

A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR THE PROPOSED WALMER GQEBERA HOUSING DEVELOPMENT ON A PORTION OF ERF 1948, WALMER, PORT ELIZABETH, NELSON MANDELA METROPOLITAN MUNICIPALITY, EASTERN CAPE PROVINCE.

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NOTE: The phase 1 archaeological impact assessment was conducted as a requirement of the National Heritage Resources Act 25 of 1999, Section 38 (1)(c)(i):

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as –

- (c) any development or other activity which will change the character of the site –
 - (i) exceeding 5000 m² in extent

This report follows the minimum standard guidelines required by the South African Heritage Resources Agency (SAHRA) and the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for compiling a Phase 1 Archaeological Impact Assessment (AIA).

1. EXECUTIVE SUMMARY

1.1. Purpose of the Study

The purpose of the study was to conduct a phase 1 archaeological impact assessment (AIA) for the proposed Walmer Gqebera housing development on a portion of Erf 1948, Walmer, Port Elizabeth, Nelson Mandela Metropolitan Municipality, Eastern Cape Province. The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological heritage material remains, sites and features; to establish the potential impact of the development; and to make recommendations to minimize possible damage to the archaeological heritage.

1.2. Brief Summary of Findings

The proposed area for the low cost housing development is situated within the 5 km archaeologically sensitive coastal zone. However, no archaeological heritage remains or expected shell midden sites were observed within the area for development. A few historical artefacts distributed across the proposed area were documented. These artefacts are associated with the Driftsands Historical Dump that extended from Happy Valley to Schoenmakerskop and includes the proposed development site, portion of Erf 1948.

1.3. Recommendations

The area is of a low pre-colonial archaeological cultural sensitivity, however, owing to the possibly untapped and unsorted historical artefacts on the Driftsands Historical Dump Site which increases the cultural significance to a medium – low cultural sensitivity. The

following recommendations must be considered and implemented in accordance with the various phases of the development activities:

1. The local historian from Bayworld Museum (Mr Emile Badenhorst) should be consulted to evaluate the material which is being uncovered if a large cache of the **late 1800's and early 1900's historical material from the Driftsands Historical Dump Site** is uncovered during the vegetation and excavation phases. It is possible that artefacts may be identified that **are not represented in Bayworld's existing collection**. If required to assist with the collection permit, to be determined by the Eastern Cape Provincial Heritage Resources Agency (ECPHRA), a professional archaeologist must be appointed to accompany the historian.
2. The developer must apply to the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for a destruction permit for the development area of the portion of Erf 1948 situated within the Driftsands Historical Dump Site. One permit may cover the extent of the development boundary.
3. If concentrations of historical and pre-colonial archaeological heritage material and/or human remains are uncovered during construction, all work must cease immediately and be reported to the Albany Museum and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) so that systematic and professional investigation/excavation can be undertaken. A professional archaeologist should then be appointed to monitor the remaining vegetation clearing activities/excavation of the surface layer in the case that pre-colonial shell middens may become exposed. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.
4. Construction managers/foremen and/or the Environmental Control Officer (ECO) 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.

2. BACKGROUND INFORMATION

Nelson Mandela Bay Municipality (NMBM) has appointed SRK Consulting to conduct an Environmental Impact Assessment (EIA) process for the proposed development of low-cost housing on Erf 11305, Walmer, as well as a Basic Assessment (BA) for the associated transitional and permanent low-cost housing on a 64.2 ha portion of Erf 1948, and connections to services infrastructure to the area. This phase 1 archaeological impact assessment (AIA) focuses on the proposed housing development to be situated on a portion of Erf 1948, Walmer, a separate report (Phase 1 AIA) will discuss the

assessment conducted for the development of low-cost housing to be situated on Erf 11305.

The Phase 1 Archaeological Impact Assessment (AIA) which has been prepared as part of the Basic Assessment (BA) process for the proposed project in accordance with the National Heritage Resources Act 25 of 1999, and guidelines by the South African Heritage Resources Agency (SAHRA), and the Eastern Cape Heritage Resources Agency (ECPHRA).

2.1. Developer:

Nelson Mandela Bay Municipality (NMBM)

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2.3. Terms of reference

The original proposal was to conduct a phase 1 archaeological impact assessment (AIA) for the proposed Walmer Gqebera housing development on a portion of Erf 1948, Schoenmakerskop, Port Elizabeth, Nelson Mandela Metropolitan Municipality, Eastern Cape Province. The Terms of Reference (ToR) are as follows:

- Conduct a literature review of known archaeological resources within the area with a view to determining which of these resources are likely to occur within the development footprint;
- Comment on potential impacts on these resources resulting from the development;
- Make recommendations regarding the mitigation of any damage to archaeological resources identified, or that may be identified during the construction phase.

3. BRIEF HERITAGE LEGISLATIVE REQUIREMENTS

Parts of sections 3(1)(2)(3), 34(1), 35(4), 36(3) and 38(1)(8) of the National Heritage Resources Act 25 of 1999 apply:

S3. National estate

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.

3. (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 and 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 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 (Act No. 43 of 1996).

3. (3) Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of the national estate if it has cultural significance or other special value because of –

(a) **its importance in the community, or pattern of South Africa’s history;**

(b) its possession of **uncommon , rare or endangered aspects of South Africa’s natural or cultural heritage;**

(c) its potential to yield information that will contribute to an understanding of **South Africa’s natural or cultural heritage;**

(d) its importance in demonstrating the principal characteristics of a particular class of **South Africa’s natural or cultural places or objects;**

(e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;

(f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;

(g) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and

(i) sites of significance relating to the history of slavery in South Africa.

S34. Structures

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.

S35. Archaeology, palaeontology and meteorites

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.

S36. Burial grounds and graves

36. (3) (a) 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.

S38. Heritage resources management

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, power line, 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 the site –
 - (i) exceeding 5000 m² 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 10 000 m² 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.

4. BRIEF ARCHAEOLOGICAL BACKGROUND

Little systematic archaeological research has been conducted within the immediate area of the proposed development. However, several relevant archaeological and heritage impact assessments have been conducted within the immediate surrounding vicinity and along the wider coastal region between Kings Beach and Van Stadens River (Binneman 2008, 2009, 2010, 2011, 2012; Binneman & Booth 2010; Booth, 2013; Webley 2005, 2007). These impact assessments have identified several Early, Middle, and Later Stone Age stone artefacts and sites distributed along the coastline as well as evidence of Khoekhoen pastoralist occupation and/or interaction by the presence of broken earthenware pot sherds. Archaeological sites in the form of shell middens and scatters have also been reported along this coastline and within the 5 km archaeologically sensitive coastal zone.

Historical research on Schoenmakerskop and the Driftsands points out that the area became a dump site during the late 1800's to stabilise the shifting dune sands. People began settling behind the dune sands from the latter part of the 1800's. Three previous heritage impact assessments have identified the scatter of historical artefacts that is associated with the distribution of the Driftsands Historical Dump Site towards the village of Schoenmakerskop below the World War II fortified observation post, about 4 km south west of the proposed site proposed housing development as well as along the Sardinia Bay Road.

4.1. Early Stone Age (ESA) - 1.5 million to 250 000 years ago

The oldest evidence of the early inhabitants are large stone tools, called hand axes and cleavers, which may be found amongst river gravels such as the Swartkops River and in old spring deposits within the region. These large stone tools are from a time period called the Earlier Stone Age (ESA) and may date between 1, 4 million and 250 000 years old. Large numbers of Early Stone Age stone tools were found at a research excavation at Amanzi Springs, some 10 kilometres north-east of Uitenhage (Deacon 1970). In a series of spring deposits a large number of stone tools were found *in situ* to a depth of 3-4 meters. Wood and seed material preserved remarkably very well within the spring deposits, and possibly date to between 800 000 to 250 000 years old.

Early Stone Age stone artefacts have been documented near Theescombe in the underlying calcrete layers (Binneman 2010).

4.2. Middle Stone Age (MSA) – 250 000 – 30 000 years ago

The large hand axes and cleavers were replaced by smaller stone tools called the Middle Stone Age (MSA) flake and blade industries. Evidence of Middle Stone Age sites occur throughout the region and date between 250 000 and 30 000 years old. Fossil bone may in rare cases be associated with Middle Stone Age occurrences (Gess 1969). These stone artefacts, like the Earlier Stone Age hand axes are usually observed in secondary context with no other associated archaeological material.

Middle Stone Age stone artefacts have been documented near Theescombe and along the Schoenmakerskop - Sardinia Bay coastline (Binneman 2010, Webley 2005).

4.3. Later Stone Age (LSA) – 30 000 years ago – recent (100 years ago)

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 (Deacon and Deacon 1999). There are

many San hunter-gatherers sites in the nearby Groendal Wilderness Area and adjacent mountains. Here, caves and rock shelters were occupied by the San during the Later Stone Age and contain numerous paintings along the walls. The last San/KhoiSan group was killed by Commando's in the Groendal area in the 1880s.

Several Later Stone Age shell midden sites as well as scatters situated on the surface of the loose dune sand with associated stone and other artefacts have been documented along Marine Drive and the Schoenmakerskop – Sardinia Bay coastline and further west, possibly dating between 6 000 – 8 000 years ago and younger than 4 500 years (Binneman 2008, 2010, 2011; Binneman & Booth 2010; Webley 2005).

4.4. Last 2 000 years – Khoenkhoen Pastoralism

Some 2 000 years ago Khoenkhoen pastoralists occupied the region and lived mainly in small settlements. They were the first food producers in South Africa and introduced domesticated animals (sheep, goat and cattle) and ceramic vessels to southern Africa. Often archaeological sites are found close to the banks of large streams and rivers. Large piles of freshwater mussel shell (called middens) usually mark these sites. Prehistoric groups collected the freshwater mussel from the muddy banks of the rivers as a source of food. Mixed with the shell and other riverine and terrestrial food waste are also cultural materials. Human remains are often found buried in the middens (Deacon and Deacon 1999).

Several shell midden sites as well as scatters situated on the surface of the loose dune sand are associated with the occupation of Khoenkhoen pastoralists within the last 2 000 years. These middens and scatters are differentiated from the Later Stone Age sites and scatters by the occurrence of earthenware pottery and the faunal remains of domesticated stock such as cattle and sheep. Sites with the occurrence of pottery and other artefacts have been documented along Marine Drive and the Schoenmakerskop – Sardinia Bay coastline and further west (Binneman & Booth 2010).

4.5. Last 500 years – Historical

Previous surveys in the Driftsands area have revealed extensive historical dump material dating to the Victorian period. After European settlement of the area, the Driftsands threatened the harbour development of Port Elizabeth and it was decided in 1893 to stabilise the dunes by spreading the town garbage in a swathe from Happy Valley to Sardinia Bay. The rubbish was taken to the dunes, and the seeds of Australian acacias (Rooikrantz, Port Jackson, and long leaf wattles) planted in the garbage compost. This job was started in 1893 and completed in 1909.

5. DESCRIPTION OF THE PROPERTY

5.1. Location data

The proposed area for the housing development is situated about 4.5 km from the nearest coastline, therefore falling within the archaeologically sensitive coastal zone. The site is approximately 700 m south of Gqebera Township and about 5 km north east of the village of Schoenmakerskop. The area can be accessed by informal roads running adjacent and through Gqebera Township. The Arlington Tip Dump Site and the Scribante Race Track are situated to the west and a sewage works plant is situated to the south east of the site.

The proposed development area is located within the Driftsands Historical Dump Site that extended from Happy Valley along Marine Drive and the Village of Schoenmakerskop. Historical maps show that a *Euc gomocephala* belt was planted to stabilise the shifting dune sands, and used the garbage from Port Elizabeth to stabilise the dunes. The garbage from the residents of Port Elizabeth was taken to the dunes, and the seeds of Australian acacias (Rooikrantz, Port Jackson, and long leaf wattles) planted in the garbage compost.

5.2. Map

1:50 000 Map: 3325DC & DD 3425BA PORT ELIZABETH (Figure 1).

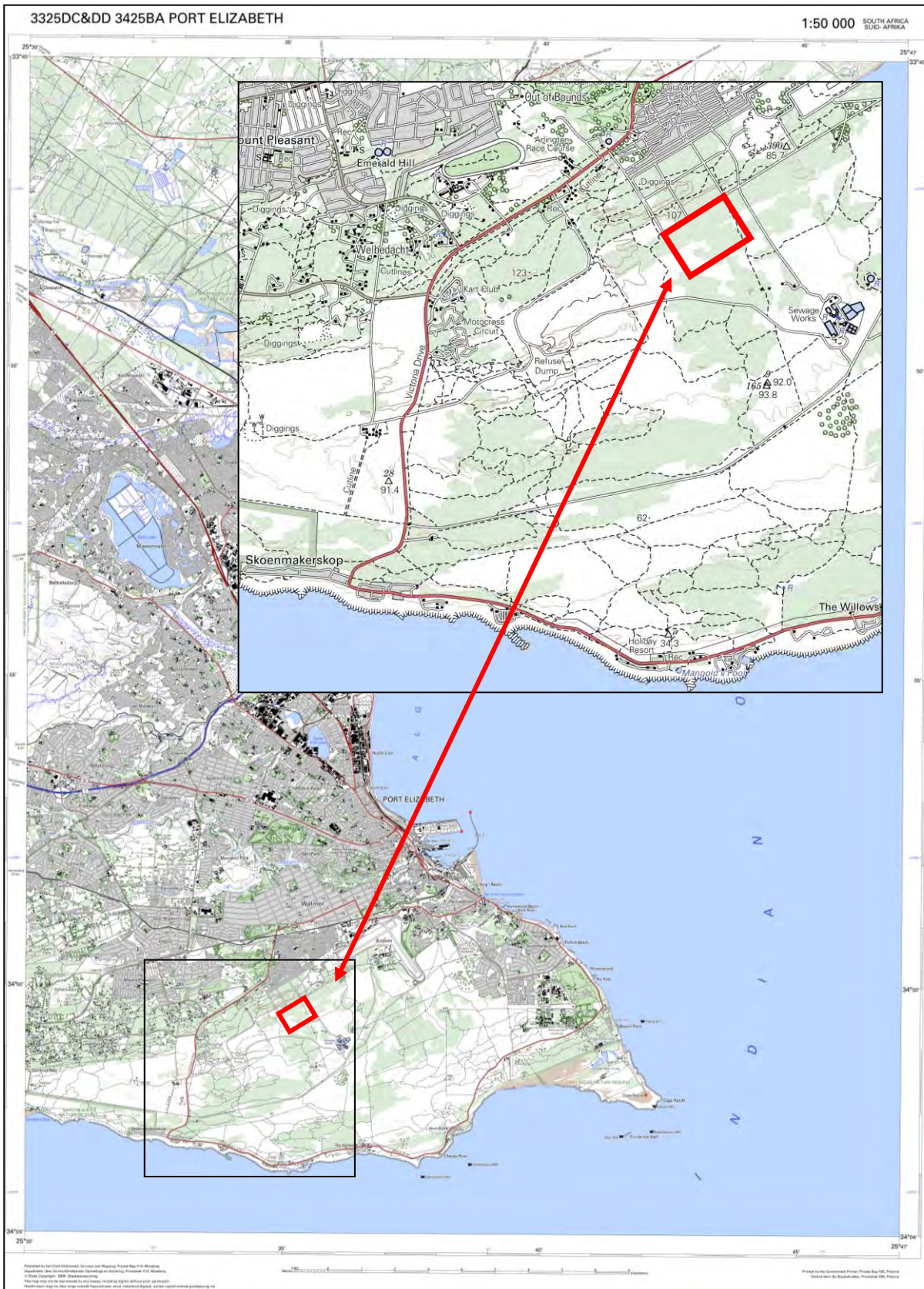


Figure 1. 1:50 000 topographic map 3325DC & DD 3425BA PORT ELIZABETH showing the location of the proposed area for the proposed housing development.



Figure 2. Aerial view of the location of the proposed housing development on Erf 1948, Gqebera, Walmer, Port Elizabeth (black rectangle).



Figure 3: Aerial view of the proposed area for the Gqeberha housing development showing previous archaeological and heritage impact assessments conducted within the immediate vicinity (1. Webley 2005; 2. Webley 2007; 3. Booth 2013; 4. Binneman & Booth 2010).



Figure 4. Close-up aerial view of the proposed area for the housing development showing the showing the location of the related Gqeberha low-cost housing development, the Arlington Tip Dump Site, the Scribante Race Track, and the Sewage Works.



Figure 5. Close-up aerial view of the proposed area for the housing development showing the development boundary, the survey track, centre GPS point, and first observance of the historical material associated with the Driftsands Historical Dump Site.

6. ARCHAEOLOGICAL INVESTIGATION

6.1. Methodology

The proposed development area was investigated by conducting spot checks from a vehicle. The informal roads and tracks were followed and the exposed areas were investigated on foot. GPS readings and photographs were taken using a Garmin Oregon 550 (Table 1). The GPS readings have been plotted on Figures 3-5.

6.2. Results of the Archaeological Investigation

The vegetation cover comprised mainly dense grass cover, Thicket vegetation, and alien vegetation that obscured archaeological visibility (Figures 6-9). Some exposed sand dune and disturbed areas that allowed for good archaeological visibility were investigated during the survey (Figures 10-11). The exposed areas were the only means to investigate for the possible remains of archaeological heritage resources. Manholes associated with stormwater drainage were located adjacent to the proposed development boundary on route to the Sewage Works on the eastern side of the site (Figure 12). Remnants of the built environment, concrete slabs indicating the remains of fences and possibly cover holes, were also observed. These, however, are likely to be less than 60 years old.



Figure 6. View of the dense Thicket vegetation cover.



Figure 7. View of the dense grass vegetation and alien vegetation.



Figure 8. View of the general landscape.



Figure 9. View of the general landscape.



Figure 10. Example of exposed areas investigated.



Figure 11. Example of exposed areas investigated.



Figure 12. View of the road and situated on the eastern boundary of the proposed development area.

No pre-colonial archaeological heritage remains or sites were identified during the survey. However, it is possible that archaeological shell midden sites and artefacts may be uncovered during the development activities.

The proposed development is situated within the extent of the Driftsands Historical Dump Site. Two previous archaeological / heritage impact assessments conducted about 3 - 4 km to the south west (Webley 2005; Booth 2013) have reported on the same types of historical artefacts identified during the current survey. Dr Lita Webley had a sample of the artefacts identified by Mrs Jenny Bennie, the then historian at Bayworld Museum, who confirmed the date for the material to be approximately 1890 and that this type of material had been widely distributed in and around Port Elizabeth during this time to stabilise the shifting sand dunes. A large collection of the historical dump material was collected around the Port Elizabeth University Campus and is currently stored at the Bayworld Museum. However, the area surveyed may contain artefacts not represented in the current Bayworld Museum collection.

The historical dump material extends over the proposed housing development area. The historical artefacts were first observed next to the road that runs along the northern boundary of the site. The exposed sand dune and disturbed areas were investigated. Mainly *ex situ* scatters of associated artefacts were located within the exposed area.

The historical artefact remains include broken bottles, glass, ceramics, rusted metal, buttons, as well as edible animal bones and oyster shells. A collection of photographs were taken of a representative sample of the artefacts (Booth 2013). The collection of bottles (Figures 13-18) identified include green bottles, stone ware, Codd bottles, **Holbrook's** Bottles, as well as bottles that were locally made in Port Elizabeth and imported from San Francisco and European countries. The Lea Perrins branded bottles seemed to be a common occurrence in the collection.

The collection of ceramics included a wide range dating to the **late 1800's (Figures 19-28)**. These included British and possibly German salt-glazed stoneware, painted decoration of blue floral as well as soft and harsh colours, transfer printed blue floral design (Asiatic Pheasant design), as well as pink transfer ware, lined ware, and undecorated white ware.

Other historical archaeological artefacts documented within the historical dump included a clay pipe stem fragment, buttons and edible food remains. Food remains in the form of edible animal bones and marine shell, oysters, were also documented within the historical dump site.

Although no pre-colonial archaeological sites and remains were documented within the proposed development area it is possible that these heritage resources may possibly be uncovered during the development activities. It is evident that the historical artefacts documented within the proposed development area are associated with the area being

used as a historical dump during the 1890's and early 1900's as the artefacts date to that particular period. The historical records also document this area being used as a dump site as well as material being dumped on these driftsands to stop them from encroaching on the harbour development during the late 1800's.



Figure 13. Close-up view of a glass artefact scatter.

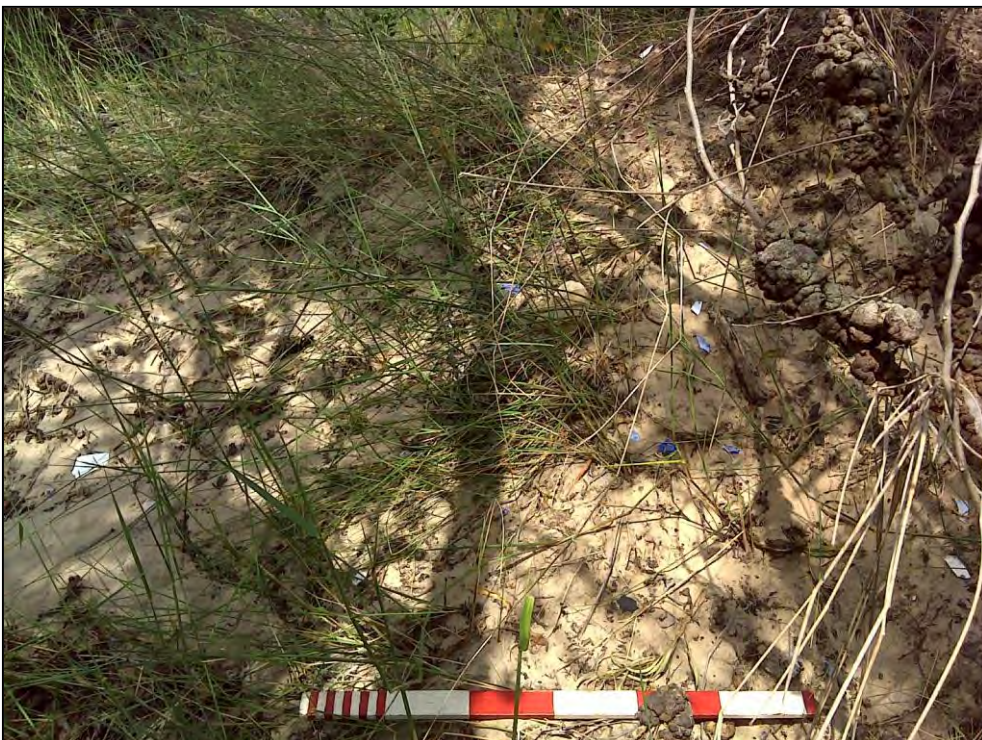


Figure 14. View of glass and ceramics scatter.



Figure 15. Examples of glass artefacts that would be found throughout the area.



Figure 16. Examples of ceramics that would be found throughout the area.

7. DESCRIPTION OF SITES

7.1. Driftsands Historical Dump

The proposed area for the proposed Gqebera housing development is situated on a portion of the widely distributed Driftsands Historical Dump. Therefore, the proposed development area may be considered as a site. However, owing to the disturbances of the dumping of the historical material, the shifting dunes, the planting of alien vegetation to stabilise the dunes as well as other activities associated with disturbance of the site, and the continuing erosion it is unlikely that the historical material can be considered in a primary context.

The historical artefacts and distribution are considered as having a medium-low cultural significance and have been allocated a heritage grading of:

'General Protection C (Field Rating IV C): This site has been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (usually Low significance).

(See Table 1. for short descriptions and co-ordinates)

8. COORDINATES AND SITES FOR THE GQEBERA HOUSING DEVELOPMENT ON A PORTION OF ERF 1948, WALMER, PORT ELIZABETH, NELSON MANDELA METROPOLITAN MUNICIPALITY, EASTERN CAPE PROVINCE.

Table 1. Coordinates and sites for the Gqebera Housing Development on a portion of Erf 1948, Walmer, Port Elizabeth, Nelson Mandela Metropolitan Municipality, Eastern Cape Province.

REFERENCE	DESCRIPTION	COORDINATE	Heritage Grading
G1 (red dot)	Centre point of proposed housing development	34°00'28.80"S; 25°35'18.70"E	N/A
DS1 (blue dot)	Historical artefacts within the Historical Driftsands Dump Site (first observance of historical artefacts that extends over entire site – Erf 1948)	34°00'55.70"S; 25°33'44.70"E	Field Rating IV C

9. CULTURAL LANDSCAPE

Cultural landscapes are increasingly becoming a significant considering factor when conducting various archaeological and heritage impact assessments for proposed developments. The proposed development area, Erf 1948, is considered as having a medium-low cultural heritage significance. This significance attests to the area being used as a **dump site during the 1890's and early 1900's as well as the significance of the dump site being used to stabilise the moving sand dunes that once threatened to cover the beachfront of Port Elizabeth.** The collection of unwanted historical material removed to the **dump captures a period of Port Elizabeth's history and its development to its current state.**

This section gives a brief introduction to the concept of cultural landscape and its relation to various aspects of the dynamic interaction of humans as cultural agents and the landscape as a medium. A description of the interwoven relationships of humans with the landscape over time will be given including the archaeological, historical, and contemporary connections. Lastly, the living heritage makes up a small part of the study undertaken, its significance will be highlighted in relation to the communities who still identify with the area and retain a sense of identity to the landscape.

9.1. Concept of Cultural Landscape

Cultural landscapes can be interpreted as complex and rich extended historical records conceptualised as organisations of space, time, meaning, and communication moulded through cultural process. The connections between landscape and identity and, hence, memory are fundamental to the understanding of landscape and human sense of place. Cultural landscapes are the interface of culture and nature, tangible and intangible heritage, and biological and cultural diversity. They represent a closely woven net of relationships, the essence of culture and **people's identity. They are symbol of the** growing recognition of the fundamental links between local communities and their heritage, human kind, and its natural environment. In contemporary society, particular landscapes can be understood by taking into consideration the way in which they have been settled and modified including overall spatial organisation, settlement patterns, land uses, circulation networks, field layout, fencing, buildings, topography, vegetation, and structures. The dynamics and complex nature of cultural landscapes can be regarded as text, written and read by individuals and groups for very different purposes and with very many interpretations. The messages embedded in the landscape can be read as signs about values, beliefs, and practices from various perspectives. Most cultural landscapes are living landscapes where changes over time result in a montage effect or series of layers, each layer able to tell the human story and relationships between people and the natural processes.

The impact of human action on the landscape occurs over time so that a cultural landscape is the result of a complex history and creates the significance of place in **shaping historical identities by examining a community's presence or sense of place**. The **deeply social nature of relationships to place has always mediated people's** understanding of their environment and their movements within it, and is a process **which continues to inform the construction of people's social identity today**. Social and spatial relationships are dialectically interactive and interdependent. Cultural landscape reflects social relations and institutions and they shape subsequent social relations.

Cultural landscapes tell the story of people, events, and places through time, offering a sense of continuity, a sense of the stream of time. Landscapes reflect human activity and are imbued with cultural values. They combine elements of space and time, and represent political as well as social and cultural constructs. Culture shapes the landscape through day-to-day routine and these practices become traditions incorporated with a **collective memory the ultimate embodiments of memorial consciousness', examples such** as monuments, annual events and, archives. As they have evolved over time, and as human activity has changed, they have acquired many layers of meaning that can be analysed through archaeological, historical, geographical, and sociological study.

Indigenous people, European explorers, missionaries, pastoralists, international and domestic travellers all looked or look at similar landscapes and experience different versions of reality. Regardless of the power of different cultural groups, however, all groups create cultural landscape and interpret them from their own perspectives. This gives rise to tensions and contradictions between groups, invariably expressed in landscape forms as well.

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Most cultural landscapes are living landscapes where changes over time result in a montage effect or series of layers, each layer able to tell the human story and relationships between people and the natural processes. A common theme underpinning the concept of ideology of landscape itself is the setting for everything we do is that of the landscape as a repository of intangible values and human meaning that nurture our very existence. Intangible elements are the foundation of the existence of cultural landscapes, and that are still occupied by contemporary communities, Landscape, culture and collective memory of a social group are intertwined and that this binds the individuals to their community. Culture shapes their everyday life, the values bind gradually, change slowly, and transfer from generation to generation – culture is a form of memory. We see landscapes as a result of our shared system of beliefs and ideologies. In this way landscape is a cultural construct, a mirror of our memories and

myths encoded with meanings which can be read and interpreted. Pivotal to the significance of cultural landscapes and the ideas of the ordinarily sacred is the realisation that it is the places, traditions, and activities of ordinary people that create a rich cultural tapestry of life, particularly through our recognition of the values people attach to their everyday places and concomitant sense of place and identity.

Living heritage means cultural expressions and practices that form a body of knowledge and provide for continuity, dynamism, and meaning of social life to generations of people as individuals, social groups, and communities. It also allows for identity and sense of belonging for people as well as an accumulation of intellectual capital current and future generation in the context of mutual respect for human, social and cultural rights.

Protection of these cultural landscapes involves some management issues such as successful conservation is based on the continuing vital link between people and their landscapes. This link can be disrupted or affected by for instance economical reasons. Other threats can also be attributed to urban expansion and development, tourism, war and looting and something beyond our human intervention: natural disasters and climate change. Cultural landscape management and conservation processes bring people together in caring for their collective identity and heritage, and provide a shared local vision within a global context. Local communities need, therefore, to be involved in every aspect of identification, planning and management of the areas as they are the most effective guardians of landscape heritage.

Most elements of living heritage are under threat of extinction due to neglect, modernisation, urbanisation, globalisation, and environmental degradation. Living **heritage is at the centre of people's culture and identity**, it is importance to provide space for its continued existence. Living heritage must not be seen as merely safeguarding the past, but it must be seen as safeguarding the logic of continuity of what all communities or social groups regard as their valuable heritage, shared or exclusive.

In some instances, villages may capitalise on local landscape assets in order to promote tourism. Travel and tourism activities are built around the quest for experience, and the experience of place and landscape is a core element of that quest. It is a constant desire for new experiences that drives tourism, rather than a quest for authenticity. It is, therefore, important to engage actively with the tourism industry so that aspects of life and landscape important to cultural identity, including connection with place are maintained.

9.2. Archaeological Landscape

Although no archaeological heritage remains have been documented within the proposed development area, the area was once part of an ancient landscape inhabited by various

families of genus *Homo*. Various studies recording archaeological sites and occurrences within the wider region **stretching along Port Elizabeth's** western coastline have reported on the evidence of the presence of *Homo erectus* (Early Stone Age), *Homo sapiens* (Middle Stone Age), and *Homo sapiens sapiens* (Later Stone Age). The only remains dating to the Early and Middle Stone Ages are stone artefacts as the organic evidence and sites have not been preserved. The influence of climatic conditions and the rising and falling of the sea levels may also attribute to much archaeological site information being lost.

The preservation of archaeological sites in the form of marine shell middens, marine shell scatters and associated cultural materials remains shows that the natural and edible resources of the area made the area an attraction over the last 10 000 years. This region would have been attractive to those hunter-gatherer communities who visited the area to harvest shellfish along the rocky coastline.

The pastoralists were driven by locating enough food to feed their domestic stock herds. The area was also attractive to later Khoekhoen pastoralists who also occupied and moved along this coastline. Their archaeological signature is evident in the remains of pottery sherds that are distributed on the dunes along the coast showing their presence on the landscape. This evidence also unlocks a potentially dynamic social landscape with possible interaction between the hunter-gathers and pastoralists.

Pre-colonial human remains are mostly unmarked and invisible on the landscape, however, in some instances, they may be marked by organised piles of stones.

9.3. Historical Landscape

The archaeological interpretation of the cultural landscape relies solely on the presence and surface visibility of artefacts left behind on the landscape by the populations who occupied and migrated through the proposed development area. A more comprehensive historical layer is able to be fitted onto the cultural landscape owing to the availability of written documents and the continuing existence of the traces left behind by European Settlers and the moulding of these traces used to shape the contemporary communities that occupies and regards itself attached to its present cultural landscape.

The proposed development area fits into a greater cultural landscape and the moulding of an historical townscape that developed into contemporary Port Elizabeth. The immediate area has always been moving Driftsands. Four farms, situated north-west (Buffelsfontein), north (Welbedacht), north-east (Papenbiesiesfontein), and Strandfontein (east) of the proposed development area were granted during the early and mid-**1800's**. It is speculated that the proposed development site was situated on Crown Lands during this period.

In 1872 the reclamation of these Driftsands started **and by the 1880's it was** realised that the Driftsands were threatening the development of the harbour. In 1890 Josef Stor Lister commenced his work of reclaiming the Driftsands area. Historical maps show that a *Euc gomocephala* belt was planted to stabilise the shifting dune sands, and used the garbage from Port Elizabeth to stabilise the dunes, therefore the historical Driftsands dump. A railway established to transport the rubbish to the area assisted in the development and human influence on the landscape.

9.4. Contemporary Landscape

The contemporary cultural landscape is the product of centuries of human interaction, more so when the European Settlers entered the area. Wars have been fought on the landscape, most probably to attain power and the land. Remnants of these cultural conflicts remain on the landscape, such as forts and people who may have died on the landscape with only oral histories and stories handed down from one generation to the next to remain in the collective memory of the community/ies and through generational farmers living on the landscape.

The remnants from the historical influence, the alien vegetation and the materials from the Driftsands historical dump, dominate the area as the landscape has changed very little from when the operation for the stabilisation of the dunes was implemented during the **1890's and early 1900's**.

The Walmer Township is now situated north of the site and the functioning farms have become small holdings along the Sardinia Bay Road, however, the village of Schoenmakerskop is still situated south along the coast.

The significance of the living heritage is low in relation to the proposed housing development site and immediate surrounds. No visible pre-colonial burials or historical graves were recorded within the area.

10. CONCLUSION

The phase 1 archaeological impact assessment (AIA) was conducted as requirement of the National Heritage Resources Act (NHRA 25 of 1999) triggered by Section 38(1)(c)(i). A literature review was conducted focusing on the archaeological literature resources available. Historical research was conducted to establish the significance of the historical artefact scatter. The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological material remains, sites and features; to establish the potential impact of the development; and to make recommendations to minimise the possible damage to the archaeological heritage. The report follows the minimum standards guidelines required by the South African Heritage Resources Agency (SAHRA) and the Eastern Cape Provincial Heritage Resources Agency (ECPHRA).

Very little systematic archaeological research has been conducted within the area proposed for the housing development. Several relevant archaeological and heritage impact assessments have been conducted within the immediate vicinity and the wider region along the coastline between Kings Beach and Van Stadens River. These reports have identified several Early, Middle, and Late Stone Age stone and other artefacts distributed along the coastline as well as evidence of Khoekhoen pastoralist occupation and / or interaction by the presence of broken earthenware pot sherds. Archaeological sites such as marine shell middens and surface scatters have been reported within this 5 km archaeologically sensitive coastal zone. Historical research on Schoenmakerskop and the Driftsands points out that the area became a dump site during **the late 1800's** to stabilise the shifting dune sands.

The proposed development area is situated within the 5 km archaeological sensitive coastal zone. No archaeological heritage remains were observed during the survey. However, the survey was limited to surface and exposed area observations and does not eliminate the possibility that archaeological heritage remains may occur below the surface. It is possible that stone artefact may occur below the vegetation cover between the surface and 50 – 80 cm below the ground. The potential impact of the proposed housing development activities on the archaeological heritage remains, sites, and features is regarded as low; however, the recommendations and mitigation measures must be taken into consideration apriori the commencement of the proposed development activities.

The area has been heavily disturbed by the historical planting of alien vegetation and use of the area as a dump to stabilise the dunes as well as the area currently being used by off-road bike enthusiasts. It is unlikely that the distribution of the historical dump material is in primary context, however, if so, the cultural significance would be particularly low. The cultural significance of the historical dump material recorded within the proposed area for the proposed housing development has been considered as medium-low owing to the possibility that some of the sample of artefacts have not been collected for future research purposes. The potential impact of the development activities on the historical dump material is regarded as being negative. The development activities will destroy a portion of the distribution. Therefore, the recommendations have addressed this and provided for mitigation measures to be implemented apriori the commencement of the development activities.

The proposed development area does not evoke the pre-colonial / archaeological cultural landscape as any archaeological heritage materials, sites or features were documented within the area. However the area falls into a greater cultural landscape that shows evidence of occupation and interactive relationships within other communities and the natural resources over a possible 1.5 million years. The colonial / historical cultural landscape describes the process of the development of Port Elizabeth as city and

functional harbour port over 200 years. The dump represents a shifting natural landscape that threatened the establishment of the harbour development during the late 1800's.

The management of the living heritage does not feature significantly in this study as it is doubtful that communities of contemporary Port Elizabeth would have some kind of intangible or spiritual connection to the historical dump site. A memorial was established in memory of Josef Lister in his contribution in initiating the process of the reclamation of the Driftsands, however, this memorial is not situated within the proposed housing development site and will not be negatively affected during development activities. The community should be made aware of the historical dump site and background and this should be included in public participation meetings.

11. RECOMMENDATIONS

1.3. Recommendations

The area is of a low pre-colonial archaeological cultural sensitivity, however, owing to the untapped and unsorted historical artefacts on the Driftsands Historical Dump Site which increases the cultural significance to a medium – low cultural sensitivity. The following recommendations must be considered and implemented in accordance with the various phases of the development activities:

1. The local historian from Bayworld Museum (Mr Emile Badenhorst) should be consulted to evaluate the material which is being uncovered if a large cache of the **late 1800's and early 1900's historical material from the Driftsands Historical Dump Site** is uncovered during the vegetation and excavation phases. It is possible that **artefacts may be identified that are not represented in Bayworld's existing collection**. If required to assist with the collection permit, to be determined by the Eastern Cape Provincial Heritage Resources Agency (ECPHRA), a professional archaeologist must be appointed to accompany the historian.
2. The developer must apply to the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for a destruction permit for the development area of the portion of Erf 1948 situated within the Driftsands Historical Dump Site. One permit may cover the extent of the development boundary.
3. If concentrations of historical and pre-colonial archaeological heritage material and/or human remains are uncovered during construction, all work must cease immediately and be reported to the Albany Museum and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) so that systematic and professional investigation/excavation can be undertaken. A professional

archaeologist should then be appointed to monitor the remaining vegetation clearing activities/excavation of the surface layer in the case that pre-colonial shell middens may become exposed. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.

4. Construction managers/foremen and/or the Environmental Control Officer (ECO) 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.

12. REFERENCES

- Deacon, H.J. 1970. The Acheulian occupation at Amanzi Springs, Uitenhage District, Cape Province. *Annals of the Cape Provincial Museums*. 8: 89-189.
- Deacon, H.J. & Deacon, J. 1999. *Human beginnings in South Africa*. Cape Town: David Phillips Publishers.
- Gess, W.H.R. 1969. Excavations of a Pleistocene bone deposit at Aloes near Port Elizabeth. *South African Archaeological Bulletin* 24:31-32.
- Hertling, U.M. & Lubke, R.A. 1999. Dune stabilization in South Africa. *Environmental Management* 24(4): 467-482.
- National Heritage Resources Act 25 of 1999.
PE.ORG.ZA
Port Elizabeth Main Library.
South African Heritage Resources Agency (SAHRA): Minimum Standards for Archaeological Impact Assessments.

13. RELEVANT ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENTS

- Binneman, J. 2012. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed phase 2 **redevelopment and landscaping of the southern portion of the King's Beach** node of the Nelson Mandela Bat Southern Beachfront (Erf 1031, Erf 576, and the Remainder of Erf 575, Humewood).
- Binneman, J. 2011. A Phase 1 Archaeological Impact Assessment of the proposed rezoning and possible subdivision of Portion 72 (Portion of Portion 1) of the Farm Stadens River No. 485 in the Division of Uitenhage, Eastern Cape Province, for residential purposes.
- Binneman, J. 2010. A phase 1 archaeological heritage impact assessment for the proposed rezoning and subdivision of farm 36 and 37, Theescombe, Port

- Elizabeth, Nelson Mandela Bay Municipality, Eastern Cape province for the development of 2 residential nodes, lodge, and nature reserve.
- Binneman, J. 2009. A phase 1 archaeological heritage impact assessment for the proposed subdivision and rezoning of Portion 1070, 409, and the Remainder of Erf 385, Theescombe, Port Elizabeth, Eastern Cape for the establishing of a residential development.
- Binneman, J. 2008. A phase 1 archaeological heritage impact assessment of the proposed development of a sand quarry on Erf 429, Theescombe, Port Elizabeth, Nelson Mandela Bay Municipality, Eastern Cape Province.
- Binneman, J. & Booth, C. 2010. A phase 1 archaeological impact assessment for the proposed 20MW wind farm on three alternative sites: Erf 121, Driftsands (Site Alternative 1), Bushy Park Farm, Remainder of Erf 26, as well as Portions 5, 6, and 7 thereof (Site Alternative 2), and Rietfontein farm, (Site Alternative 3), Nelson Mandela Metropolitan Municipality, Eastern Cape Province.
- Booth, C. 2013. A phase 1 archaeological impact assessment (AIA) for the proposed mining permit application on Erf 118, Schoenmakerskop, Port Elizabeth, Nelson Mandela Metropolitan Municipality, Eastern Cape Province.
- Webley, L. 2009. Phase 1 heritage impact assessment: Caravan park development at Van Stadens River Mouth, Cacadu District, Eastern Cape.
- Webley, L. 2007. Phase 1 heritage impact assessment for the establishment of the Sardinia Bay Golf Estate (Erf 278 – Theescombe), Port Elizabeth.
- Webley, L. 2005. Phase 1 heritage impact assessment of a proposed water reservoir site near Schoenmakerskop, Port Elizabeth.

14. GENERAL REMARKS AND CONDITIONS

NOTE: This report is a phase 1 archaeological impact assessment (AIA) only and does not include or exempt other required specialist assessments as part of the heritage impact assessments (HIAs).

The National Heritage Resources Act (Act No. 25 of 1999, Section 35 [Brief Legislative Requirements]) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources including 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 phase 1 archaeological impact assessment (AIA) are based on the visibility of archaeological remains, features and sites and may not reflect the true state of affairs. Many archaeological remains, features and sites may be covered by soil and vegetation

and will only be located once this has been removed. In the event of such archaeological heritage being uncovered (such as during any phase of construction activities), archaeologists or the relevant heritage authority 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 Resources Act No. 25 of 1999 (NHRA 25 of 1999).

Archaeological Specialist Reports (desktops and AIA's) will be assessed by the relevant heritage resources authority. The final comment/decision rests with the heritage resources authority that may confirm the recommendations in the archaeological specialist report and grant a permit or a formal letter of permission for the destruction of any cultural sites.

APPENDIX A: GRADING SYSTEM

The NHRA stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act and the South African Heritage Resources Agency:

- National: This site is suggested to be considered of Grade 1 significance and should be nominated as such. Heritage resources with qualities so exceptional that they are of special national significance.
- Provincial: This site is suggested to be considered of Grade II significance and should be nominated as such. Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region
- Local: This site is suggested to be Grade IIIA significance. This site should be retained as a heritage register site (High significance) and so mitigation as part of the development process is not advised.
- Local: This site is suggested to be Grade IIIB significance. It could be mitigated and (part) retained as a heritage register site (High significance).
- **'General' Protection A (Field Rating IV A):** This site should be mitigated before destruction (usually High/Medium significance).
- **'General' Protection B (Field Rating IV B):** This site should be recorded before destruction (usually Medium significance).
- **'General Protection C (Field Rating IV C):** This site has been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (usually Low significance).

APPENDIX B: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM COASTAL AREAS: guidelines and procedures for developers

1. Shell middens

Shell middens can be defined as an accumulation of marine shell deposited by human agents rather than the result of marine activity. The shells are concentrated in a specific locality above the high-water mark and frequently contain stone tools, pottery, bone and occasionally also 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.

2. 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.

3. Fossil bone

Fossil bones or any other concentrations of bones, whether fossilized or not, should be reported.

4. 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.

5. Stone features and platforms

They come in different forms and sizes, but are easy to identify. The most common are an accumulation of roughly circular fire cracked stones tightly spaced and filled in with charcoal and marine shell. They are usually 1-2 metres in diameter and may represent cooking platforms. Others may resemble circular single row cobble stone markers. These are different sizes and may be the remains of wind breaks or cooking shelters.

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.