A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR THE PROPOSED MOTHERWELL NU 31 HOUSING DEVELOPMENT, PORTION 2 OF 316, UITENHAGE, NELSON MANDELA METROPOLITAN MUNICIPALITY, PORT ELIZABETH, EASTERN CAPE PROVINCE

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A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR THE PROPOSED MOTHERWELL NU 31 HOUSING DEVELOPMENT, PORTION 2 OF FARM 316, UITENHAGE, NELSON MANDELA METROPOLITAN MUNICIPALITY, PORT ELIZABETH, EASTERN CAPE PROVINCE

Note: This report follows the minimum standard guidelines required by the South African Heritage Resources Agency for compiling Phase 1 Archaeological Impact Assessment (AIA).

EXECUTIVE SUMMARY

Purpose of the Study

The purpose of the study was to conduct a phase 1 archaeological impact assessment (AIA) of the proposed Motherwell NU 31 housing development situated within the boundaries of portion 2 of farm 316, Uitenhage, Nelson Mandela Metropolitan Municipality, Port Elizabeth, Eastern Cape Province. The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological heritage materials and features, the potential impact of the development and, to make recommendations to minimize possible damage to these sites.

Brief Summary of Findings

The proposed area for development is situated about 20 km north of the Port Elizabeth city centre between the Swartkops and Coega River valleys, and lies approximately 4.5 km north of the lower Swartkops estuary and 9 km from the coastline. The proposed area is bordered by the MR460/R334 Uitenhage-Addo road in the north, and the new NU29 and NU30 residential developments in the east, and is situated directly adjacent to the Motherwell Cerebos salt works. The area has in the past been highly disturbed by the construction of the Motherwell reservoir which is situated within the boundaries of the proposed area for the development. Informal housing/shacks have also been constructed around the reservoir. Service gravel roads, informal footpaths, power lines and underground pipelines have also caused disturbances in the past. The proposed area is currently being used as an informal dumping site by members of the local community.

Occasional surface scatters of predominantly Middle Stone Age (MSA) stone tools were documented over the entire area proposed for development. It is highly unlikely that the stone tool scatters are *in situ* and are, therefore, considered to be in a secondary context. Few Early Stone Age (ESA) stone tools were also documented, but not as much as those of the MSA. No sites containing any depth of deposit or other archaeological material associated with the stone tool artefacts were observed within the area. The proposed area for development is considered as having a low cultural significance, although the following recommendations must be taken into consideration prior to the construction activities.

Recommendations

The area is of a low cultural sensitivity and development may proceed as planned, although the following recommendations must be considered:

- 1. The area has been highly disturbed in past and currently, therefore, it is unlikely that any *in situ* archaeological sites/remains, and human remains would be uncovered during construction. However, if concentrations of archaeological heritage material and human remains are uncovered during construction, all work must cease immediately and be reported to the Albany Museum (046 622 2312) and/or the South African Heritage Resources Agency (SAHRA) (021 642 4502) so that systematic and professional investigation/excavation can be undertaken.
- 2. Construction managers/foremen should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.

BACKGROUND INFORMATION

The phase 1 archaeological impact (AIA) assessment report is part of a heritage impact assessment (HIA) required for the environmental impact assessment (EIA).

The proposed Motherwell NU 31 mixed-use housing development is 147.67 ha in extent with a total of 5187 erven expected to be subdivided and rezoned to accommodate mainly residential living units. Some residential erven have been consolidated to create a large site for a multi-purpose centre next to the Motherwell reservoir, which it is envisaged would include a resource-community hall, sports fields, a clinic, administration offices, a library and other institutional facilities.

Developer:

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Terms of Reference

To conduct a survey of possible archaeological heritage sites within the area of the proposed Motherwell NU 31 housing development, Erf 2 of Farm 216, Uitenhage, Nelson Mandela Metropolitan Municipality, Port Elizabeth, Eastern Cape Province. The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological heritage materials and features, the potential impact of the development and, to make recommendations to minimize possible damage to these sites.

Legislative requirements

Parts of sections 35(4) and 38(1) (8) of the National Heritage Resources Act 25 of 1999 apply:

- 35 (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;
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- 38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as -
- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- (b) the construction of a bridge or similar structure exceeding 50m in length;
- (c) any development or other activity which will change the character of the site -
 - (i) exceeding 5000m² in extent, or
 - (ii) involving three or more erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA, or a provincial resources authority;
- (d) the re-zoning of a site exceeding 10 000m² in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must as 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.
- (8) The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Ant No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environmental Affairs and Tourism, or the Minerals Act,

1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent.

BRIEF ARCHAEOLOGICAL BACKGROUND

Literature review

Little is known about the archaeology of the immediate area, mainly because no systematic research has been conducted there. The gravels of old river terraces which line most of the Coega River and estuary contain archaeological remains in the form of stone tools. Early Stone Age (ESA) (approximately 1.4 million - 250 000 years old) stone tools are found throughout the area. Large handaxes were reported from Coega Kop and were also collected from the banks and gravels of the Coega River as well as between the N2 national road and the salt works (Albany Museum collections). One of South Africa's most important Earlier Stone Age sites, Amanzi Springs, was excavated by H.J. Deacon during the 1970's (Deacon 1970) is situated a few kilometres north-west of the surveyed area. In a series of spring deposits a large number of stone tools were found *in situ* to a depth of 3-4 metres. Wood and seed material preserved remarkably very well within the spring deposits, and possibly date to between 800 000 to 250 000 years old.

Middle Stone Age (MSA) (250 000 - 30 000 years ago) and Later Stone Age (LSA) (30 000 years ago to historical times) stone tool artefacts are also found in the gravels and along the banks of the Coega River. These stone artefacts, like the Earlier Stone Age handaxes are in secondary context with no other associated archaeological material.

Occurrences of fossil bone remains and Middle Stone Age stone tools were also reported south of Coega Kop (Gess 1969). The remains were found in the surface limestone during excavations, but the bulk of the bone remains were found some 1-1.5 metres below the surface. The excavations exposed a large number and variety of bones, teeth and horn corns strongly suggesting that they were deposited there by early humans. The bone remains included warthog, leopard, hyena, rhinoceros and ten different antelope species. A radiocarbon date of greater than 37 000 years was obtained for the site.

The proposed area for development is situated approximately 9 km from the coast and falls outside of the 5 km maximum distance shell middens are expected to be found from the beach. A large number of shell middens were also situated east of Coega River Mouth. Several of the middens were sampled and excavated just before the harbour was constructed. Many middens, ceramic pot sherds (from Later Stone Age Khoekhoen pastoralist origin - last 2 000 years) and other archaeological material, are situated between the Coega and Sunday's River Mouths. These remains date mainly from Holocene Later Stone Age (last 10 000 years). Human remains have also been found in the dunes along the coast.

The majority of archaeological sites found in the area date from the past 10 000 years (called the Later Stone Age) and are associated with the campsites of San hunter-gatherers and Khoi pastoralists. These sites are difficult to find because they are in the open veld and often covered by vegetation and sand. Sometimes these sites are only represented by a few stone tools and fragments of bone. The preservation of

these sites is poor and it is not always possible to date them Africa (Deacon & Deacon 1999). There are many San hunter-gatherers sites in the nearby Elandsberg and Groot Winterhoekberg Mountains. Here caves and rock shelters were occupied by the San during the Later Stone Age and contain paintings along the walls. The last San/KhoiSan group was killed by Commandos in the Groendal area in the 1880s.

The most common archaeological sites along the nearby coast are shell middens (relatively large piles of marine shell) found usually concentrated opposite rocky coasts, but also along sandy beaches (people refer to these as 'Strandloper middens') (Rudner 1968). These were campsites of San hunter-gatherers, Khoi herders and KhoiSan peoples who lived along the immediate coast (up to 5 km) and collected marine foods. Mixed with the shell are other food remains, cultural material and often human remains are found in the middens. In general, middens date from the past 6 000 years. Also associated with middens are large stone floors which were probably used as cooking platforms (Binneman 2001, 2005).

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Relevant archaeological impact assessments:

A few relevant archaeological impact assessments have been conducted within the Coega and the Coega Industrial Development Zone areas. These archaeological impact assessments are currently stored at the Department of Archaeology, Albany Museum, Grahamstown, Eastern Cape Province.

DESCRIPTION OF THE PROPERTY

Area surveyed

Location data

The proposed area for development is situated in an already developed and developing area about 20 km north of the Port Elizabeth city centre between the Swartkops and Coega River valleys. The area lies approximately 4.5 km north of the lower Swartkops estuary and about 9 km from the coast. The proposed area is bordered by the MR460/R334 Uitenhage-Addo road in the north and the new NU29 and NU30 residential developments in the east, and is situated directly adjacent to

the Motherwell Cerebos salt works. The area has in the past been highly disturbed by the construction of the Motherwell reservoir which is situated within the boundaries of the area proposed for the development. Informal housing/shacks have also been constructed around the reservoir area. Service gravel roads, informal footpaths, power lines and underground pipelines have also created disturbances in the past. The proposed area is currently being used as an informal dumping site by members of the local community.

Map

1:50 000 3325CD & DD & 3425BA Port Elizabeth (Map 1)

ARCHAEOLOGICAL INVESTIGATION

Methodology

The survey was conducted by two people on foot following the already existing service gravel roads and informal footpaths within the area. GPS readings were taken using a Garmin Plus II. The GPS readings have been plotted on Map 3.

Most of the area is covered by dense bush and tree vegetation making especially the northern-most reaches of the proposed area impenetrable, although some informal footpaths do occur within the dense bush areas, these were followed during the survey. The southern extent of the proposed area is relatively open with a slightly sloping down gradient. This area consists of a more open veld landscape making archaeological visibility good (Figs 1-4). There are several service gravel roads that extend from the R334 as well as Sowangube Street and the adjacent township into the proposed area, these were followed during the survey.



Figs 1-2. Dense bush vegetation towards the northern-most extent of the proposed area.



Figs 3-4. Open veld landscape in the southern extent of the proposed area. Power lines are visible in the background stretching across the area (right).

The Motherwell reservoir is situated almost in the centre of the proposed area. A few informal dwellings, water tanks and buildings occur to the west and north-west of the reservoir. Power lines have also been implemented around the reservoir and stretch across the proposed area to the adjacent NU 29 and NU 30 townships in the east. Underground pipelines are situated within the proposed area and are most probably associated with the reservoir activities and indicated by inspection holes above the ground. Other disturbances associated with the reservoir activities include the construction of overflow channels that surround the reservoir. The proposed area has in the past and is currently being as an informal dumping site with dumping areas scattered across the whole area. Bulldozed areas occur immediately adjacent to the R344 and may previously have been dams when the proposed area was still a working farm (Figs 5-8)





Figs 5-6. Disturbed areas within proposed area. Informal dwellings and building to the east of the reservoir (left). A bulldozed area which may previously have been a dam.





Figs 7-8. Informal dumping areas occurring over the whole of the proposed area.

Middle Stone Age (MSA) stone tool artefacts which include flakes and blades identified by the characteristic facetted platform prepared core technique, and cores, occur sporadically over most of the proposed area. However, it is highly unlikely that much of the stone tool occurrences would be *in situ* owing to the disturbances of the area in the past and presently. MSA stone tools occur around the reservoir area marked GPS1 (33°46′52.2″S; 25°33′36.18″E), GPS2 (33°46′46.50″S; 25°33′40.02″E) and GPS3 (33°46′42.96″S; 25°33′34.02″E). The stone tool artefacts occurred within and next to the service road in secondary context owing to the disturbances caused by the construction of the reservoir and the making of the service roads. The stone tools consisted mainly of flakes, flakes with cortex and cores (e.g. radial cores) made from medium-grained quartzite raw material (Figs 9-10).





Figs 9-10. Examples of MSA stone tools around the reservoir area

Occasional MSA stone tools are a common occurrence in and parallel to the road between the areas marked, GPS3, GPS4 (33°46′38.34″S: 25°.33′30.24″E),GPS5 (33°46′31.86″S; 25°33′30.06″E), GPS6 (33°46′30.90″S; 25°33'21.84E) and GPS7 (33°46'20.34"S; 25°33'27.72"E), extending east into the more dense vegetation in the northern-most area of the proposed area. The stone tool scatters consist mainly of those previously mentioned, flakes, blades (with the characteristic facetted platform prepared core technique) and cores made on the medium-grain quartzite raw material. These scatters are also in secondary context owing to disturbances caused by the bulldozing activities for the construction of the service road and the area still being used as a dumping area. Gravels have also been added to the making of the service road which may sometimes be mistakenly identified at stone tools (Figs 11-12).

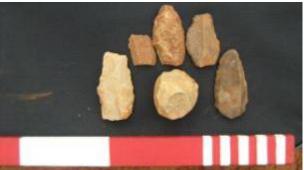




Figs 11-12. Examples of MSA stone tools occurring between the areas marked GPS3 and GPS7.

Surface scatters of MSA stone tools also occur in the areas marked GPS8 (33°46′26.64″S; 25°33′21.84″E), GPS9 (33°46′24.54″S; 25°33′20.46E), GPS10 (33°46′27.54″S; 25°33′19.86″E), GPS11 (33°46′30.78″S; 23°33′8.40″E) and GPS13 (33°46′38.44″S; 25°33′12.30″E). The stone tool scatters have mainly been exposed within the service although stone tools also occur in the veld on either side of the road. The surface scatters consist mainly of flakes and blades with facetted platforms and cores made with a medium-grained quartzite raw material (Figs 13-14). Occasional MSA stone artefacts were also documented around the areas marked GPS14 (33°46′47.00″S; 25°33′15.92″E), GPS15 (33°46′51.04″S; 25°33′15.92″E) and GPS16 (33°46′53.47S; 25°.33′12.32″E).





Figs 13-14. Extent of exposed MSA stone tool scatter exposed in service road (left). Examples of MSA stone tools exposed in service road (right).

The open veld, southern extent of the proposed area also contains occasional surface occurrences of MSA stone tools, similarly, comprised mainly of flakes and blades with the characteristic faceted platform prepared core technique made with medium-grained quartzite raw material. The stone tools occur mainly around the upper slope areas marked GPS19 (33°47′01.13″S; 25°33′53.08″E), GPS20 (33°46′58.14″S; 25°33′45.30″E) and GPS21 (33°46′55.38″S; 25°33′53.22″E) and are probably in secondary context having been washed down the slope in the past (Figs 15-16). Further down the slope around the areas marked GPS17 (33°46′58.14″S; 25°33′45.30″E) and GPS18 (33°46′36.06″S; 25°33′46.38″E) the stone tool surface scatters tend to filter out. No stone tools were documented within the areas marked GPS17 and GPS18.





Figs 15-16. Examples of MSA stone tools occurring within the open veld southerly extent of the proposed area.

The area surrounding GPS22 (33°46′36.06″S; 25°33′46.38″E) consists of dense bush, a newly bulldozed gravel road was followed to a dead end, no stone tools or other archaeological materials were observed in this area. Similarly the area between GPS22 and GPS23 (33°46′21.80″S; 25°33′47.59″E) is comprised mainly of dense bush making the area completely impenetrable.

The proposed area for the development of the Motherwell NU 31 housing development has in the past been heavily disturbed by the construction of the reservoir and the informal dwellings and buildings surrounding the reservoir, the building of the service roads, the making of informal footpaths, as well as the continuous use of the area as an informal dumping area and previous use of the area as a working farm by the construction of a possible dam. Occasional stone tool artefacts, mainly from the Middle Stone Age period (250 000-30 000 years ago), occur over most of the proposed area; however, it is highly unlikely that they are in

primary context owing to the disturbances mentioned above. Therefore, despite the occurrence of stone tool artefacts over the proposed area, they have mainly been found in a secondary context e.g. in service roads and around the reservoir, and no other archaeological materials have been observed in association with the stone tool artefact occurrences, nor has any depth of possible archaeological deposit.

Survey/Description of sites

Predominantly Middle Stone Age (MSA) stone tools were documented within the proposed area for development, however, it is unlikely that the artefacts are *in situ* and occur in secondary context owing to the previous and present disturbances occurring with the area. In addition, no other archaeological materials were observed to be in association with stone tool surface scatters and no depth of archaeological deposit recorded.

RECOMMENDATIONS

The area is of a low cultural sensitivity and development may proceed as planned, although the following recommendations must be considered:

- 1. The area has been highly disturbed in past and currently, therefore, it is unlikely that any *in situ* archaeological sites/remains, and human remains would be uncovered during construction. However, if concentrations of archaeological heritage material and human remains are uncovered during construction, all work must cease immediately and be reported to the Albany Museum (046 622 2312) and/or the South African Heritage Resources Agency (SAHRA) (021 642 4502) so that systematic and professional investigation/excavation can be undertaken.
- 2. Construction managers/foremen should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.

GENERAL REMARKS AND CONDITIONS

Note: This report is a phase 1 archaeological heritage impact assessment/investigation only and does not include or exempt other required heritage impact assessments (see below).

The National Heritage Resources Act (Act No. 25 of 1999, section 35) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources, that is, all places or objects of aesthetics, architectural, historic, scientific, social, spiritual linguistic or technological value or significance are protected. Thus any assessment should make provision for the protection of all these heritage components, including archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

It must be emphasized that the conclusions and recommendations expressed in this archaeological heritage sensitivity investigation are based on the visibility of archaeological sites/features and may not therefore, reflect the true state of affairs. Many sites/features may be covered by soil and vegetation and will only be located once this has been removed. In the event of such finds being uncovered, (such as during any phase of construction work), archaeologists must be informed immediately so that they can investigate the importance of the sites and excavate or collect material before it is destroyed. The onus is on the developer to ensure that this agreement is honoured in accordance with the National Heritage Act No. 25 of 1999.

It must also be clear that Archaeological Specialist Reports (AIAs) will be assessed by the relevant heritage resources authority. The final decision rests with the heritage resources authority, which may grant a permit or a formal letter of permission for the destruction of any cultural sites.

APPENDIX A: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM INLAND AREAS: guidelines and procedures for developers

1. Human Skeletal material

Human remains, whether the complete remains of an individual buried during the past, or scattered human remains resulting from disturbance of the grave, should be reported. In general the remains are buried in a flexed position on their sides, but are also found buried in a sitting position with a flat stone capping and developers are requested to be on the alert for this.

2. Freshwater mussel middens

Freshwater mussels are found in the muddy banks of rivers and streams and were collected by people in the past as a food resource. Freshwater mussel shell middens are accumulations of mussel shell and are usually found close to rivers and streams. These shell middens frequently contain stone tools, pottery, bone, and occasionally human remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m² in extent, should be reported to an archaeologist.

3. Stone artefacts

These are difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately and archaeologists notified

4. Fossil bone

Fossil bones may be found embedded in geological deposits. Any concentrations of bones, whether fossilized or not, should be reported.

5. Large stone features

They come in different forms and sizes, but are easy to identify. The most common are roughly circular stone walls (mostly collapsed) and may represent stock enclosures, remains of wind breaks or cooking shelters. Others consist of large piles of stones of different sizes and heights and are known as *isisivane*. They are usually near river and mountain crossings. Their purpose and meaning is not fully understood, however, some are thought to represent burial cairns while others may have symbolic value.

6. Historical artefacts or features

These are easy to identified and include foundations of buildings or other construction features and items from domestic and military activities.

Map 1. 1:50 000 map indicating proposed are for the Motherwell NU31 housing development. (Insert map courtesy of Arcus GIBB) $\,$



Map 2. Aerial views of the proposed area for the Motherwell NU 31 housing development



Map. 3. Close-up aerial view of the proposed area for housing development with plotted GPS co-ordinates.