

Archaeological Site Inspection –

**BORROW PIT 76.0 QUARRY IMPACT ON
ARCHAEOLOGICAL 'MICHAUSDAL' DEPOSITS,
CRADOCK DISTRICT, EASTERN CAPE, SOUTH AFRICA**

DATE: 2006-08-25



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ARCHAEOLOGICAL 'MICHAUSDAL' DEPOSITS,
CRADOCK DISTRICT, EASTERN CAPE, SOUTH AFRICA**



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1) PROJECT BRIEF

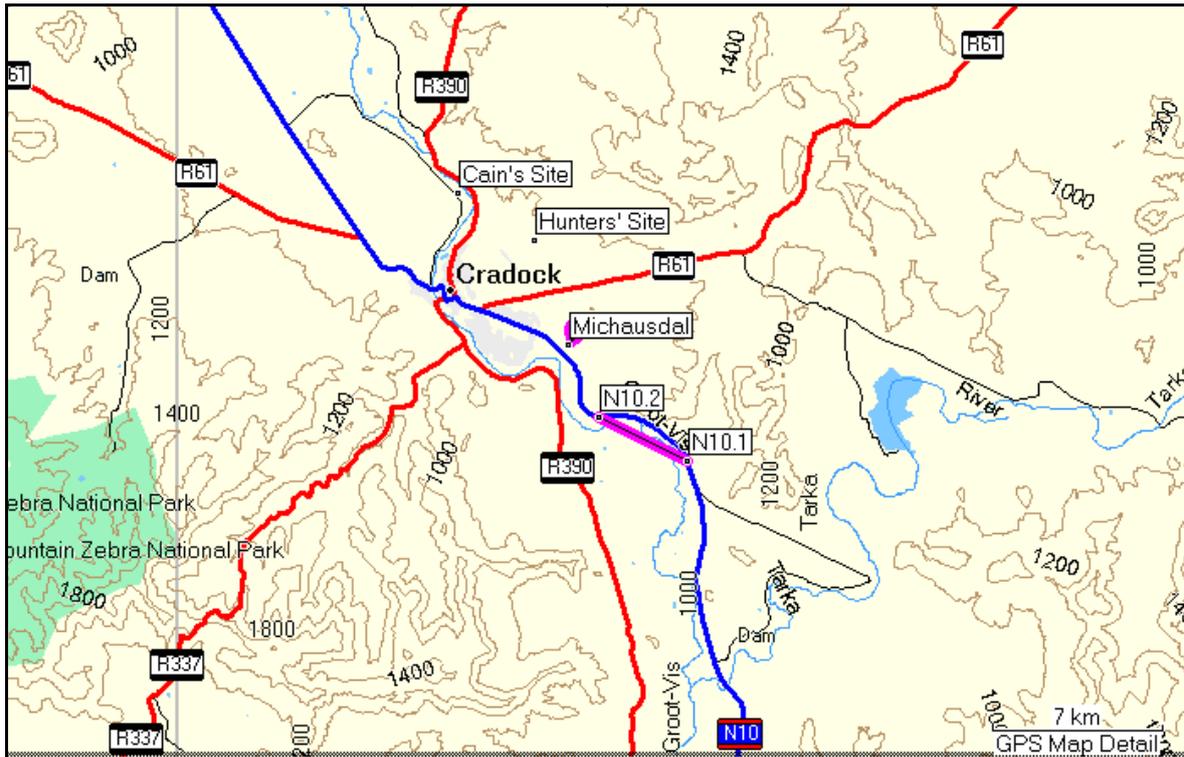
The National Museum Bloemfontein, Archaeology Contracts Office, was requested by SAHRA and the developer, SNA / HHO / ICE Joint Venture, to conduct a site inspection after it was discovered that quarry activities at Borrow Pit 76.0 impacted on archaeological deposits. The aim of the site inspection was to identify and assess the importance of the archaeological deposit and comment on a way forward for continued use of Borrow Pit 76.0 and the proposed extension thereof, in order to complete the approximate 5km long rerouting of the N10 from Tarka Bridge to Cradock.

2) DEVELOPMENT LOCATION, DESCRIPTION & IMPACT

Borrow Pit 76.0 is situated approximately 7km east of Cradock. The approximate 5km long rerouting of the N10 (N10.1-N10.2) from Tarka Bridge to Cradock is situated approximately 9 km south east of Cradock (1:50,000 map ref 3225BA).

Borrow Pit 76.0 is less than 10ha in surface size. Quarrying at the site provides material for the construction and rehabilitation of the N10 rerouting. Quarrying is done mechanically, and resulted in the permanent loss of artefact and archaeological context information of the 'Michausdal' deposits.

Rerouting of the approximate 5km long stretch of the N10 between Tarka Bridge and Cradock is inclusive of the construction of 2 bridges, a new road and the rehabilitation and upgrading of sections of the N10. In general the activities involved would be destructive to cultural heritage resources, as defined and protected by the NHRA 1999.



MAP 1: Locality of the approximate 5km long N10 reroute development between Tarka Bridge and Cradock, indicating the position of the 'Michausdal' / Borrow Pit 76.0 location (1:50,000 map ref 3225 BA) in association with the Hunters' and Cain's MSA sites

3) BRIEF HISTORY OF EVENTS & THE REQUESTED SITE INSPECTION

The Department of Environmental Affairs and Tourism (DEAT) issued a record of decision (RoD) for the development on 2006-01-10. The RoD was issued prior to a request for a Phase 1 Archaeological Impact Assessment, a prerequisite for developments of size in terms of the Mineral and Petroleum Resources Development Act, No 28 of 2002 (MPRDA 2002), the National Environmental Management Act, No 107 of 1998 (NEMA 1998) and the NHRA 1999. Conditions to the RoD (3.2.13) however included that 'should any cultural, historical and/or archaeological artefacts be discovered on site during the construction phase, work at the site must cease immediately...'

Upon notification that the development was impacting on an archaeological site (2006-08-11) the developer, in accordance with the conditions of the RoD, immediately ceased operation and SAHRA was notified of the find. SAHRA gave conditional approval for continued excavation at Borrow Pit 76.0 provided that excavation remained confined to areas already disturbed and that an archaeological site inspection be done (by Dr. Zoe Henderson, National Museum Bloemfontein).

The Archaeology Contracts Office, National Museum Bloemfontein, conducted the requested Site Inspection on 2006-08-21 to 23. The site inspection included:

- i. An assessment of the impact of Borrow Pit 76.0 on the 'Michausdal' deposits;
- ii. Assessment of the (remainder) of the 'Michausdal' archaeological site;
- iii. A brief assessment of the N10 reroute development including both the production and development area; and
- iv. Site visits to other identified archaeological sites in the area to assess the importance of the 'Michausdal' archaeological deposit on a local scale.

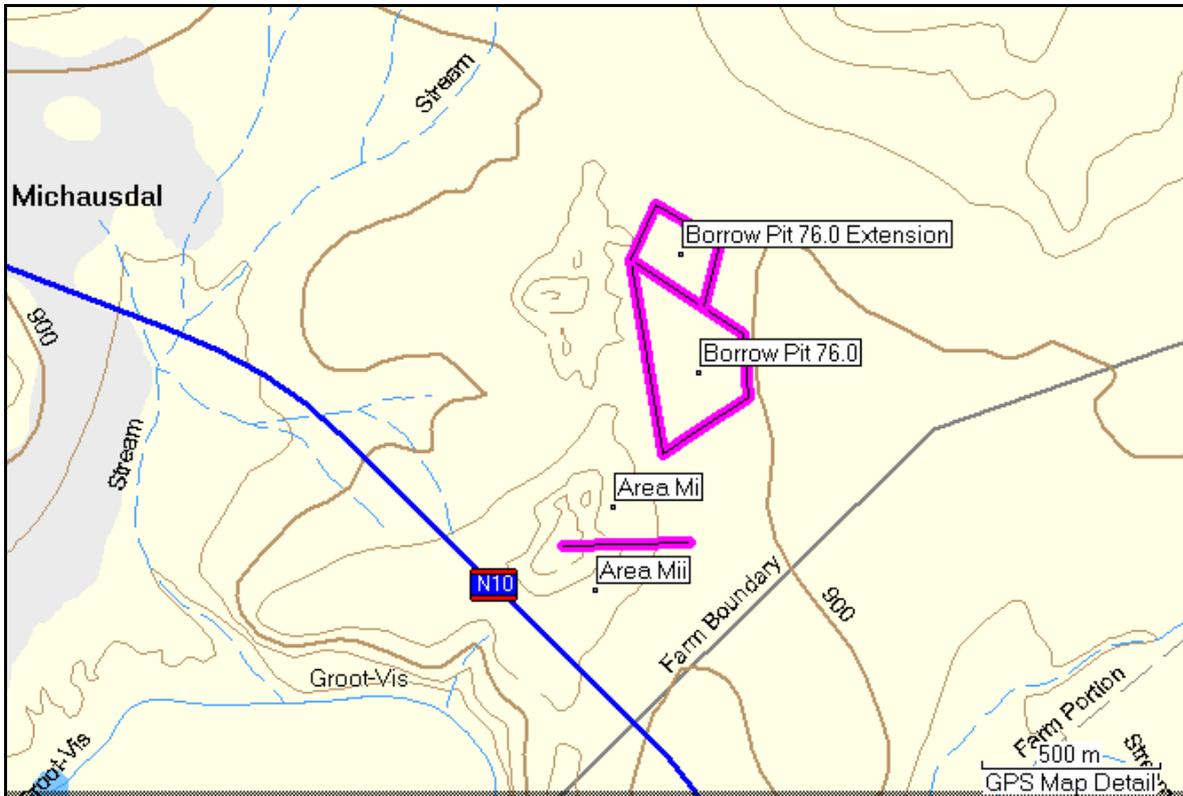
Assessment was largely limited to surface surveillance. Sub-Surface interpretations are based primarily on the inspection of existing open sections or animal burrows.

GPS co-ordinates were either provided by the developer or taken with a Garmin e-trex vista GPS (3-15m error margin, due to overcast weather). Photographic documentation was done with a Casio exilim EX-S2 camera.

4) ASSESSMENT FINDINGS

4.1) THE MICHAUSDAL DEPOSIT & BORROW PIT 76.0

The 'Michausdal' / Borrow Pit 76.0 area revealed a rich scatter of Middle Stone Age (MSA) surface stone artefacts. Two significant types of MSA deposits were identified; these will be described according to their general characteristics and location on the hill, divided into Areas Mi and Mii.



MAP 2: The 'Michausdal' / Borrow Pit 76.0 area. MSA deposits in Area Mi stretches from the horizontal line south of Borrow Pit 76.0 north, while deposits typical of Area Mii were restricted to the southern part of the hill

○ AREA Mi

MSA artefacts encountered in Area Mi were predominantly produced from hornfels, a raw material not indigenous to the immediate area. Artefact types included a rich array of blades, flake-blades and irregular flakes with lesser quantities of convergent flakes. Little to no associated cores and waste material were encountered, giving the impression that primary knapping was done elsewhere. Some secondary knapping was evidently done on site. The general area may thus be indicative of an 'activity / specialist area' with a focus on demarcated Area Mi. Artefact quantities decreased towards the north with little to no artefacts encountered in the vicinity of the Borrow Pit 76.0 Extension site. Artefact ratios (artefacts:m²) thus vary considerably, ranging from >10:1 to 0:1. At Area Mi artefacts were concentrated around a palaeo-spring, situated within the U-shaped formation of the hill. Artefacts were more exposed in the immediate vicinity of the spring and in game footpaths, a result of erosion, giving the impression that the deposit may well have stratigraphic depth of up to 1.5m (inference based on an animal burrow). Faunal material was encountered. No direct association between faunal remains and the archaeological deposit could be established.

A single ephemeral stone circle was located next to the spring. Two similar 'structures' were present in the Borrow Pit 76.0 area (Pers. Comm: Holden). Stone circles may well have pointed to a Later Stone Age (LSA) occupation phase at the site with a probable focus on lower altitudes.

In Area Mi the Historic Period was represented by a number of metal artefacts, bullet cases and an approximate 15m straight stone wall. Historic artefacts were sparsely spread and may well be of very recent origin.

○ AREA Mii

At Area Mii MSA associated artefacts were encountered in characteristic small exposed scatters. Scatters seem to be the direct result of on site knapping activities. A wider variety of raw materials were used. The difference in raw material may well be the reason for the change in typology, also impacting on technology. Artefact types at Mii were dominated by tools produced from shorter flakes and blades, with higher quantities of irregular shaped tools in direct association with large

numbers of cores and waste material. Artefact ratios vary considerably from dense artefact scatters to almost 'sterile' areas. Any attempt to ascribe a general artefact ratio to the area would present a biased view their distribution pattern. Stratigraphic depth is inferred to be relatively limited.

A single cleaver is indicative of an Earlier Stone Age (ESA) component in the area.

Identified flowstone is suggestive of a wetter palaeo-environment and complements the identified spring in Area Mi. The total of the site thus seem to have a strong focus on water availability as an important draw card to the site.

In Area Mii a number of metal objects and a small stone structure represented the Historic Period.

○ BORROW PIT 76.0

A number of MSA artefacts were encountered during assessment of Borrow Pit 76.0. Artefacts were restricted to quarry dumps or areas where the underlying calcrete layer was not yet reached, strengthening the interpretation that cultural deposits were restricted to the top layer. Thickness of the top layer decrease visibly towards the north and east. On average artefact quantities decrease from south to north. Virtually no artefacts were encountered in the northern exposures of the Borrow Pit, limiting the inferred impact of the development to the southern extremities thereof. In this area development impact was total and the few remaining artefacts does not validate conservation. No sign of the reported 'stone circles' (Pers. Comm: Holden) could be discerned.

○ BORROW PIT 76.0 - EXTENSION

The Borrow Pit 76.0 Extension indicated on the map serves as a rough indication of the proposed enlargement of the current borrow pit. Due to the decrease in topsoil, and thus the available quarry material for the reroute development, the extent of the pit will need to be increased.

Assessment of Borrow Pit 76.0 Extension area indicated an extremely low presence of surface artefacts, serving as an indication of the 'Michausdal' site's boundary. Artefacts are typologically similar to material found at Mi, but with artefact ratios of <1:64.

4.2) THE N10 REROUTE DEVELOPMENT

Assessment of the approximate 5km long reroute development included a visit to the production as well as the development area. No cultural heritage resources were identified in the production area. No artefacts, including those in secondary context from Borrow Pit 76.0, were identified in the reroute development area. The absence of expected *ex-situ* artefacts can be seen as a result of the advanced stage of the development.

An old canal was encountered during construction in the vicinity of N10.2. Work in the area was seized and municipal documents will be consulted to record the canal before it is moved to its planned new location. The canal does not comprise of a cultural heritage resource as defined and protected by the NHRA (1999) and relates directly to past upgrading and maintenance of the N10.

4.3) A COMPARISON OF THE MICHAUSDAL SITE WITH LOCALLY IDENTIFIED STONE AGE DEPOSITS

Two additional identified MSA archaeological sites were visited to assist in comparative site assessment of the significance of the 'Michausdal' site. Mark Holden, a Cradock resident, discovered the sites. Brief descriptions of the sites are provided below.

○ CAIN'S SITE (S32° 07' 49.6"; E25° 37' 22.0")

Cain's site stretches over a couple of hectares, generally characterised by calcrete rich erosion gullies. MSA stone tools were produced from a variety of raw material sources present in the area. Formal tool types include blades, flake-blades, convergent points and a variety of scrapers. Waste material such as cores and production *debris* is also present on site. General tool size is relatively small, a probable result of the use of river cobbles as raw material.

Some stone walling was identified in a densely vegetated part of the Stone Age site. Walling is not associated with the MSA lithic deposit.

Close to Cain's site and situated at approximately S32°07'46.3"; E25°37'21.5" is an informal Historical grave site. Graves are marked with stacked stones. Some graves have head and footstones. The graves were preliminary, based on grave size, identified as follows: two adult graves (one with a head and footstone), three children's graves (two of which were marked with head and footstones) and one infant grave (marked with a head and footstone).

○ **HUNTERS' SITE (S32° 08' 54.3"; E25° 39' 20.6")**

Artefact concentrations are focussed on the hill where ratios of approximately 6:1 were recorded. Though still present, artefact ratios decreased significantly with distance from the hill. Stone tools were produced from a mixture of raw material. Relatively small scrapers and flakes constitute the primary types. Knapping *debris*, including cores and waste flakes are present. A member of the public apparently collected the majority of the artefacts, approximately 2 years ago (Pers. Comm: Holden). If so, any interpretation of the site will be relatively biased. However, the remaining artefacts indicates a possible later MSA / macrolithic LSA occurrence in a factory context.

Two stone circles with approximate diameters of 2-4m are situated on the hill. Stone tools were found within the confines of the circles. The stone circles are not associated with the Stone Age deposit and interpreted as a later reoccupation of the area.

A short distance away from the hill itself, at a dolomite ridge (S32°09'05.4"; E25°39'18.5"), a number in incisions on stone may well be representative of rock art associated with the Stone Age deposit. Due to wet weather it was impossible to identify, or to photographically document, any images.

From the archaeological sites visited the 'Michausdal' Area Mi deposit seem to be unique in both the use of raw material and artefact types. 'Michausdal' Area Mii deposits with a characteristic mixed raw material factory context are best echoed by deposits identified at 'Cain's' site. While the 'Michausdal' Area Mii deposits may well be restricted to the surface / with very little sub-surface depth, deposits at 'Cain's' site probably have much better stratigraphic depth and by inference greater archaeological value.

'Michausdal' Area Mii deposits are typologically MSA related. The deposit may thus temporally overlap with the 'Hunter's' site deposit.

DEVELOPMENT AREA	RECORDED SITES, FIND PLACES AND FEATURES	IMAGE NR	CO-ORDINATES	
			SOUTH	EAST
BORROW PIT 76.0	a		S32° 11' 04.5"	E25° 40' 29.4"
	b		S32° 10' 58.6"	E25° 40' 28.9"
	c		S32° 10' 51.9"	E25° 40' 16.8"
	d		S32° 11' 09.6"	E25° 40' 20.2"
BORROW PIT 76.0 EXTENSION	a		S32° 10' 50.3"	E25° 40' 26.3"
	b		S32° 10' 56.3"	E25° 40' 24.6"
	c		S32° 10' 51.9"	E25° 40' 16.8"
	d		S32° 10' 46.9"	E25° 40' 19.4"
MICHAUSDAL AREA Mi			S32° 11' 14.6"	E25° 40' 14.9"
MICHAUSDAL AREA Mii			S32° 11' 22.1"	E25° 40' 12.9"
REROUTE N10 DEVELOPMENT	N10.1		S32° 13' 50.9"	E25° 43' 23.7"
	N10.2		S32° 12' 50.3"	E25° 41' 02.2"
CAIN'S SITE			S32° 07' 49.6"	E25° 37' 22.0"
HUNTERS' SITE			S32° 08' 54.3"	E25° 39' 20.6"

TABLE 1: GPS co-ordinates of the proposed development area, identified and associated sites and features

5) **IMAGE GALLERY**



IMAGE 1: General view of the 'Michausdal' site and Borrow Pit 76.0



IMAGE 2: View onto the Borrow Pit 76.0 development



IMAGE 3: Exposed north-western quarry section; note the shallow topsoil overlying calcrete layers



IMAGE 4: View onto Borrow Pit 76.0 from proposed Borrow Pit 76.0 Extension site



IMAGE 5: General view: The 'Michausdal' site, Area Mi



IMAGE 6: The 'Michausdal' site, Area Mi. Note the spring located off centre in the middleground of the photograph (white sandy patch)



IMAGE 7: Blade and flake hornfels artefacts from Area Mi



IMAGE 8: Blade and flake artefacts from Area Mi (the artefact on the left is produced from fine grained dolorite)



IMAGE 9: A 'stone circle' situated next to the spring. Similar 'stone circles', in association with younger lithics were recorded from the area destroyed by the Borrow Pit 76.0 development (Pers. Comm: Holden)



IMAGE 10: A single cleaver from Area Mii, indicative of an ESA presence at the 'Michausdal' deposits



IMAGE 11: A collection of mixed raw material artefacts from Area Mii



IMAGE 12: Typical surface concentrations in which artefacts in Area Mii were found



IMAGE 13: A historic stone shelter in Area Mii



IMAGE 14: Historic metal remains from the 'Michausdal' site

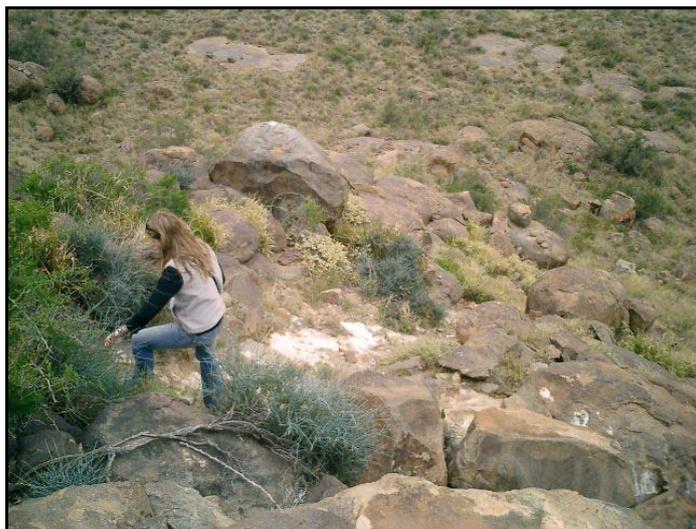


IMAGE 15: Exposed flowstone in Area Mii is indicative of a much wetter climate in the past



IMAGE 16: Upgrading of the N10 within the 5 km between Tarka Bridge and Cradock



IMAGE 17: A part of the 5km reroute development project

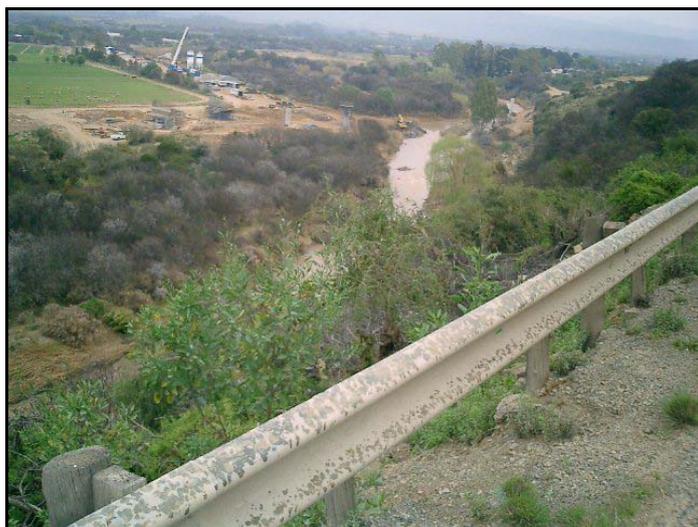


IMAGE 18: One of the bridges (under construction) included in the reroute development with a view onto the production area



IMAGE 19: General view of 'Cain's site'



IMAGE 20: A collection of artefacts from 'Cain's site'



IMAGE 21: Stone walling in dense vegetation, 'Cain's site'



IMAGE 22: A historic grave from the grave site in the vicinity of 'Cain's site'



IMAGE 23: General view; the top of 'Hunter's site'



IMAGE 23: One of the stone circular enclosures at the 'Hunter's site'



IMAGE 24: A collection of stone artefacts from 'Hunter's site'

5) CONCLUSION

Borrow Pit 76.0 quarry activities impacted negatively on identified 'Michausdal' deposits. Deposits in the Borrow Pit area have been either totally destroyed, or impacted on, to such a degree that conservation of the remaining deposits will have little value in furthering our understanding of the past. The development however did not affect the total of the site. Remains were still identifiable in areas closer to the adjacent hills in the west. 'Michausdal' deposits are represented by identified ESA, MSA and LSA Stone Age components. A Historical presence is also evident on the site. ESA, LSA and Historical artefacts are extremely limited; remaining 'Michausdal' deposits can be described as a MSA site.

The 'Michausdal' MSA deposits are twofold in nature:

- 1) Archaeological deposits in Area Mi were produced from hornfels. Prominent artefacts include large blade and flake-blade types. Due to limited numbers of cores and knapping *debris* a specialist activity context is inferred. Stratigraphic depth of up to 1.5m may be expected. Remaining deposits can be described as of general medium to high significance with a *Generally Protected A* field rating. A sample of the deposit should be mitigated / excavated. An excavated sample from the remainder of the Area Mi deposits is expected to be representative of the majority of the deposits destroyed during the Borrow Pit 76.0 development.
- 2) Area Mii is represented by a mixed raw material collection of artefacts. Artefacts sizes are smaller to that of Area Mi and the occurrence seem to have a strong factory or production connotation. At 'Cain's' site similar site characteristics have been identified namely a mixed raw material MSA lithic collection within a factory context. 'Cain's' site seems to have potential for greater stratigraphic depth than 'Michausdal' Area Mii. Due to the lack of stratigraphic depth at 'Michausdal' the deposits can be described as of general medium significance with a *Generally Protected B* field rating. Recording of the deposits should include systematic excavation of at least one knapping area. The lack of stratigraphic depth may well result in recording being confined to a systematic surface collection of artefacts.

Borrow Pit 76.0 will need to be enlarged to ensure sufficient material for the N10 reroute development. The proposed Borrow Pit 76.0 Extension site is located to the north of the existing site. A general Phase 1 archaeological assessment of the area was done. The extremely low quantity of artefacts in the area is indicative of the 'Michausdal' Area Mi deposit boundary. Development in this area will not impact on significant archaeological deposits.

6) RECOMMENDATIONS

We would recommend that Phase 2 mitigation be done to collect representative samples of the MSA deposits in remaining areas, not yet impacted on by the Borrow Pit 76.0 development. The following mitigation measures are proposed:

- 1) 'Michausdal' Area Mi: One $\geq 49\text{m}^2$ excavation down to approximately 1.5m (archaeological sterile level) and approximately three $\geq 1\text{m}^2$ testpits situated at various intervals north of Area Mi to monitor inferred decrease in artefact quantities.
- 2) 'Michausdal' Area Mii: Excavation / systematic surface collection of one knapping area.

Borrow Pit 76.0 will not impact significantly on the remaining 'Michaulsdal' deposits and the proposed mitigation measures are thus seen as sufficient taken into account the fact that parts of the site will be 'conserved'. Provided the above mitigation measures are met, we would suggest that quarry activities at Borrow Pit 76.0 can proceed to the applied for, and RoD approved limits, of the pit.

Borrow Pit 76.0 Extension will not impact on any significant archaeological deposits; we would propose that development in this area proceed if applied for.

Assessment of the 5km long reroute development indicated that the development does not impact on any identified cultural heritage resources as defined and protected by the NHRA (1999).

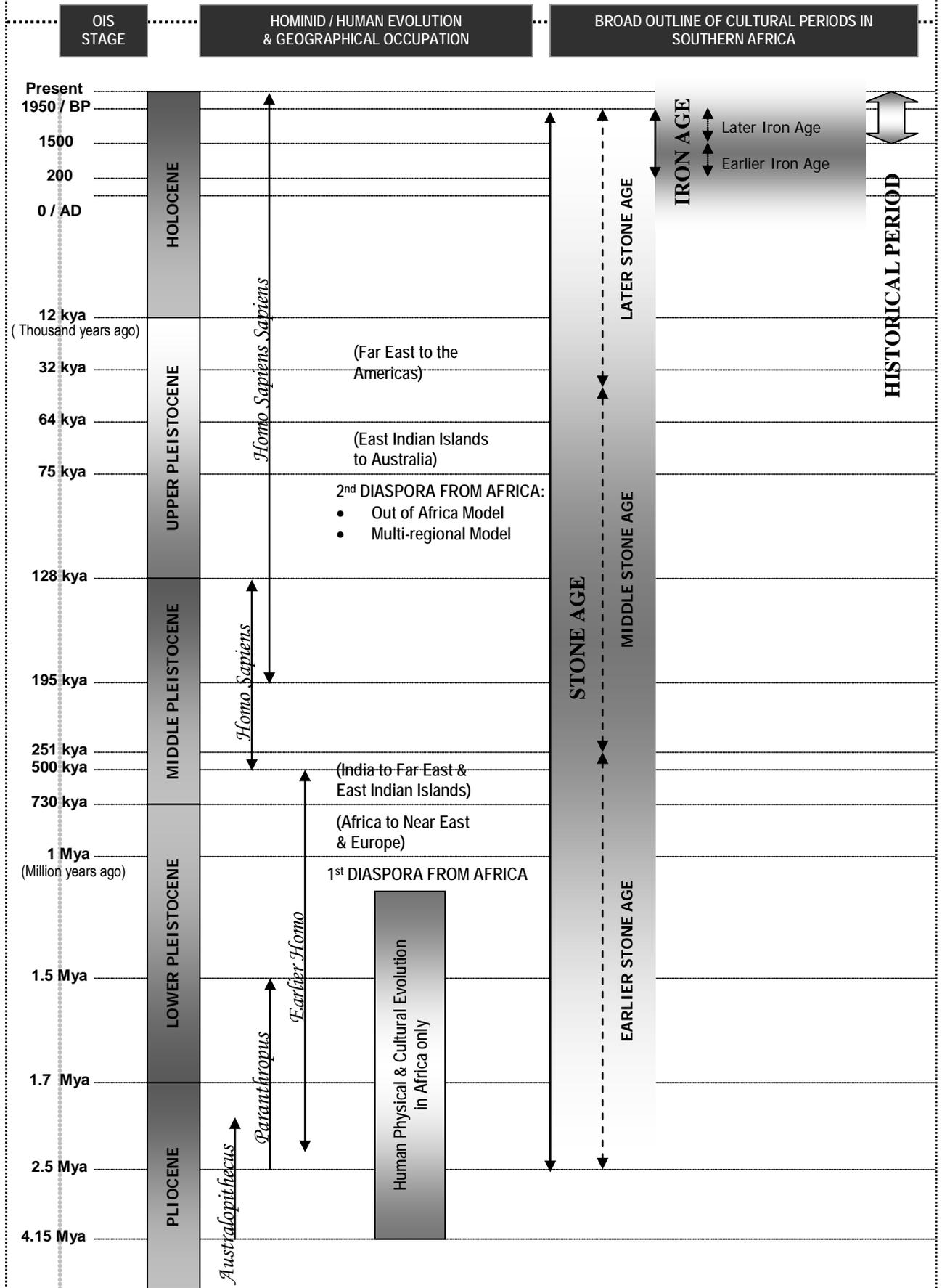
NOTE: Should the developer encounter any heritage resources, not reported on in this document, and as defined and protected by the NHRA (1999) during the course of development, the developer should immediately cease operation in the immediate vicinity and report the site to SAHRA or an ASAPA accredited CRM archaeologist.

7) ACKNOWLEDGEMENTS

We would like to thank Eduard de Wet (SNA / HHO / ICE Joint Venture) and Johan von Nieuwholtz (Group 5/Ilima) for accompanying us to the site and for providing on site and development information. A further word of thanks to Mark Holden and Desray Britz for accompanying us to the identified archaeological sites.



Schematic Outline of the Pre-historic and Historic Periods



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.
- xxxi. "*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-interment 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