that operation in the immediately vicinity be ceased and the find reported to SAHRA / ASAPA accredited CRM archaeologist. (Palaeontological resources are often identified by high concentrations of bone, fossilized bone or animal and plant imprints on stone. Archaeological and Historical resources are identified by concentrations of stone tools and knapping debris, ceramic, porcelain, earthenware and glass sherds, mineral slag, bone, metal objects, structure remains including foundations and building material ranging from *daga* to branch and brick, associated occupation middens, stock enclosure remains including vetrified dung etc. In addition unmarked human remains may be encountered.)

3.4.3) POST CONSTRUCTION COMPLIANCE REQUIREMENTS

Should any cultural heritage resources, as described above, be reported on by either residents or visitors to the Hopewell Conservation Project the developer / management should report the find to SAHRA / ASAPA accredited CRM archaeologist / Albany Museum, Grahamstown.

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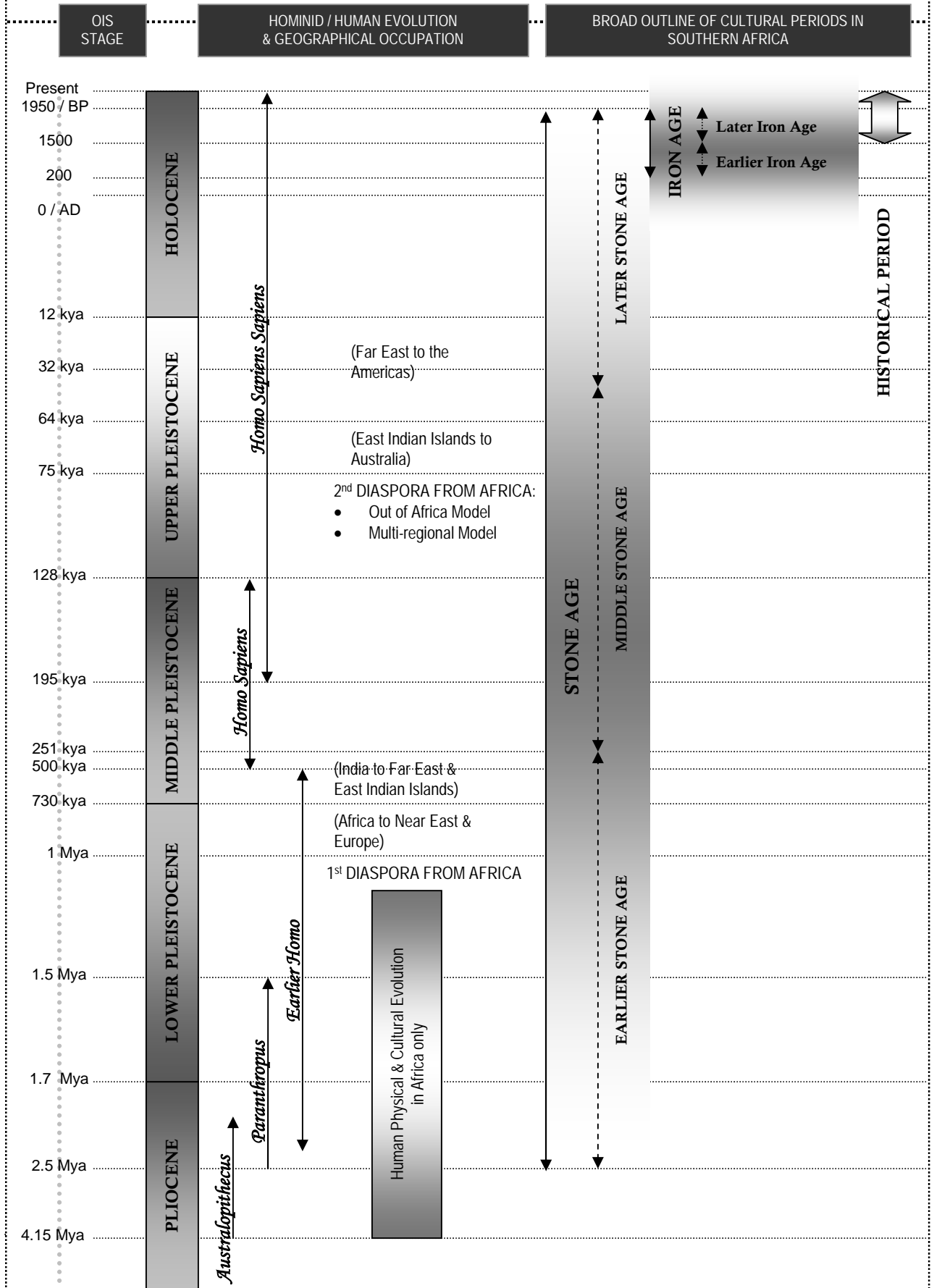
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Schematic Outline of the Pre-historic and Historic Periods (Southern Africa)



EXTRACTS FROM THE

NATIONAL HERITAGE RESOURCES ACT (NO 25 OF 1999)

DEFINITIONS

Section 2

In this Act, unless the context requires otherwise:

- ii. “*Archaeological*” means –
 - a) material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years, including artefacts, human and hominid remains and artificial features and structures;
 - b) rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10 m of such representation;
 - c) wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the Republic,... and any cargo, debris, or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation.
- viii. “*Development*” means any physical intervention, excavation or action, other than those caused by natural forces, which may in the opinion of a heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including –
 - a) construction, alteration, demolition, removal or change of use of a place or structure at a place;
 - b) carrying out any works on or over or under a place;
 - c) subdivision or consolidation of land comprising, a place, including the structures or airspace of a place;
 - d) constructing or putting up for display signs or hoardings;
 - e) any change to the natural or existing condition or topography of land; and
 - f) any removal or destruction of trees, or removal of vegetation or topsoil;
- xiii. “*Grave*” means a place of interment and includes the contents, headstone or other marker of such a place, and any other structure on or associated with such place;
- xxi. “*Living heritage*” means the intangible aspects of inherited culture, and may include –
 - a) cultural tradition;
 - b) oral history;
 - c) performance;
 - d) ritual;
 - e) popular memory;
 - f) skills and techniques;
 - g) indigenous knowledge systems; and
 - h) the holistic approach to nature, society and social relationships.
- xxx. “*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;
- xli. “*Site*” means any area of land, including land covered by water, and including any structures or objects thereon;
- xliv. “*Structure*” means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith;

NATIONAL ESTATE

Section 3

- 1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.
- 2) Without limiting the generality of subsection 1), the national estate may include –
 - a) places, buildings, structures and equipment of cultural significance;
 - b) places to which oral traditions are attached or which are associated with living heritage;
 - c) historical settlements and townscapes;
 - d) landscapes and natural features of cultural significance;
 - e) geological sites of scientific or cultural importance
 - f) archaeological and palaeontological sites;
 - 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 individuals designated by the Minister by notice in the Gazette;

- v. historical graves and cemeteries; and
- vi. other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No 65 of 1983)
- h) sites of significance relating to the history of slavery in South Africa;
- i) 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. objects to which oral traditions are attached or which are associated with living heritage;
 - iii. ethnographic art and objects;
 - iv. military objects;
 - v. objects of decorative or fine art;
 - vi. objects of scientific or technological interest; and
 - vii. books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1 xiv) of the National Archives of South Africa Act, 1996 (Act No 43 of 1996).

STRUCTURES

Section 34

- 1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

ARCHAEOLOGY, PALAEOLOGY AND METEORITES

Section 35

- 3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority.
- 4) No person may, without a permit issued by the responsible heritage resources authority –
 - a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
 - b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
 - c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
 - d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- 5) When the responsible heritage resources authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or palaeontological site is under way, and where no application for a permit has been submitted and no heritage resources management procedure in terms of section 38 has been followed, it may –
 - a) serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order;
 - b) carry out an investigation for the purpose of obtaining information on whether or not an archaeological or palaeontological site exists and whether mitigation is necessary;
 - c) if mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph a) to apply for a permit as required in subsection 4); and
 - d) recover the costs of such investigation from the owner or occupier of the land on which it is believed an archaeological or palaeontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks of the order being served.
- 6) The responsible heritage resources authority may, after consultation with the owner of the land on which an archaeological or palaeontological site or meteorite is situated, serve a notice on the owner or any other controlling authority, to prevent activities within a specified distance from such site or meteorite.

BURIAL GROUNDS AND GRAVES

Section 36

- 3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority –
 - a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
 - b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

- c) bring onto or use at a burial ground or grave referred to in paragraph a) or b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.
- 4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction of any burial ground or grave referred to in subsection 3a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.
- 5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection 3b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority –
 - a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
 - b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.
- 6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority –
 - a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
 - b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-internment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

HERITAGE RESOURCES MANAGEMENT

Section 38

- 1) Subject to the provisions of subsections 7), 8) and 9), any person who intends to undertake a development categorised as –
 - a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
 - b) the construction of a bridge or similar structure exceeding 50 m in length;
 - c) any development or other activity which will change the character of a site –
 - i. exceeding 5 000 m² in extent; or
 - 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
 - iv. the costs which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
 - d) the rezoning of a site exceeding 10 000 m² in extent; or
 - e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,
 must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.
- 2) The responsible heritage resources authority must, within 14 days of receipt of a notification in terms of subsection 1) –
 - a) if there is reason to believe that heritage resources will be affected by such development, notify the person who intends to undertake the development to submit an impact assessment report. Such report must be compiled at the cost of the person proposing the development, by a person or persons approved by the responsible heritage resources authority with relevant qualifications and experience and professional standing in heritage resources management; or
 - b) notify the person concerned that this section does not apply.
- 3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection 2a) ...
- 4) The report must be considered timeously by the responsible heritage resources authority which must, after consultation with the person proposing the development decide –
 - a) whether or not the development may proceed;
 - b) any limitations or conditions 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 is 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.

APPOINTMENT AND POWERS OF HERITAGE INSPECTORS

Section 50

- 7) Subject to the provision of any other law, a heritage inspector or any other person authorised by a heritage resources authority in writing, may at all reasonable times enter upon any land or premises for the purpose of inspecting any heritage resource protected in terms of the provisions of this Act, or any other property in respect of which the heritage resources authority is exercising its functions and powers in terms of this Act, and may take photographs, make measurements and sketches and use any other means of recording information necessary for the purposes of this Act.
- 8) A heritage inspector may at any time inspect work being done under a permit issued in terms of this Act and may for that purpose at all reasonable times enter any place protected in terms of this Act.
- 9) Where a heritage inspector has reasonable grounds to suspect that an offence in terms of this Act has been, is being, or is about to be committed, the heritage inspector may with such assistance as he or she thinks necessary –
 - a) enter and search any place, premises, vehicle, vessel or craft, and for that purpose stop and detain any vehicle, vessel or craft, in or on which the heritage inspector believes, on reasonable grounds, there is evidence related to that offence;
 - b) confiscate and detain any heritage resource or evidence concerned with the commission of the offence pending any further order from the responsible heritage resources authority; and
 - c) take such action as is reasonably necessary to prevent the commission of an offence in terms of this Act.
- 10) A heritage inspector may, if there is reason to believe that any work is being done or any action is being taken in contravention of this Act or the conditions of a permit issued in terms of this Act, order the immediate cessation of such work or action pending any further order from the responsible heritage resources authority.