

A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT FOR A PROPOSED WAREHOUSE DEVELOPMENT ON ERF 35 IN GREENBUSHES, GQEBERHA (PORT ELIZABETH), NELSON MANDELA BAY MUNICIPALITY, EASTERN CAPE PROVINCE.



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Note: This report follows the minimum standard guidelines required by the South African Heritage Resources Agency and the Eastern Cape Heritage Resources Authority for compiling Phase 1 Archaeological Impact Assessment (AIA) reports. The report forms part of a Basic Assessment process in terms of the National Environmental Management Act (Act No. 107 of 1998, NEMA), as amended. The Basic Assessment process is currently within the 90 day Public Participation Phase (PPP) of the application.

EXECUTIVE SUMMARY

Eastern Cape Heritage Consultants cc has been appointed by Digital Soils Africa (Pty) Ltd to conduct a Phase 1 Archaeological Impact Assessment (AIA) for a proposed warehouse development, Gqeberha (Port Elizabeth), Nelson Mandela Bay Municipality, Eastern Cape Province.

Access to the study area was easy, but vegetation that covers the area consisting of trees, grass and low shrubs made it difficult to find *in situ* archaeological sites/materials. The only surface disturbances that could be investigated on the property were footpaths and several molehills that could be observed within areas covered by grass. The property is approximately 2 hectares in size and it was possible to cover most of the area on foot. The recent high rainfall in the area created several small puddles of water and muddy conditions on the northern side of the property next to Cape Road. No archaeological sites/materials were observed within or in close proximity to the study area. There are no known graves or historical buildings on the proposed site.

Several other archaeological assessments were conducted in close proximity to the proposed development area in the past that provided similar results to this assessment (Binneman 2014; Booth 2016 and Reichert 2022b-d). A single Middle Stone Age (MSA) occurrence was identified (as well as historic heritage resources) within a 900 ha area surveyed at the Hopewell Conservation Project in another survey relevant to the study area (Van Ryneveld 2007).

The proposed site for the development is located approximately 0,5 kilometers east of the Greenbushes Hotel. Prior to the construction of the hotel the area was used as an ox-wagon “outspan” during the 1800’s (McClelland 2018). Should the remains of build structures that are older than 60 years or concentrations of historical material be uncovered after vegetation clearing or during the construction phase, a historian / heritage practitioner must be appointed to evaluate the find and to determine if a destruction permit needs to be obtained from the Eastern Cape Heritage Resources Authority (ECPHRA) in terms of Section 34 of the National Heritage Resources Act, No. 25 of 1999.

The main impact on possible archaeological sites/remains will be the physical disturbance of the material and its context. Should such material be exposed then work must cease in the immediate area and it must be reported to the archaeologist at the Albany Museum in Makhanda (Grahamstown) (Tel: 046 622 2312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel.: 043 492 1370), so that a systematic and professional investigation can be undertaken. Construction managers/foremen should be informed before clearing/construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites. In general, the proposed areas for development appears to be of **low archaeological sensitivity** and the development may proceed as planned.

PROJECT INFORMATION

Type of development

The proposed development will entail the development of a warehouse with offices, a workshop area and a builders yard. There will be two access areas to the Erf, the front entrance from Cape Road and the back entrance from an unnamed gravel road that connects Draaifontein Road and Seaview Road. The property is 2.0366 ha in size which will be fenced with precast vibracrete fencing along the back and side boundary line and clearvu fencing along the Cape Road facing boundary. Two controlled access areas to the site will be established.

In terms of stormwater design, the internal stormwater network will be designed according to the instructions of the engineer and will drain into the stormwater system along Cape Road. Likewise with the sewage connection, infrastructure will connect with the Nelson Mandela Bay Municipality (NMBM) infrastructure.

Applicant

Rennasance Construction

Consultant

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Purpose of the study

The purpose of the study was to conduct a Phase 1 Archaeological Impact Assessment (AIA) for the proposed project and the associated activities, to describe and evaluate:

- the importance of possible archaeological sites, features and materials,
- the potential impact of the development on these resources and,
- to propose recommendations to minimize possible damage to these resources.

Site and Location

The property is located within the 1:50 000 topographic reference map 3325CD & 3425AB Uitenhage (Map 1). The proposed development area is located within the suburb of Greenbushes and it is surrounded by small holdings, with mostly vacant plots or one-dwelling house plots and a few outbuildings, dormant fields, and small businesses such as pallet wood sales (Map 2). Cape Road is on the northern side of the property and there is a gravel road along the southern boundary of the site. The proposed activities will take place on a relatively flat area that is covered with dense grass, and a mixture of alien trees and shrubs (Fig. 1). There are several footpaths and a couple of low rocky outcrops within the vegetation that covers the property. The recent high rainfall in the area created several small puddles of water and muddy conditions on the northern side of the property next to Cape Road. General GPS reading: 33 55.659S, 25 24.971E.

Relevant Archaeological Impact Assessments

- Binneman, J. 2014. A phase 1 archaeological impact assessment for the proposed integrated residential development and associated infrastructure in the Hunters Retreat area, Port Elizabeth, Nelson Mandela Bay Municipality, Eastern Cape Province. Prepared for CEN Integrated Environmental Management Unit. Port Elizabeth. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. 2011. A phase 1 archaeological heritage impact assessment for the proposed residential development on the remainder of Erf 982, Parsonsvelei, Port Elizabeth, Nelson Mandela Bay Municipality, Eastern Cape Province. Prepared for CEN Integrated Environmental Management Unit. Port Elizabeth. Eastern Cape Heritage Consultants cc.
- Binneman, J. 2010. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for the proposed hard rock (quartzite) quarry on Erf 1, Parsonsvelei, Port Elizabeth, Nelson Mandela Bay Municipality, Eastern Cape Province. Prepared for Stellenryck Environmental Solutions. Port Elizabeth. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. and Reichert, K. 2021. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for the proposed development of a Solar Photovoltaic (PV) facility on a portion of Erf 1, Parsonsvelei, Gqeberha within the Nelson Mandela Bay Municipality, Eastern Cape. Prepared for: JG Afrika. Greenacres. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Booth, C. 2016. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed expansion of the bulk water supply infrastructure of potable water to Seaview and Greenbushes supply areas, Nelson Mandela Bay Municipality, Eastern Cape Province. Prepared for: SRK Consulting. Port Elizabeth. Booth Heritage Consulting. Grahamstown.
- Reichert, K. 2022a. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for the proposed development of Erven 984 and 1134, Parsonsvelei, Nelson Mandela Bay Municipality, Eastern Cape Province. Prepared for Engineering Advice & Services (Pty) Ltd. Humewood. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Reichert, K. 2022b. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed expansion of the existing Port Elizabeth Rifle and Pistol Club on Portions 0 and 5 of Erf No. 8 in Greenbushes, Gqeberha (Port Elizabeth), Nelson Mandela Bay Municipality, Eastern Cape. Prepared for BlueLeaf Environmental Consulting (Pty) Ltd. Sunridge Park. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Reichert, K. 2022c. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed development of a Solar Photovoltaic (PV) Facility on Erf 77 in Greenbushes, Gqeberha (Port Elizabeth), Nelson Mandela Bay Municipality, Eastern Cape Province. Prepared for Habitat Link Consulting. Mount Croix. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Reichert, K. 2022d. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed development of the Greenbushes Farm Solar PV Facility on Portion 8 (Portion of Portion 3) of the Farm Kuyga No. 8, as well as electrical transmission lines in Ward 40 in Greenbushes, Gqeberha (Port Elizabeth). Prepared for: CEN Integrated Environmental Management Unit. Summerstrand. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Van Ryneveld, K. 2007. Phase 1 archaeological impact assessment. The Hopewell Conservation Project, Greenbushes, Port Elizabeth, South Africa. Prepared for SRK Consulting. Port Elizabeth. Archaeomaps Archaeological Consultancy. Danhof.

The Albany Museum in Makhanda (Grahamstown) and the Bayworld Museum houses collections and information from the wider region.

BRIEF ARCHAEOLOGICAL BACKGROUND

Literature review

Pre-colonial archaeology

The archaeology of the immediate Greenbushes area is largely unknown, mainly because little systematic research has been conducted there. The oldest evidence of the early inhabitants in the Gqeberha (Port Elizabeth) area are large stone tools, called handaxes and cleavers, which can be found amongst river gravels and in old spring deposits in the region (Deacon 1970). These large stone tools are from a time period called the Earlier Stone Age (ESA) and may date between 1,5 million and 250 000 years old. In the Sunday's River Valley area more recent research has focused on the morphological variability of these handaxes at Penhill Farm and Amanzi Springs (Caruana & Lotter 2022). The large handaxes and cleavers were replaced by smaller stone tools called the Middle Stone Age (MSA) flake and blade industries. Evidence of MSA sites occur throughout the Gqeberha (Port Elizabeth) region and date between 200 000 and 30 000 years old. Fossil bone may in rare cases be associated with MSA occurrences (Deacon & Deacon 1999).

The majority of archaeological sites found in the Port Elizabeth 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 & Deacon 1999). There are many San hunter-gatherers sites in the nearby Elandsberg and Groot Winterhoekberg Mountains. Here caves and rock shelters were occupied by the San during the Later Stone Age and contain paintings along the walls. The last San/KhoiSan group was killed by Commando's in the Groendal area in the 1880s. Some 2 000 years ago Khoi 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.

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

HISTORICAL BACKGROUND

Port Elizabeth was established in 1820 as a British settlement around Fort Frederick and was incorporated as a town in 1861. It was named by Sir Rufane Donkin after his deceased wife while he was the acting governor of the Cape Colony (Britannica 2023). The main transport during those early days was by ox - wagon until railways became established in the 1870's. Ox - wagons were also used to distribute general merchandise to various destinations outside of the Port Elizabeth area. The travellers and their oxen needed water, pasturage and places to rest along these routes and for this purpose the government set aside rest places known as "Outspans". There were three existing outspans in the Port Elizabeth area before Divisional Councils were eventually designated in 1860 to maintain these rest areas (McClelland 2018). There was one situated on the site of the Greenbushes Hotel and there was a smaller one at Hunter's Retreat next to Cape Road. The busiest one by far was located at Fishwaters Flats at Zwartkops outside of Port Elizabeth on route to Grahamstown (McClelland 2018). The proposed site for the development of the warehouse is

located approximately 0,5 kilometers east of the Greenbushes Hotel. There is no indication that the proposed development area was used as an “outspan” area or for any other purpose during the historical period. More recently the previous landowner neglected the property and over the years it has simply become overgrown with alien vegetation. This is supported by aerial photographs from between 1960 and 1980 that shows no agricultural activities or the presence of large structures on the property (Fig. 1 & 2).

References

- Binneman, J.N.F. 2001. An introduction to a Later Stone Age coastal research project along the south-eastern Cape coast. *Southern African Field Archaeology* 10:75-87.
- Binneman, J.N.F. 2005. Archaeological research along the south-eastern Cape coast part1: open-air shell middens *Southern African Field Archaeology* 13 & 14:49-77.
- Britannica*. 2023., *The Editors of Encyclopaedia*. "Port Elizabeth". *Encyclopedia Britannica*. www.britannica.com/place/Port-Elizabeth-South-Africa.
- Caruana, M. & Lotter, M.G. 2022. Comparing morphological variability in handaxes from Penhill Farm and Amanzi Springs, Eastern Cape, *South African Field Archaeology* 17:35-52.
- 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. *Human beginnings in South Africa*. Cape Town: David Phillips Publishers.
- McClelland, D. 2018. *Port Elizabeth of Yore: Outspans and Road Inns on the Inter-Town Roads of later 1800s*. www.thecasualobserver.co.za
- Rudner, J. 1968. Strandloper pottery from South and South West Africa. *Annals of the South African Museum* 49:441-663.



Figure 1. Aerial photograph from 1965 of the general area where the proposed development will take place, indicated by the red circle (<http://www.cdngiportal.co.za/cdngiportal/>).

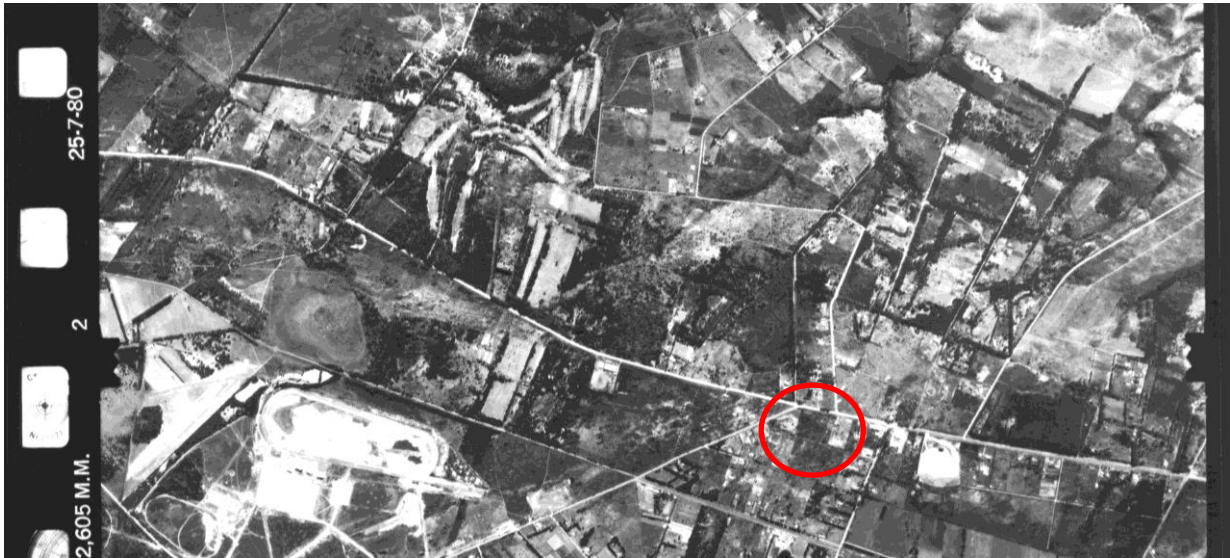


Figure 2. Aerial photograph from 1980 of the general area where the proposed development will take place, indicated by the red circle (<http://www.cdngiportal.co.za/cdngiportal/>).

ARCHAEOLOGICAL INVESTIGATION

Methodology

Google aerial images, historical aerial photographs as well as previous heritage reports related to the study area were studied prior to the investigation. The investigation was conducted on foot by an archaeologist. GPS readings were taken with a Garmin and all important features were digitally recorded. Access to the study area was easy but the archaeological visibility was poor due to the dense grass, trees and other vegetation. The visibility was better where areas have been exposed in footpaths and as a result of other surface disturbances. The recent high rainfall in the area created several small puddles of water and muddy conditions on the northern side of the property next to Cape Road. Molehills were also checked on and adjacent to the proposed development area for the presence of possible subsurface archaeological material.

Limitations and assumptions

It was not possible to do a comprehensive survey of the property due to the vegetation, trees and grass cover (Map 2, Figure 3). The property has not been used for any type of activity over the last couple of years and it is now totally overgrown with vegetation. The archaeological visibility was poor and it was difficult to locate archaeological and other heritage sites/materials.

Regardless of the restrictions imposed by the natural environmental, the experiences and knowledge gained from other investigations in adjacent and the wider surrounding region, provided background information to make assumption and predictions on the incidences and the significance of possible pre-colonial archaeological sites/material which may be located in the area, or which may be covered by soil and vegetation. It is possible that historical material will be exposed during the development due to the fact that an ox -wagon “outspan” or resting area was located in close proximity to the proposed development area.

Results

No archaeological sites/materials were observed within or in close proximity to the study area. In general, the area for the proposed development appears to be of low archaeological sensitivity and it is unlikely that any archaeological remains of significance will be found *in situ* or exposed during these activities. There are no known graves or historical buildings on the proposed site.

ASSESSMENT OF THE IMPACTS

Direct impacts

Table 1. The potential physical disturbance and destruction of surface and buried pre-colonial archaeology sites/remains during all developments (rating based on the surface visibility of archaeological remains).

Nature of the Impact	Possible loss of non-renewable heritage resources: The main impact on archaeological sites/remains (if any) will be the physical disturbance of the material and its context. The clearing of the vegetation may expose, disturb and displace archaeological sites/material. However, from the investigation it would appear that the proposed areas earmarked for development are of low archaeological sensitivity. There are no known graves or buildings older than 60 years on the area surveyed.
Extent	Site specific - The impact will be limited to the development footprint.
Duration	Permanent - Disturbance to archaeological material will be permanent.
Intensity	Medium
Probability	Probable – the archaeological material within the proposed development footprint will be disturbed, displaced or destroyed.
Reversibility	Irreversible – Once the archaeological material has been removed or destroyed this impact cannot be reversed.
Degree of Confidence	Medium / High
Status and Significance of Impact (no mitigation)	Low Negative (-)
Mitigation	<ul style="list-style-type: none"> • Construction managers/foremen should also 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. <p>If any human remains (or any other concentrations of archaeological heritage material) are exposed during construction, all work must cease in the immediate area of the finds and must be reported immediately to the archaeologist at the Albany Museum in Makhanda (Tel.: 046 622 2312) or to the Eastern Cape Provincial Heritage Resources Authority (043 492 1370). Sufficient time should be allowed to investigate and to remove/collect such material. Recommendations will follow from the investigation and may include:</p> <ul style="list-style-type: none"> • Consultation with the local communities regarding the conditions for the possible removal, storage and reburial (in the case of human remains) of heritage material.

	<ul style="list-style-type: none"> • If the local communities agree to the removal of human remains and heritage, an archaeologist must apply for permits from the Eastern Cape Province Heritage Resources Authority to collect and/or excavate sites/materials from archaeological sites impacted by the development. • Consultation with the Albany Museum (repository for archaeological material in the Eastern Cape) regarding permit(s) to remove the heritage material, the storing, curating and costs involved. • A Phase 2 Mitigation process to systematically excavate and to remove the archaeological deposits before construction of the development continues. <p><u>Note:</u> All costs must be financed by the applicants. This may include:</p> <p>All monitoring and mitigation expenses regarding the excavations/collecting of material, travel, accommodation and subsistence, analysis of the material, radiocarbon date(s) of the site(s) and a once-off curation/storage fee payable to the Department of Archaeology at the Albany Museum.</p>
<p>Significance and Status (with mitigation)</p>	<p>Neutral (0)</p>
<p>Residual Impact</p>	<p>The cumulative impacts on above and below ground heritage will increase when further developments take place in adjoining areas, such as the proposed Solar developments on Portion 8 of the Farm Kuyga and Erf 77 in Greenbushes (in close proximity to the proposed development area). There are also proposed transmission lines on the northern side of Cape Road that forms part of the proposed Farm Kuyga Solar development. It is anticipated that archaeological material uncovered or found during these developments (if approved) will be of low cultural significance due to the disturbed context of the properties. The cumulative impact of the developments therefore does not change the overall impact rating. Low Negative (-)</p>



Figure 3. General views of the proposed area for the development of a warehouse on Erf 35 in Greenbushes, Gqeberha (Port Elizabeth), Nelson Mandela Bay Municipality, Eastern Cape Province.

DISCUSSION

No archaeological sites/materials were observed within or in close proximity to the study area and although it is unlikely that archaeological remains will be found *in situ*, there is always a possibility that human remains and/or other archaeological material may be uncovered during the development.

Several other archaeological assessments were conducted in close proximity to the proposed development area in the past that provided similar results to this assessment (Binneman 2014; Booth 2016 and Reichert 2022b-d). A single Middle Stone Age (MSA) occurrence was identified (as well as historical heritage resources) within a 900 ha area surveyed at the Hopewell Conservation Project during another survey relevant to the study area (Van Ryneveld 2007).

There are no known graves or historical buildings on the proposed site. The proposed development is located in an area of Gqeberha (Port Elizabeth) with a long history and the discovery of historical material can therefore not be excluded. The proposed site for the development is located approximately 0,5 kilometers east of the Greenbushes Hotel. Prior to the construction of the hotel the area was used as an ox-wagon “outspan” during the 1800’s (McClelland 2018). There is however no indication that the proposed development area was used for this or any other purpose during the historical period. In general, the proposed areas for development appears to be of **low archaeological sensitivity** and the development may proceed as planned.

RECOMMENDATIONS

The main impact on possible archaeological sites/remains will be the physical disturbance of the material and its context. Should such material be exposed then work must cease in the immediate area and it must be reported to the archaeologist at the Albany Museum in Makhanda (Grahamstown) (Tel: 046 622 2312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel.: 043 492 1370), so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to remove/collect such material (See Appendix B for a list of possible archaeological sites that maybe found in the area). The developer must finance the costs should additional investigations be required.

It is further recommended that:

1. Should the remains of build structures that are older than 60 years or concentrations of historical material be uncovered after vegetation clearing or during the construction phase, a historian / heritage practitioner must be appointed to evaluate the find and to determine if a destruction permit needs to be obtained from the Eastern Cape Heritage Resources Authority (ECPHRA) in terms of Section 34 of the National Heritage Resources Act, No. 25 of 1999.
2. Construction managers/foreman should be informed before clearing/construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.

References

Binneman, J. 2014. A phase 1 archaeological impact assessment for the proposed integrated residential development and associated infrastructure in the Hunters Retreat area, Port Elizabeth, Nelson Mandela Bay Municipality, Eastern Cape Province. Prepared for CEN Integrated Environmental Management Unit. Port Elizabeth. Eastern Cape Heritage Consultants cc. Jeffreys Bay.

- Booth, C. 2016. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed expansion of the bulk water supply infrastructure of potable water to Seaview and Greenbushes supply areas, Nelson Mandela Bay Municipality, Eastern Cape Province. Prepared for: SRK Consulting. Port Elizabeth. Booth Heritage Consulting. Grahamstown.
- Reichert, K. 2022b. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed expansion of the existing Port Elizabeth Rifle and Pistol Club on Portions 0 and 5 of Erf No. 8 in Greenbushes, Gqeberha (Port Elizabeth), Nelson Mandela Bay Municipality, Eastern Cape. Prepared for BlueLeaf Environmental Consulting (Pty) Ltd. Sunridge Park. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Reichert, K. 2022c. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed development of a Solar Photovoltaic (PV) Facility on Erf 77 in Greenbushes, Gqeberha (Port Elizabeth), Nelson Mandela Bay Municipality, Eastern Cape Province. Prepared for Habitat Link Consulting. Mount Croix. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Reichert, K. 2022d. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological impact assessment for the proposed development of the Greenbushes Farm Solar PV Facility on Portion 8 (Portion of Portion 3) of the Farm Kuyga No. 8, as well as electrical transmission lines in Ward 40 in Greenbushes, Gqeberha (Port Elizabeth). Prepared for: CEN Integrated Environmental Management Unit. Summerstrand. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Van Ryneveld, K. 2007. Phase 1 archaeological impact assessment. The Hopewell Conservation Project, Greenbushes, Port Elizabeth, South Africa. Prepared for SRK Consulting. Port Elizabeth. Archaeomaps Archaeological Consultancy. Danhof.

GENERAL REMARKS AND CONDITIONS

Note: This is an Archaeological Impact Assessment (AIA) report compiled for the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) to enable them to make informed decisions regarding the heritage resources assessed in this report and only they have the authority to revise the report. This Report must be reviewed by the ECPHRA where after they will issue their Review Comments to the EAP/developer. The final decision rests with the ECPHRA who must grant permits if there will be any impact on cultural sites/materials as a result of the development.

This report is a Phase 1 Archaeological Impact Assessment and does not exempt the developer from any other relevant heritage impact assessments as specified below:

In terms of the National Heritage Resources Act, No. 25 of 1999 (section 38) ECPHRA may require a full Heritage Impact Assessment (HIA) to assess all heritage resources, that includes *inter alia*, all places or objects of aesthetical, architectural, historic, scientific, social, spiritual, linguistic, or technological significance that may be present on a site earmarked for development. A full Heritage Impact Assessment (HIA) should assess all these heritage components, and the assessment may include 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 this Phase 1 AIA is based on the visibility of archaeological sites/material and may not therefore reflect the true state of affairs. Sites and material may be covered by soil and vegetation and will only be located once this has been removed. In the event of such finds being uncovered during construction activities, ECPHRA or an archaeologist must be informed immediately so that they can investigate the importance of the sites and excavate or collect material before it is destroyed (see attached list of possible archaeological sites and material). The *onus* is on the developer to ensure that the provisions of the National Heritage

Resources Act No. 25 of 1999 and any instructions from ECPHRA are followed. The EAP/developer must forward this report to ECPHRA in order to obtain their Review Comments, unless alternative arrangements have been made with the heritage specialist to submit the report.

APPENDIX A: brief legislative requirements

Parts of sections 34, 35(4), 36(3) and 38(1) (8) of the National Heritage Resources Act, No. 25 of 1999 apply:

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.

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.*

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.*

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, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
- (b) the construction of a bridge or similar structure exceeding 50m in length;*
- (c) any development or other activity which will change the character of the site –*
 - (i) exceeding 5000m² in extent, or*
 - (ii) involving three or more erven or subdivisions thereof; or*
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA, or a provincial resources authority;*

- (d) the re-zoning of a site exceeding 10 000m² in extent; or*
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must as the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.*

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

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.

Freshwater mussel middens

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

Fossil bone

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

Stone artefacts

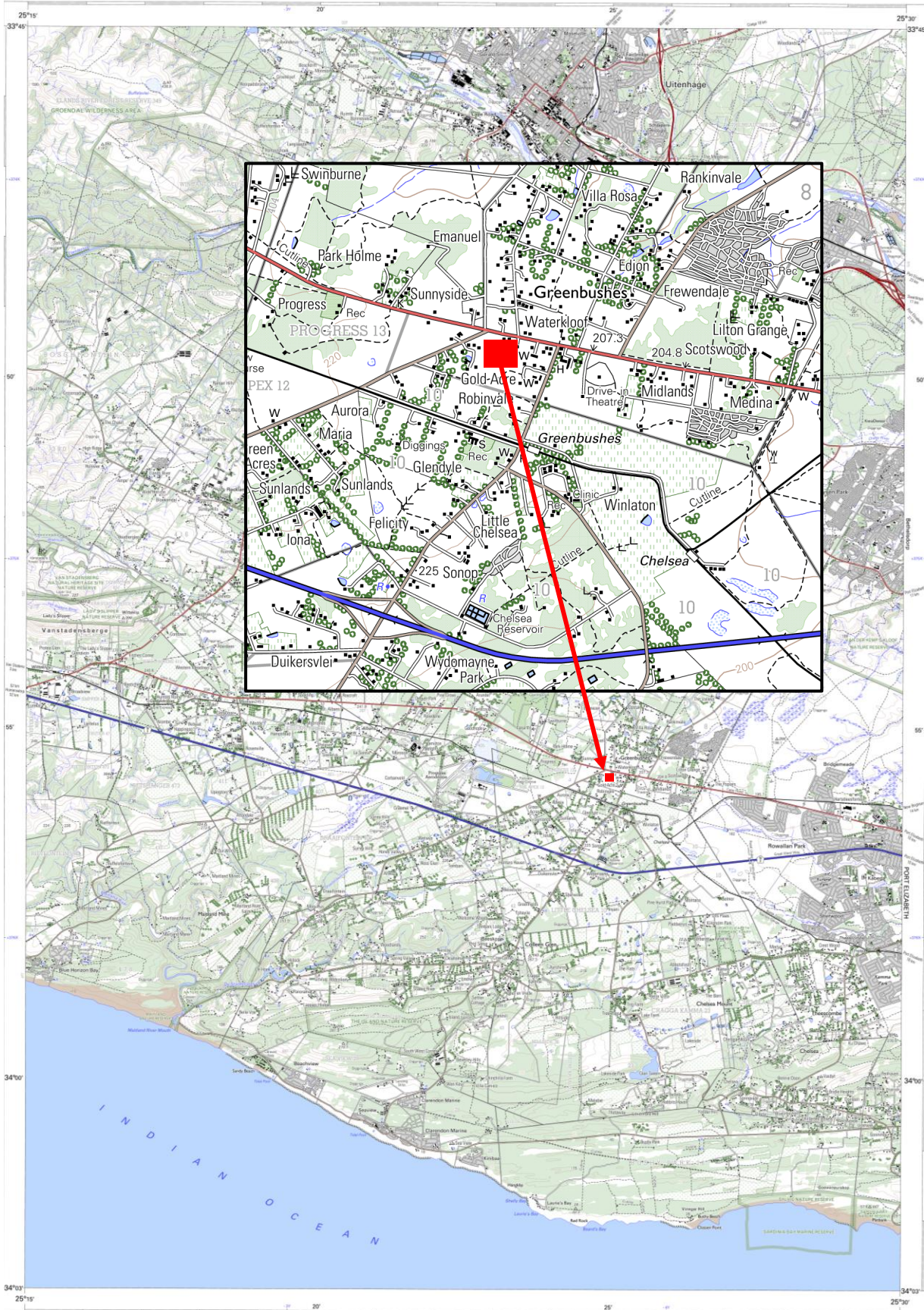
These are difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately, and archaeologists notified.

Stone features and platforms

These occur in different forms and sizes, but easily identifiable. 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 for shellfish. Others may resemble circular single row cobble stone markers. These occur in different sizes and may be the remains of wind breaks or cooking shelters.

Historical artefacts or features

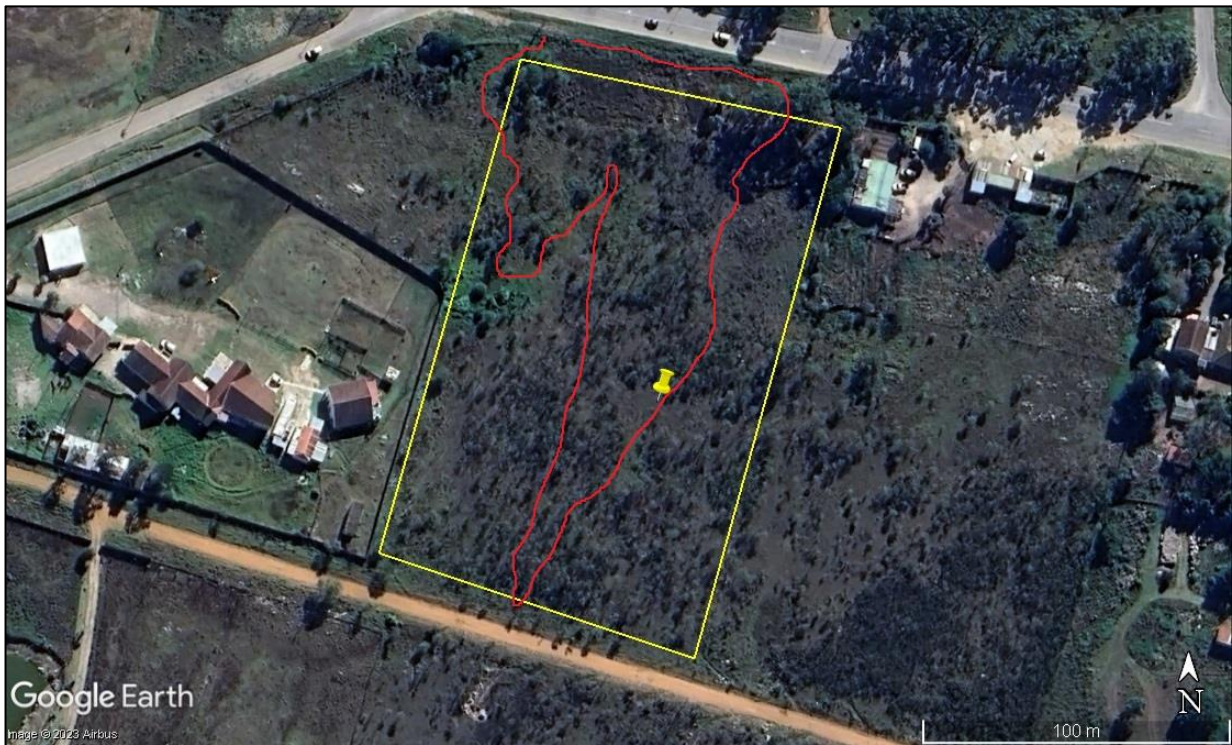
These are easy to identify and include foundations of buildings or other construction features and items from domestic and military activities.



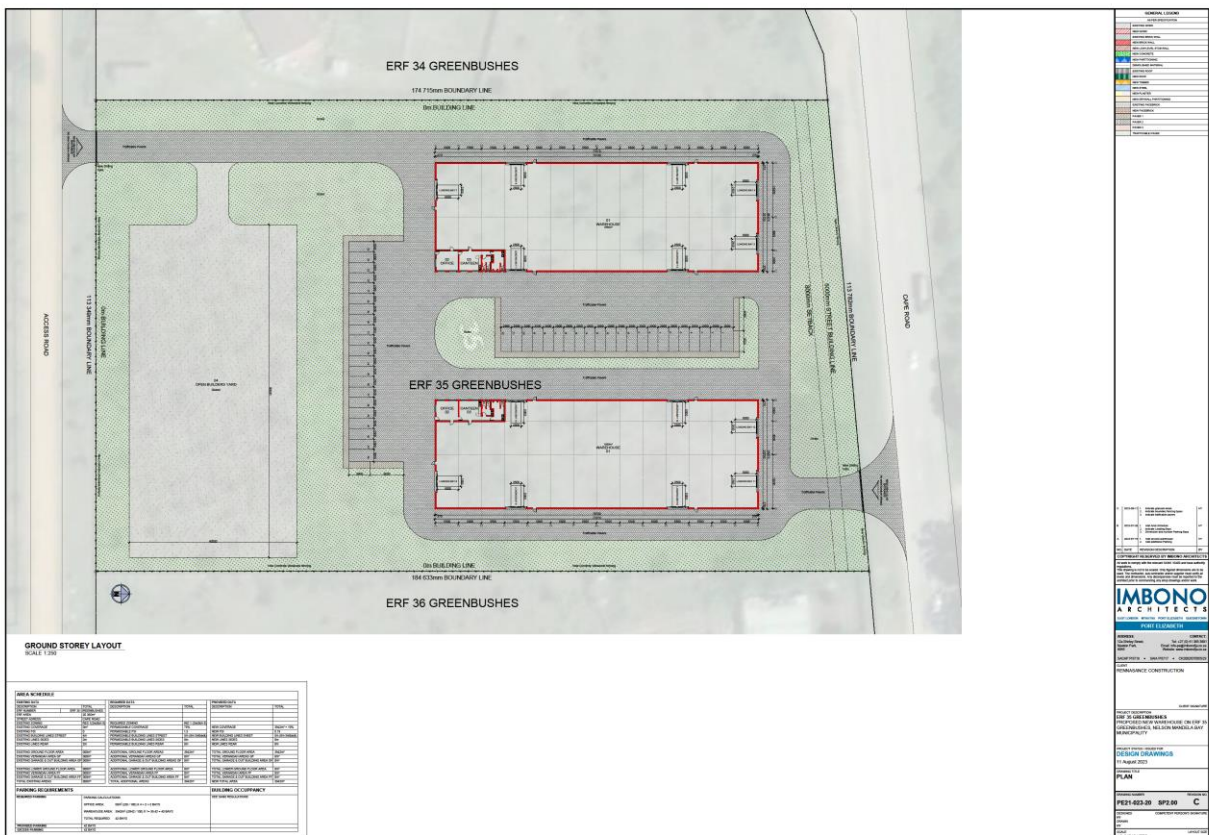
Map 1. 1:50 000 Topographic maps indicating the approximate location of the proposed area for the development on Erf 35 in Greenbushes, Gqeberha (Port Elizabeth), Nelson Mandela Bay Municipality, Eastern Cape Province (marked by the red squares).



Map 2. Aerial views of the general location of the proposed area for the development of Erf 35 in Greenbushes, Gqeberha (Port Elizabeth), Eastern Cape Province, indicated with the red arrow. The proposed development area is outlined in red.



Map 3. Aerial view of the proposed development area indicating survey tracks in red.



Map 4. Provisional layout of the proposed warehouse development on Erf 35 in Greenbushes (Map courtesy of IMBONO Architects).