

# **Analysis of Skeletal Material**

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Farm Dwars River 372 KT  
Richmond Road Project

**Permit number:** 80/08/08/021/51

**Hester Roodt**

For: Vhufa Hashu Heritage Consultants

2009

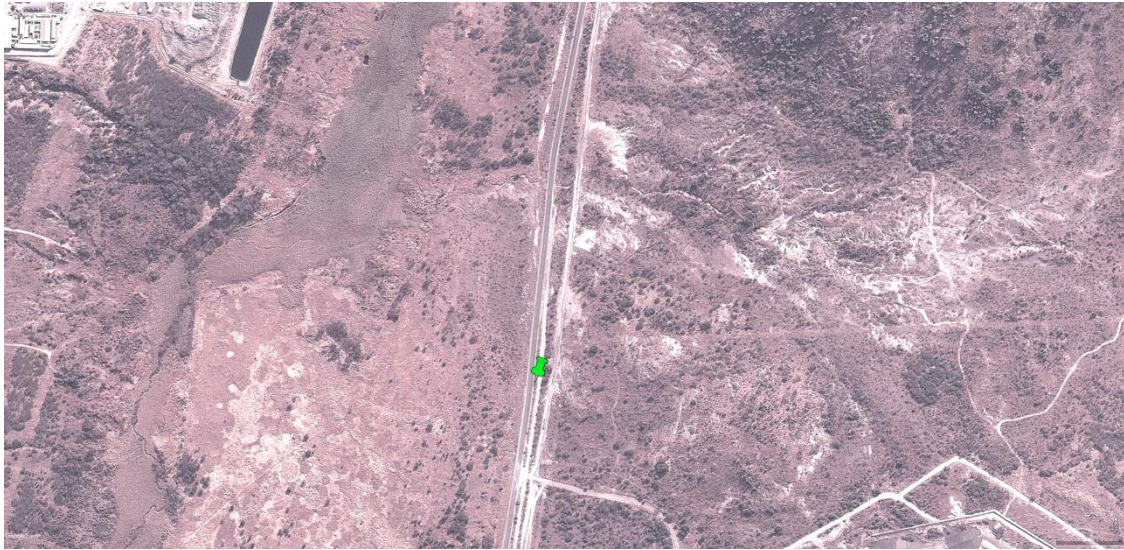
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## INTRODUCTION

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**Figure 1.** The insert shows the burial locality within the larger area. The burial is marked with a green pin, and is right next to the existing road. The context of the burials, i.e the associated Eiland pottery and the ashy deposit, clearly separates these graves from historical and recent graves.

**Location:** Farm Dwars River 372 KT at co-ordinates S24° 56' 31.8" E30° 06' 00.0".

**Permit number:** 80/08/08/021/51

**Date issued:** September 23, 2008

On July 1, 2008 human remains were exposed during construction of the new Richmond road where a new mine is being developed by Anglo Platinum. The archaeologists, who were immediately sent to investigate the discovery, could confirm that the remains were of an archaeological nature. Community members who were present, as well as the SAPS, agreed that they probably had no claim on the remains. The exposed remains were recovered and left in the care of the Security Division of Hillary Construction.



**Figure 2.** The excavation of the new Richmond road by the construction team, right next to the existing road. The skeletal remains were dislodged by the mechanical equipment.





**Figure 3.** *The damage done to the burials. Several skeletal parts are visible (the blue surgical gloves were placed there to make the remains, which are the same colour as the soil, more visible), scattered throughout the excavation. It is this loose soil which was screened by the archaeological team in search of more skeletal material.*



**Figure 4.** *The complete skull which was also recovered. The destruction of the graves are apparent from the above photographs: none of the material was found in situ; at that early stage it was not even clear that there were actually two graves involved.*

Verbal permission to recover the rest of the skeletal remains was obtained on July 10, 2008, from the Manager, Mrs Mary Leslie of the SAHRA Archaeological and Palaeontological Unit. The archaeological team screened the earth dumps and loose soil in the area which contained more skeletal remains. These were again left in the care of Hillary Security.

Once a written permit was obtained from SAHRA for the archaeologist, Mr F Roodt (ID: 5404245035083), to have the skeletal material analysed and reinterred in a grave yard developed by the Two Rivers Mine, all the remains were transported to Polokwane. Arrangements for reburial will be made with the GaMawela Community or persons who feel that, by tradition, they should have an input into these arrangements.

## METHODS OF SKELETAL IDENTIFICATION / ANALYSIS

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Human remains and burials are protected by law (*See Attachment 1: National Heritage Resources Act No 25 of 1999, Article 36*). Whenever human remains are discovered, it is essential and critical to have the material identified. The study of skeletal material serves various scientific purposes, for, amongst others, it forms the basis of racial classification in prehistoric times and provide the means of biological comparison of prehistoric peoples with those living at present, burial patterns provide evidence of culture and the world view, and identification can also assist in solving forensic cases. Useful information regarding bone disease and/or trauma may reveal cause of death; growth and maturation is of major importance for it relates to the time and sequence of age changes and their relation to sex and race differences (Bass 1987; Krogman & İşcan 1986).

All skeletal material was accordingly procured and documented using standard archaeological and anthropological techniques following Buikstra and Ubelaker (1994) on standard documentation forms for skeletal remains (*See Appendix 2*).

Assessment of **racial phenotype**<sup>1</sup> and affiliation is important since maturation is influenced by *inter alia* racial and environmental factors. Race is also deduced from the archaeological context and cultural remains found on the site.

**Gender** determination is necessary since male and female individuals mature at different rates. In an archaeological context it provides important information about the deceased's status in life and cultural practices within the particular society. In forensic cases it assists in the identification of victims. For this purpose the skull and pelvis are very important (Buikstra & Ubelaker 1994).

The estimation of **age-at-death** is crucial in forensic, archaeological and demographic studies. It is determined by assessing the maturation stage of the various bones, for example cranial sutural closure, dental eruption and attrition, epiphyseal ossification of the long bones, the auricular surface of the os coxae and the pubic symphysis (İşcan 1989).

The **dating of the material** is important to order prehistorical cultures, as found on archaeological sites, in a chronological sequence. All artefacts, be it a complete site or a single object, occur within a matrix and have a specific provenience in time and space. Provenience in space is based on associations between tools and other items that were the results of human behaviour in a specific culture. It is determined by association and superposition. The time dimension is represented by superpositioning; the artifacts, features, etc. found in the lowermost levels was deposited there before the upper horizons were accumulated.

The timely intervention by archaeologists at a site where a human burial and/or cultural remains were discovered is thus of the utmost importance for scientific inquiry. Once mechanical removal of soil is implemented, provenience and cultural practices within the particular society is destroyed. If the skeletal material is compromised, it becomes difficult and often impossible to ascertain race, gender, and age-at-death. All results are correlated, thus, with less material available and accuracy of the analysis automatically suffers.

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<sup>1</sup> As opposed to the term "ethnicity", which refers to nationality, religion, etc., "phenotype" describes what forensic anthropologists determine when they examine skeletal remains (İşcan, Loth & Steyn 2000).

## SKELETAL ANALYSIS

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During the cleaning process of the skeletal material, it became clear that it comprised of two incomplete individuals. Usually, in a case such as this, the skeletal material is analysed as “co-mingled”. It was, however, possible to distinguish between the two individuals on the basis of the weight and length of the bones. The epiphyses of the long bones fit well together; the proximal epiphyses of the femora fit into the acetabulae of the os coxae. Based on completeness of the skeletal material (as opposed to the highly fragmented material assigned to Skeleton 02), it was initially assumed that the complete cranium is part of the same individual. During the assessment of age-related changes, this initial assumption was confirmed, since the second individual is younger than the first, as witnessed by the cranial sutural closure: the epiphyseal union of the long bones correlate better with the complete cranium than with the fragmented parietals assigned to the second individual. Attrition also confirms that this first individual was older than the second at the time of death.

## SKELETON 01

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The first of the two partial skeletons discovered is the most complete, with the cranium (skull and mandible), both humeri, radii and ulnae, os coxae, femora, tibiae and fibulae present, although some was damaged during excavation. Some hand and foot bones were also recovered. None of the vertebrae or ribs was retrieved.



**Figure 5.** From the image above it is clear that all the skeletal material present are those of a single individual. Each bone was measured and compared against its counterpart; relative weight, colour and epiphyseal fit and closure were taken into consideration as well as preservation. The fragmentation occurred post-mortem during road construction and the mechanical excavation of the remains.

## CRANIAL MORPHOLOGY

The most important information procured from a cranium is identification about race, gender and age-at-death. The cranial suture closure pattern and its relation to age have been investigated for nearly a century. In spite of the considerable attention paid to this technique, variation is so enormous that it is practically abandoned as an age marker. However, suture closure can be used as an age marker in conjunction with other age indicators, assisting in establishing the age-at-death (Buikstra & Ubelaker 1997).

### ***Racial and Cultural Affinity***

Race is usually determined by the differences in skull vault shape, relative projection of the jaws (prognathism), shape of the nose and relative position of the cheek bones.

In a lateral view (*Figs 6, 9 & 10*) the prognathism typical of the Negroid phenotype is clear, as well as the less prominent (than found in Caucasoids) chin. The nasal depression at the nasion is shallow and the forehead is rounded (Bass 1987). The Negroid characteristics are also evident in the anterior view (*Fig 8*): the nasal aperture is wide; the nasal sills are guttered; and the interorbital distance is wide. The rounded forehead is also obvious in this view; and the orbits are rectangular (Bass 1987; İşcan, Loth & Steyn 2000).

In *Figs 9 and 10* the ramus of the mandible is clearly seen: it is robust and rectangular, as opposed to the Caucasian mandible which is tall, thin and gracile (Loth & İşcan 2000). The cranial index is 68.51, which is classified as being dolichocranic (narrow or long headed), a characteristic of the Negroid phenotype. The low cranial index is compliant with an individual from Eastern Africa (Steyn 1993).

Important is the archaeological provenience which usually provides a reliable indication of at least the broad racial background. Unfortunately the construction activities had disturbed the chronological layering of the archaeological deposits, which prevent the assignment of the skeletal material to a specific time frame or period. No radiocarbon analysis is possible, since both the skeletal material and soil was handled by various people since its discovery and exposure resulting in contamination with recent radio carbon. The chronological age of the skeletal material thus could only be relatively dated due to its association with the related cultural material.

The pottery sherds identified in the immediate surrounding area comprises the Eiland type, dated to around AD 1000 – 1300 (Huffman 2007). The presence of this pottery thus confirms the prehistorical origin of the skeletal material and disproves a modern or contemporary origin for the human remains. Since this date precedes the arrival of the Caucasoid peoples in Southern Africa by at least 300 years, the date ascribed to the associated Eiland pottery also confirms the Negroid ancestry of the individual.

### ***Gender determination***

Following Buikstra and Ubelaker (1997) five sexually dimorphic features on the cranium are recorded: these are the nuchal crest, the mastoid processes, the supra-orbital margin, the glabella and the mental eminence. On a five-point scale, the more gracile, feminine features are at the lower end.

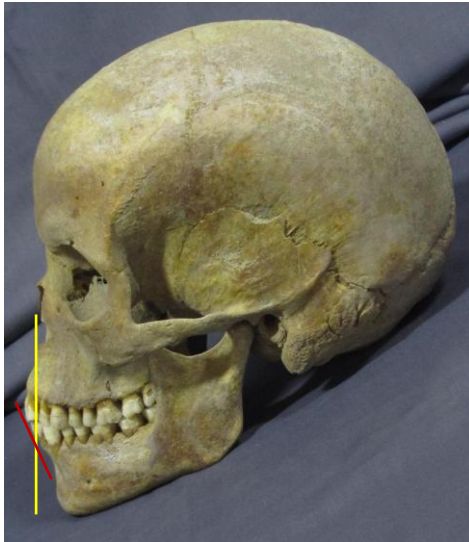
Together these features obtained a score of 3, which means that the sexually diagnostic features are ambiguous. However, some features express strong male characteristics, such as the rectangular orbits with rounded margins (*Fig 8*), the large mastoid processes (*Figs 9 & 10*) (Loth & İşcan 2000), and the posterior ramus of the mandible which is flexed at the occlusal surface of the molars.

### ***Age estimation***

There are 10 locations on the ectocranial sutures, four palatal and three endocranial to be recorded in a complete skull. Cranial sutures fuse with increasing age, and although there is considerable variability in closure rates, these criteria are useful when no other criteria are available for age estimation. It is, however, valuable in corroborating age criteria in other parts of the skeleton (Buikstra & Ubelaker 1997).

The ectocranial sutures are clearly visible in *Figures 7* (posterior view), *9 and 10* (lateral views) and *11* (superior view). The summing scores presented a chronological age for a young adult, i.e between 20-35 years old at the time of death.





**Figure 6.** The cranium is aligned in the Frankfort horizontal position. In this lateral view the alveolar prognathism typical of the Negroid is clear, indicated by the red line. The yellow line indicates the flat (orthognathous) line more typical of a Caucasian.



**Figure 7 (above).** A posterior view of the skull. The rugged occipital protuberance is a male characteristic.

**Figure 8 (Left).** The anterior view. Negroid characteristics are evident in the view: the nasal aperture is wide; the nasal sills are guttered; and the interorbital distance is wide. The rounded forehead is obvious. The orbits are also rectangular (İşcan, Loth & Steyn 2000).



**Figure 9.** The right lateral view.



**Figure 10.** The left lateral view.



**Figure 11.** The superior view. The long, narrow (dolichocranic) cranium is typical of the Negroid (İşcan, Loth & Steyn 2000).



**Figure 12.** The basilar view.

## DENTAL ANALYSIS

The dentition of an individual reflects age-at-death, diet, and health. Patterns of dental wear and disease are the result of food properties such as nutritional value and its physical attributes. Decay (or caries) indicates the relative amount of sugar or carbohydrates in the diet. Dental caries are among the most common and the most informative dental pathologies observed in archaeological samples. Coarser diets facilitate natural cleaning and thus lower caries rates. With age and periodontal disease, inter-proximal, cervical and root caries become more common. Abscesses indicate inflammation due to excessive attrition or dental caries. Health status and diet quality (systemic stressors such as malnutrition and infectious disease) is reflected in the abnormal production of enamel during dental development (Buikstra & Ubelaker 1994).

### **Age estimation in the dentition**

The permanent dentition of both the maxilla and mandible is complete and in occlusion. The full eruption of all third molars are complete, a process which is usually completed around the age of at least 23 years. However, they present some wear, which means that the individual must be older than 23 years. The first molars ( $M^1$  and  $M_1$ ) and incisors, the first permanent teeth to erupt, show significant wear, while the canines and premolars – which erupt around the age of 10 to 12 also show wear. The attrition on the incisors, in particular  $I^1$  in the left maxilla, has reached the pulp. This is due to a tight overbite. Clearly seen in Fig 13 is the unique wear of the left maxillary incisors ( $I^1$  &  $I^2$ ) and the second incisor ( $I_2$ ) and canine (C) in the mandible: this pattern is usually an indication of habitual wear, e.g pipe smoking or use as a tool.

Since factors such as differences in attrition rate among various populations and the wear of dentition within a population varies - due to individual differences in diet and tooth structure – and the attrition of a particular population is unknown, the accuracy of determining age is very limited (Bass 1987). This method can, however, corroborate evidence from elsewhere in the skeleton.

Brothwell<sup>2</sup> based his age classification on wear patterns on pre-medieval British teeth, in particular the molars. His classification is only used in this instance to assist in

<sup>2</sup> Bass 1987, 287

obtaining an approximate estimate of age and serves to corroborate information from elsewhere in the skeleton. According to this classification, the age-at-death was between 25 and 35 years.

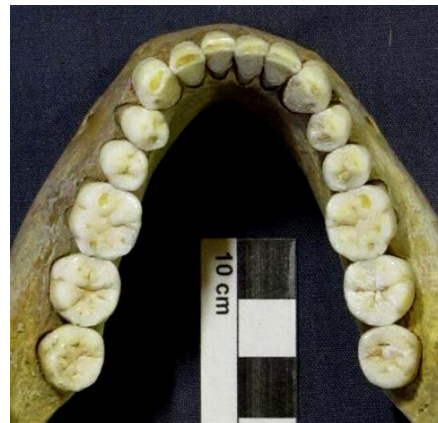
A single carious lesion occurs on the third maxillary molar ( $M^3$ ), the rest of the dentition being smooth, clean and strong. Dental calculus affects most of the dentition – lingually as well as labially/buccally - and ranges from small to moderate amounts. No abscesses, indicative of pulp chamber inflammation following excessive attrition or dental caries or trauma (Buikstra & Ubelaker 1994), are present.



**Figure 13.** The anterior view of the dentition. Almost all the teeth present with calculus. Also clearly seen in the above image is the attrition of the four maxillary incisors, with some attrition on the mandibular incisors and canines. Calculus is present on virtually all the dentition.



**Figure 14.** The occlusal view of the maxillary dentition. The exposed pulp in the left first incisor shows darker in colour.



**Figure 15.** The occlusal view of the mandibular dentition. The wear on the dentition of the left side of the mandible, which is mirrored in the maxilla (Fig 14), is more severe than that on the right side.



**Figure 16.** The cusps on the molars are rounded rather than being clearly defined; even the third molar shows some obliteration. The left 3<sup>rd</sup> maxillary molar ( $M^3$ ) is the only carious tooth in the mouth. Also clear is the calculus formation on the dentition.

## POSTCRANIAL BONES

*“Accurate age and sex estimates in human skeletal remains are basic to studies of past adaptations and demographic histories. Age and gender-based differences in diet, disease, activity patterns, and mortuary practices are all accessible through investigations of human skeletal materials. Skeletal studies can also provide temporal perspectives on human demography that are available from no other source”.*

Buikstra and Ubelaker (1994)

Several techniques had been developed for these estimates, and the standards which are applied have great value in age and gender assessment in particular for archaeologically recovered materials. Many other techniques exist but are only applicable to well preserved skeletal material (Buikstra & Ubelaker 1994).

### **Gender Determination**

Except for obvious morphological differences between male and female skeletal material in size and general shape, the pelvic bones (os coxae) provides the strongest evidence for gender determination due to growth changes during adolescence resulting in differences in male and female os coxae (Buikstra & Ubelaker 1994).

Various attributes such as those in the subpubic region, the form of the greater sciatic notch, the presence/absence of a preauricular sulcus differentiates between male and female skeletal material. Each attribute is individually recorded and scored according to its expression. It is thus clear from the above that, the more complete a skeleton is, the more secure the analysis is.

Due to the damage suffered in the pubic region, five of the seven indicators could not be recorded. The greater sciatic notch with a score of “3” falls in the middle range, and is ambiguous (“1” being broad and characteristic of a female; “5” is narrow and is male). It is, however, not a reliable indicator of gender, since osteomalacia in females may narrow this feature. The absence of a preauricular sulcus – more commonly appearing in females than males – is in this case the only positive postcranial evidence for the individual being a male.

### **Age Estimation**

Bone formation and growth is used as an age indicator in the skeleton. The formation of bone tissue – ossification – proceeds in a systematic and organized manner. Development normally follows a well-known sequence and timing of events culminating in the development of the diaphyses and epiphyses. Fusion proceeds in a set order throughout the skeleton until growth is complete between the late teens and early 20's, with males still being active at the older ages. Metamorphosis of the pubic symphysis and acetabulum and degree of arthritic degeneration are other important markers for determining age (Buikstra & Ubelaker 1994).

Unfortunately the pubic bone has been destroyed during the mechanical excavation which unearthed the burial. This part of the os coxa provides valuable information regarding gender, age and parturition.

According to the standards developed by Lovejoy et al (1985, 1989) eight phases were assigned to the age-related changes on the auricular surface (Buikstra & Ubelaker 1997). The changes which occurred in Skeleton 02 range between Phases 3 and 4 (30 - 40 years).



The lower lateral part of the os coxa, the ischial tuberosity, usually the last bone to ossify at approximately the age of 25, has completed ossification. This provides a minimum age for the individual.

No other age related changes were observed.

## HEALTH STATUS

No pathological conditions such as arthritis, bone remodelling, fractures, abnormal shapes or bone loss were noted in the skeletal material.

## STATURE

An individual's stature is the result of both genetics and environmental factors (e.g. nutrition). (Sjøvold 2000). Although this interrelationship is not quite fully understood, it is not only important in forensic cases, but also for studies in growth, demography, nutrition and dietary customs in prehistoric populations (Steyn 1993).

An adaptation of Lundy and Felderman's table for South African Black Males (1987) of least squares regression equations were used for stature estimation (Sjøvold 2000). Due to the incomplete skeleton, the humerus, radius, ulna and femur was used separately to estimate stature. A length between 157.34 and 164.58cm was equated.

## SKELETON 02

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Very little of the second individual's skeletal material was recovered during the screening process: two fragmented parietals, one right maxillary molar ( $M^3$ ), the right half of the mandible, the left humerus (with no epiphyses present), and the distal part of the left tibia. The rest of the skeletal material had been removed by means of the mechanical excavator used in the road construction and were never recovered.



**Figure 17.** The few bones collected for the second burial: two fragmentary parietals, one maxillary molar ( $M^3$ ), the right half of the mandible, the left humerus (with no epiphyses present), and the distal part of the left tibia.

## CRANIAL MORPHOLOGY

### ***Racial and Cultural Affinity***

No distinctive racial characteristics are present on the few fragmentary cranial bones. However, due to its proximity to the first burial (Skeleton 01) this individual is thus associated with it. Bone weight and colour are also similar, which could be proof that they were buried for the same length of time. Similarity in bone weight can also be an indicator of comparable age.



### **Gender determination**

None of the important markers on the skull, necessary for gender determination, had survived. Even the posterior ramus of the mandible is too fragmented for this purpose. It is possible though, that the chin and (partial) mental eminence, together with the height of the mandibular body could be an expression of a male individual.

### **Age estimation**

An attempt at age estimation is only tentative, since very few markers were preserved. The entire skull is necessary for this, but since no other markers are available on the postcranial skeleton which can corroborate age, it was decided to at least endeavour an estimate. The sagittal suture of the parietals are complete, while both the anterior and posterior parts of the parietals are complete at the point where they form the bregma of the coronal suture and the lambda of the lambdoid suture. All four available points which are used to record suture closure were either still open (stage "0") or approached minimal closure (stage "1"). According to sutural closure alone, the age of this individual could thus be roughly estimated at between 19 – 44 years at the time of death, which is a most unsatisfactory result. Since the internal cranial suture fusion also range between 0 and 1 (being fully fused in older adults according to Krogman and İşcan 1986), it is estimated that this individual was at least older than 23 years at the time of death.



**Figure 18.** The four markers for determining age on the sagittal suture. The absence of the occipital bone, forming the lambdoid suture, and the frontal bone, forming the coronal suture with the parietals, show that none of the bones were closed. This suggests a young individual.

### **DENTAL ANALYSIS**

All permanent dentition of the retrieved right mandible have erupted, with post-mortem loss of M<sub>3</sub> as well as the incisors, due to alveolar bone loss. The right maxillary molar (M<sup>3</sup>) has been recovered with no accompanying alveolar bone.

No carious lesions are present, the dentition being smooth, clean and strong. Small amounts of dental calculus appear on both lingual and labial sides. No abscesses are present.

### **Age estimation in the dentition**

Following Brothwell (Bass 1987) the wear on especially the first molar ( $M_1$ ) places the individual's age between 17 - 25 years, however, since all molars have been erupted at the time of death, the age difference could possibly be diminished by pushing the minimum age up to at least 22 years. According to Meindl & Lovejoy (1985), a composite score of S2 is obtained for tooth wear, which have an age range of 23-45 years. Since the root formation of  $M^3$  is complete, with the apices not yet closed, it is reasonable to estimate the age of the individual to have been in the lower part of the range, i.e the lower 20's at the time of death.



**Figure 19.** Right lateral view of the mandible.



**Figure 20.** Medial view of the right mandible.



**Figure 21.** An occlusal view of the mandible and dentition, with the right maxillary molar ( $M^3$ ) at top left. All dentition is involved in wear/attrition.

### **POSTCRANIAL BONES**

None of the postcranial bone markers for gender determination, age or parturition is present. The only long bone with its distal epiphysis intact and completely fused to the diaphysis is the left tibia. It only confirms the individual as being older than 18 years at the time of death.

All the bone present is normal with no abnormalities.

It is not possible to estimate stature.

### **DISCUSSION**

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The incomplete and fragmentary skeletal material complicated analysis and it is thus possible that some of the resultant inferences are undecided.

Due to its context within the archaeological site and its association with Eiland pottery, it has been concluded that the skeletal remains of both individuals are of Negroid origin

which dates from at least AD 1000 – 1300 years ago. The facial features of Skeleton 01 definitely display Negroid characteristics. Owing to the similarity in the two skeletons' colour and preservation as well as their burials in close proximity, it is fairly certain that they were buried within a short time of each other and could even be related.

No bone abnormalities were observed, which means that the individuals did not perish from any of the diseases which affect bone in any way.

The two individuals were close to each other in age, both estimated to be between 20 – 35 years at the time of death. Skeleton 01 seems to be the older of the two, possibly closer to 35 years, while the second burial is estimated to be in his early 20's.

## **CONCLUSION**

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The above analysis contains some descriptions of techniques and terminology used in the analysis of skeletal material, the aim being to impress upon the reader the importance and meaning of skeletal material in archaeological contexts and what one can learn from it.

The archaeological site from which these particular individuals originated had been largely destroyed. This inhibits the determination of a specific cultural affinity other than being Eiland (AD 1000 -1300). The great age though, of the skeletal material, prohibits any community or individual from claiming descent from these individuals.

The great shortcoming in this study is the unfortunate disturbance of the human skeletal remains and the archaeological site. With limited time allowance, the archaeological team was only able to screen the already disturbed soil for skeletal remains. The site could not be explored or recorded properly. Comparable skeletal material was limited since most of it is missing and/or very fragmented. Had the remains been retrieved in a planned and archaeologically scientific manner, more scientific analysis with secure results would have been possible. It could have opened a window into the past of a prehistorical community – their way of life, health and diseases caused by their environment, diet and way of life.

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Confirmed: March 28, 2014

**Date**

## ATTACHMENT

### National Heritage Resources Act (No 25 of 1999) - Burial grounds and graves

- 36. (1)** Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.
- (2)** SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.
- (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 or damage of any burial ground or grave referred to in subsection (3)(a) 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 (3)(b) 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.
- (7) (a)** SAHRA must, over a period of five years from the commencement of this Act, submit to the Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or *agents provocateur* and which, after a process of public consultation, it believes should be included among those protected under this section.
- (b)** The Minister must publish such lists as he or she approves in the *Gazette*.



- (8)** Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.
- (9)** SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may re-inter the remains of that person in a prominent place in the capital of the Republic.